THE

NEW ENGLAND FARMER;

A SEMI-MONTHLY JOURNAL, DEVOTED TO

AGRICULTURE, HORTICULTURE,

AND THEIR KINDRED

ARTS AND SCIENCES;

EMBELLISHED AND ILLUSTRATED WITH NUMEROUS BEAUTIFUL ENGRAVINGS.

"Agriculture not only gives riches to a nation, but the only riches she can call her own." — JOHNSON.

S. W. COLE, EDITOR,

AUTHOR OF THE AMERICAN VETERINARIAN, AND THE AMERICAN FRUIT BOOK.

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INDEX TO THE SECOND VOLUME.

B.

C.

D.

E.

F.

G.

T.

V.

W.

Y.

INDEX TO ILLUSTRATIONS.

INDEX TO POETRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, JANUARY 5, 1850. NO. 1.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

NEW YEAR.

OLD Time, in his rapid, ceaseless revolutions, has brought us to another year, and we must now prepare for another farming campaign. The intelligent farmer has before him an extensive field for improvement, and various means to aid him in accomplishing his object. During the winter, he will store his mind with knowledge from reading, conversation, and reflection, and commence operations in the spring, and design his experiments with more zeal, energy, and confidence, from fresh information, maturer plans, and more intelligent views.

To some of our friends, who thought that they would give us articles before now, we would say, that they will be acceptable at any time. We trust that they will not disappoint us. We hope that our readers, generally, who have gathered important facts from their experience or observation, will be liberal and communicate them, that others may profit by them as well as themselves. The liberal diffusion of information is characteristic of American farmers, and we hope that no one will make himself an exception to this noble compliment, by withholding facts that would be conducive to individual prosperity and the public welfare.

The science and the best system of practice in agriculture are formed from the accumulation and arrangement of facts; and the most humble and retired individual, who cultivates the soil, or attends to rural pursuits, may contribute important items for the promotion of improvement.

If any of our readers would have more matter on any subjects, or have any investigated and discussed in our columns, they will please direct attention to them. In the wide circle of many thousand readers, there are some well skilled in almost every department that can be presented. Inquiries may call out able articles from those who otherwise might remain silent. And while the inquirer gains knowledge from those who kindly attend to his requests, he that communicates is led, by this exercise of his faculties, to further investigation and experiments, so that in the end he will find it "more blessed to give than to receive."

WINTER MANAGEMENT OF FOWLS.

The great art in the management of hens, in order to render them profitable, is to cause them to lay in winter, as it is this season in which eggs are scarce and high. If a person keeps a flock of hens in order to supply his family with eggs, or for the purpose of selling the eggs in market, he must manage so that they will lay in winter, else they will not generally pay their expenses. For in the first case, he will be under the necessity of buying eggs when they are very dear, and if he produces eggs for the market, he has them only when every body's hens lay, and he must sell them at a low rate.

To cause hens to lay in winter, furnish them with a warm, dry shelter, in a warm location, where they can be free from cold winds, and enjoy a good share of sunshine. The hen-house should be kept clean, and all filth from remains of food should be carefully removed. There should be a good supply of gravel, which ought to be renewed occasionally, or dug over so as to furnish a fresh lot often.

Hens should have a constant supply of pure water, and pure, wholesome food. They are fond of corn, wheat, barley, oats, buckwheat, rye, rice, millet, boiled potatoes, and various other kinds of food. Generally, the cheapest grain may be used as their principal food; but it is better to supply them with several kinds. They are very fond of corn, and they flourish well with this as their main food. Boiled potatoes, mashed up, while hot, with meal of almost any kind of grain, or with wheat bran or shorts, and given warm, are an excellent food in cold weather, and greatly promotes laying. Changes in food are advantageous. Hens prefer variety, as well as non-feathered bipeds.

In winter, and in summer, when confined to small yards, hens should have a small supply of animal food. Refuse meat or fish may be given, cooked or raw. Scraps are often obtained, for this purpose, from the tallow dealers; but this is not so acceptable to hens as fresh meat or fish, which may be obtained at a cheap rate, or gratis, from the fish market or butcher. Fresh, unburnt bones, pounded or chopped fine, are excellent, as they supply both animal food and lime.

Hens need various condiments, such as lime, chalk, or pounded bone and oyster shells. Egg shells are also good. Lime may be given in old mortar. They must have some material to form egg shells, when they cannot have access to the ground, even if they have a supply of gravel. They should also have, occasionally, some green food, such as cabbages, or raw turnips, potatoes, or apples, cut in large slices, and they will peck and eat what they want.

Though hens should be kept warm in winter, they should not be crowded together in large lots without ventilation, as they will be liable to disease from impure air. In mild weather, when the ground is bare, they should go out in the sun. In feeding boiled potatoes and other warm food to hens, it should be given early in the morning, and the grain should be covered up at night, else they will fill themselves with that before they get a warm breakfast. Give dry loam or ashes to roll in.

With good management, generally in accordance with what we have recommended, hens will lay well in winter, if they are of good breeds, and not too old, and are in healthy condition. If they do not lay, with much care and attention, give them a very little cayenne in their mixed food, and warm, stimulating food. Hens often suffer in winter for want of exercise. They will fly from their roost, eat their breakfast, and stand almost motionless, and go to roost again soon after noon, especially if they are in rather a dark house.

We avoid this evil by covering their grain up in gravel, and let them scratch for a living, which gives them exercise that is conducive both to their health and comfort, and to their laying. Whether they have gravel in large boxes, or on a ground floor, mix the grain up several inches deep in it. This is often essential to success, as sometimes hens will not lay without their being reduced to the necessity of taking exercise. Bury the grain so that they must have considerable labor in finding it, leaving a little on the top and near the surface to induce search for more. This is the best remedy for laziness; as that exercise which gains the food, gives a good relish for it.

We will name a few among the many instances of the profit of hens in winter when well managed. One winter, we had eight hens, which were well supplied with water, grain, and gravel, but did not lay in winter — not one egg in January. The next winter, we tried what could be done with the same hens, then the worse for age, as they were mostly old hens. They were in the same house. We gave them warm food and condiments, and buried their grain in gravel and old plaster, and they laid eggs enough in January to pay three times the expense for their food.

J. S. Sayward, Esq., editor of the Bangor Courier, in an article furnished to us for the Yankee Farmer, stated that from one hundred and fifty hens he had nineteen hundred eggs in the month of January. This was in the cold region of Down East. Numerous other cases might be named of large profits from extra attention in managing hens in cold weather.

PROFIT IN PEARS.

In the fall of 1848, Mr. John Washburn, of Plymouth, bought two dwarf pear trees, (on quince stocks,) at $1.25 each. He set them that fall, and in less than a year from planting the trees, he took a dozen pears from them, and exhibited them at the annual show of the Mass. Horticultural Society, for which he received a premium of $6, and he sold the pears for $3 — making a dividend of $9 on the small investment of only $2.50. The pleasure and reputation of so successful cultivation will pay ten times the trouble. The variety was the Louise Bon de Jersey.

Town Agricultural Meetings. — At a late meeting of the Hillsborough, N. H., Agricultural Society, voted, as a means of promoting an interest among farmers and mechanics, to hold monthly meetings in different towns during winter, for the purposes of hearing addresses from competent persons, and discussing such subjects as have been proposed at a previous meeting.

Large Potatoes from Seed. — Mr. Anthony Hatch, of Saugus, has shown to us some handsome, full-grown potatoes raised from seed planted in a hotbed last spring.

Lime. — It is a singular fact, that in many parts of the world, soils resting on limestone, which is within a few feet of the surface, contain no more lime than those where is no limestone.

Agricultural Meetings. — The first meeting at the State House will be held on Tuesday evening, the 15th inst.

☞ We have on hand several communications, which will appear in our next number.

SWELLING OF THE THROAT IN HOGS.

In order to contribute to the usefulness of your valuable periodical, and to inform the public of what I find to be an infallible cure for a certain disease with hogs, viz., the swelling of the throat, I herewith send you a receipt for the disease, with a desire that you publish the same in your work, if you deem it of any import, and the same meets your approbation.

Take of molasses one half a pint, and a teaspoonful of hog's lard; to this add of brimstone a piece an inch long. Melt it over the fire, and when it is cold, or in a liquid state, drench the hog with it; and nine times out of ten it will be found to have the desired effect. My hogs were affected with this disease during the past year, and I found the above to be effective when all else failed. — *Far. Reg.*

Money skilfully expended in drying land by draining it, or otherwise, will be returned with ample interest.

THE BANKIVA COCK.

These fowls are remarkable for their spiritod and wild appearance, and some writers upon the subject consider them as the foundation of all the races of domestic fowls, as they are traceable to this original breed. But such statements need confirmation; and as it will be a curious matter in natural history to know what race is the parent of all breeds, we should like to see the evidence in favor of this position. But to establish the fact beyond doubt, that the Bankiva fowls are the progenitors of all others, it will be necessary to show that they were all the gallinaceous race that emigrated from Noah's ark.

Our beautiful portrait of this fowl is taken from the American Fowl-Breeder; and from the same interesting work we copy the following description:—

"The Bankiva fowl is a native of Java, and is characterized by a red, indented comb, red wattles, and ashy-gray legs and feet. The comb of the cock is scolloped, and the tail elevated a little above the rump, the feathers being disposed in the form of tiles or shingles; the neck feathers are gold-color, long, dependent, and rounded at the tips; the head and neck are of a fawn color; the wing coverts a dusky brown and black; tail and belly black. The color of the hen is a dusky ash-gray and yellow; her comb and wattles much smaller than those of the cock, and, with the exception of the long hackles, she has no feathers on her neck. These fowl are exceedingly wild, and inhabit the skirts of woods, forests, and other savage and unfrequented places. These Bankiva fowl are very like our Bantams, and, like those pretty little birds, are also occasionally to be seen feathered to the feet and toes."

Tea has been successfully cultivated by Dr. Smith, of South Carolina.

SMALL POTATOES.

Some years ago, a gentleman, visiting a farmer in Tolland, Connecticut, took from his pocket a small potato, which somehow had got in there at home. It was thrown out with a smile, and the farmer taking it in his hand to look at it, a curious little boy of twelve, at his elbow, asked what it was.

"O, nothing but a potato, my boy. Take and plant it, and you shall have all you can raise from it till you are free."

The lad took it, and the farmer thought no more about it at that time. The boy, however, not despising small potatoes, carefully divided it into as many pieces as he could find eyes, and put them into the ground. The product was carefully put aside in the fall, and planted in spring, and so on until the fourth year, the yield being good; and the actual product was four hundred bushels! The farmer, seeing the prospect that the potato field would by another year cover his whole farm, asked to be released from his promise.

With the same calculation, prudence, and industry, how many who are disposed to regard the trifling things on which fortunes are built, as too small potatoes to receive their attention, would have been independent in circumstances, if they had husbanded small advantages. Small potatoes should not be despised, even though there be at first but few in a hill. — *Selected.*

Naturalists tell us of one advantage which instinct has over genius, evinced in the construction of a bird's nest, inasmuch as the first nest built by a bird of any species, was as perfect as nests constructed at this day are.

Spring water is to be introduced into London, by a company with a capital of £350,000.

NATIVE TREES, SHRUBS, AND PLANTS.

Our obliging and intelligent correspondent, S. P. Fowler, Esq., who is distinguished as a successful cultivator, an enthusiastic admirer of nature, and a nice and accurate observer, proposes to furnish us with several articles on the cultivation of such native trees, shrubs and plants as are distinguished for their beauty or singularity, together with the soil and locality in which they flourish. We now give the article on native herbaceous plants. He will furnish two more articles in this series, one on native trees, the other on native shrubs.

CULTIVATION OF NATIVE PLANTS.

Mr. Cole: After some experience in the cultivation of native plants, we have found a considerable number of them, which are desirable for their beauty, wholly unfit for cultivation, in consequence of their troublesome and weedy habits, in filling the garden with their seeds, or crowding out, with their roots, all other plants in their neighborhood. For when once permitted to take root, they at once take possession and occupy all the ground around them, and are extremely difficult to extirpate. The names of some of these plants are the Succory, (*Cichorium intybus.*) having large, elegant blue flowers, commonly found by road-sides; the large Bindweed, (*Convolvulus sepium,*) a fine climbing, or rather twining plant, common in low grounds; the Toad Flax, (*Anteripinum linaria,*) with a handsome spike of yellow flowers, — thought by Dewey not to be indigenous, but introduced,— found by the side of roads; *Epilobium*, or Willow Herb, a fine, showy plant, with purple flowers, found by the side of woods.

In the cultivation of native plants and shrubs, we shall also introduce into our grounds many new insects, many of which invariably follow them to their new location. That elegant butterfly, the *Papilio plexippus*, with its delicate green-colored *pupa*, with dots of burnished gold, follows the beautiful orange-colored flowering *Asclepias tuberosa* into our gardens. The *Attacus promethea* is found on the cultivated Fever Bush, and also on the *Cephalanthus*, or Button Bush. On the first-mentioned shrub under cultivation, may now be seen, the leaves are fallen, fifty or more chrysalids of these insects, enclosed within a dry, curled leaf, attached firmly to a twig, and swinging in the breeze. The Trumpet Weed, and the New England Aster, having fine, sweet-scented, aromatic flowers, attract many insects, particularly the different kinds of wild bees, and that class of uneasy butterflies called *Skippers*, so named from a singular habit they have acquired of jerking their wings, and thereby producing an undulating flight.

We find also, upon trial, many native plants difficult to cultivate; and, after a few years, they entirely disappear, unless especial care is bestowed upon them. They appear to suffer most from the effects of freezing and thawing in the winter, thus injuring the crown of their roots; or, being thrown out of the ground by the action of the frost, they are destroyed. They receive some protection, in a natural state, by being in winter covered with water, grass, leaves, or snow; and should likewise be protected, under cultivation, by throwing over them hay, straw, litter, or earth.

The names of some of these comparatively tender plants, are the Pleurisy Root, (*Asclepias tuberosa,*) with its bright, orange-colored flowers. It is a rare plant in this vicinity, and I know of none in a wild state. The rich flowering *Liatris scariosa*, with its raceme of bright purple flowers. Its root is a solid tuber, and truncated; that is, it has the appearance of its end being bitten or cut off. The popular name of this plant is the *Devil's Bit*. I was informed, many years ago, by an old root doctor, that it received its last appellation in this way: It having come to the knowledge of the great adversary that this plant was useful to mankind, and possessed great medicinal properties, he, in order to show his enmity to our race, bit off the end of the root, thereby depriving it of most of its useful properties. Upon doubting the truth of the legend, and observing to him that the roots of some other plants presented the truncated form, "Why, bless me!" replied the old man, "don't you see the marks of his teeth?"

The *Liatris* is found growing, with us, in a clayey soil, on the borders of woods. Fine specimens of this plant can be easily obtained by seedlings. The splendid Cardinal Flower, when once introduced into a garden, will propagate itself by its seeds, and produce some fine plants. The Indian Turnip, or *Arum*, with its singular flower, variegated inside with stripes of pale green or brown. In autumn, the plant presents its bunches of shining scarlet berries. The *Neottia pubescens*, or Rattlesnake Plantain, with its dark green leaves, veined with white — a pretty plant, found in woods. The Soap Wort Gentian is a handsome autumnal plant, with blue flowers. The several species of the *Orchis*, particularly the *Fimbriated* and the *Grandiflora*, both elegant plants, and to be found in a swamp bordering on Pleasant Pond, in Wenham. The *Rhexia Virginica*, a showy plant, with purple petals, and long, crooked, yellow anthers, found in low grounds.

There is another class of native plants, that require no particular care, but, when once introduced into our gardens, continue to grow and thrive for many years. The names of some of these are the Asters, particularly the New England, which can be made to grow to the height of ten feet, and bearing upon its spreading top several hundred flowers. The Golden Rods, many of them coarse, but showy plants.

The *Apocynum*, or Dogsbane, is a pretty plant, with a creeping root, found in dry soils. It is remarkable for possessing, in a high degree, the property of a fly-trap — a fact not noticed by many botanists who have described this plant. It entraps large numbers of flies, bees, and other small insects, who seek the flower to obtain its honeyed juice. The insect, upon entering the flower, thrusts its proboscis down to the bottom of the cup, thereby exciting its wonderful irritability, when instantly the stamens close upon the stigma, like the jaws of a trap, seizing the poor insect by its tongue. It is not uncommon to see the flowers of this plant, under cultivation, crowded with insects thus caught. This irritable or sensitive power is possessed in a high degree in Venus's Fly-Trap, found in North Carolina, and in a less degree in the flowers of the Barberry, and some other plants.

By taking up, in the autumn, the *Sarracenia*, or Side-Saddle Flower, with the wet moss attached to its roots, put into water, and cultivated like the hyacinth, and placed on a parlor window, it will flourish, and show its curious flowers towards spring.

In closing this article upon the cultivation of native herbaceous plants, we would mention several distinguished for their beauty, which as yet we have wholly failed to cultivate. The names of some of these plants are the *Cypripedum*, or Ladies' Slipper, Fringed Gentian, Oak-leaved Gerardia, Northern Calla, and Northern Dracena.

S. P. FOWLER.

Danvers New Mills, *Dec.* 13, 1849.

For the New England Farmer.

SHELLY-MARL, OR MUSCLE BED.

Mr. Editor: It must be gratifying to many of our farmers and cultivators of the soil, residing near

the line of the Essex railroad, to learn that the directors have in contemplation an arrangement by which they can transport, to different points upon this route, the above excellent manure for the land. I say excellent, for it is well known that the soil in this, as well as in many other counties in the state, is deficient in calcareous matter; and, as was recently said by a distinguished agriculturist, that "no soil can be regarded as at all *well* fitted for cultivation, unless it be calcareous," this article must, therefore, be among the best that can be applied to improve its texture and composition, by making it more capable of supplying the food necessary for the production of vegetables. The use of this compound, upon a poor or light sandy loam, will produce a more lasting degree of fertility than dung *alone*.

Its effect upon the soil, in the first year of its application, is inconsiderable in comparison with the second and succeeding years. After an application of one and a half cords of muscle marl to about one eighth of an acre of sandy loam, (by placing it in small heaps upon the land in the fall, and spreading it over the land early in the following spring,) we planted potatoes; the crop, as well as the size of the vegetable, was small. The spring following, it was again planted to potatoes, without dressing of any kind, and the crop was good, and the potatoes of a large size. This failure at first, we admit, may have been owing, in *some* degree, to the season; but not to such an extent. We have, from the Beverly Bar to Ornes and Ropes's Points and Porter's River, so called, in North Salem, muscle beds, where are large deposits of this fertilizing manure, which increases in forming, as is supposed, nearly as fast as it has heretofore been gathered; and if it can be transported, at a reasonable rate, from these several places, on this railroad, it must be a great benefit to the farmer.

It is *comparatively* recent that our cultivators have turned their attention to the use of this material, and thus far it has been generally, or almost exclusively, used in the cultivation of onions, and considered to be a fine manure for this vegetable alone; but we feel assured that it will be found, by a proper application, quite as useful in nearly, if not all, purposes where *shell*-lime and marl operate beneficially; and, as before remarked, that, our soil being deficient in calcareous matter, it cannot but be exceedingly useful. Shell-lime is now used with astonishing effect by Mr. Pell, of New York state, by which that finest of all American apples, the Newton Pippin, is made to produce annually great crops of the finest fruit.

The muscle beds in the North and Porter's Rivers are formed by the decomposition of a small shell-fish and sea-weed, rock-weed, and other substances which gather in large quantities in the *eddies* of the above rivers, thus making an exceedingly fertilizing compound. The muscle is very prolific, millions being formed in a square rod in a single year. As their surface is immediately covered by the young the succeeding year, the growth of the "beds," as they are called, is astonishingly rapid, upwards of one thousand cords being annually taken from the deposits in the vicinity of the railroad. Notwithstanding this quantity has been gathered, there does not appear to be a very sensible diminution of the article.

The beneficial effects of this manure are more marked when applied to land at a distance from the salt water. This manure is sometimes gathered and used immediately, in what is called its raw state; the generality of cultivators, however, prefer to place it upon their land in small heaps, in the fall, to be acted on by frost, when it slackens and becomes better pulverized in the spring, to spread evenly over the land. We prefer, in order to preserve the saline juices, which are useful on almost every description of soils, to apply muscle marl fresh from the shore, while we have frosty nights, early in March, spreading it at once; and, in a week or two, (after it is meliorated by freezing,) ploughing it under the soil. Muscle-bed and common barn-yard manure make an excellent compost for Indian corn. A correspondent of the Yankee Farmer, in speaking of "sea manure," says, "When sea mud is thickly blended with sea-shells, they tend to give it much additional value; as the shells, when exposed to atmospheric influence, will have their cohesion and organization gradually destroyed — chemical composition ensues, carbonic gas is disengaged, and this gas comes in contact with the vegetable fibre, where it is distributed through all its ramifications. To improve the soil is to give it the principles which it requires, and does not contain. Marine dressing not only imparts to its principles, but animates inert matter into action; or, to define it more chemically, the elements of inert matter are resolved into new combination. In these remarks, I have made no deductions from supposition, but have drawn conclusions from known facts, supported by chemical affinity. I will only observe that I have used the above-named dressing for more than twenty years, and it has fully answered my expectations." Another writes, "Nature, to supply a deficiency in the soil and climate on our rugged seaboard, has, with a liberal hand, deposited inexhaustible magazines of marine manure all along our shores, which is composed of *animal*, *calcareous*, *saline*, *argillaceous*, and *vegetable matter*; the calcareous, of the shells; the saline, of the salt of the ocean; the argillaceous, of the fine mould washed from the surrounding clay banks; and the vegetable, of eel-grass, rock-weed, kali, and other marine vegetable productions brought in from the ocean by flood-tides and easterly winds."

In speaking of a rich muscle bed, he says, "The population and territory of aquatic community have unquestionably been progressively increasing from its origin; for small animals, by a law of nature, are generally prolific, and prolific animals, by the same wise law, are confined to a very brief existence; therefore numerous deaths have enlarged this territory, and numerous births, exceeding the deaths, have increased the population. The same contracted inch of space is the birthplace, residence through life, and at death the grave, of each individual." "By an ordinance of the British Parliament, passed about A. D. 1680, for the exclusive benefit of the New England colonies, all flats fronting upland, in public grants, became the property of the grantees, although not expressed in the instrument of conveyance, extending to the channel, or one hundred rods below high-water mark; and in all subsequent conveyances, when bounded by the shore. The shore, as legally defined, is the margin of the water at any time of tide. This ordinance and definition remain in full force, having been invariably recognized and sanctioned by all our courts."

Another material, somewhat different in its character, (and which is used extensively in Europe,) is sea-sand, mixed with a large proportion of shell. This mixture is considered an excellent fertilizer for grass and grain crops on low land. It is found in inexhaustible quantities in the North River, in near proximity to the railroad.

Lord Bacon, who flourished early in the seventeenth century, having noticed the advantages which the farmers in the maritime countries of Europe derived from the free use of sea-sand, which, upon those coasts, chiefly consists of broken shells, impregnated with salt water, declares that the "best manure, next to marl, is sea-sand;" and the Archbishop of Dublin, speaking of the manuring of lands, in the counties of Londonderry and Donegal, with sand and shells from the sea-shore, says, "that what formerly was not worth a groat per acre, is now worth four shillings."

"This substance is very generally used in Cornwall,

England, for manure; and the quantity which is every season carried away from different parts of the coast, for the purpose of manure, almost exceeds belief."

From "Bude," in the parish of Stratton, it has been ascertained that in one day as many as four thousand horse-loads have been taken; and from the harbor of Padstow, it has been computed that fifty-four thousand cart-loads are annually carried. Martin Doyle says, "I have known this manure in the county of Cork to be carried in bags ten or fifteen, ay, twenty miles from the coast, on the backs of mules." The expense of land carriage for this material as a manure, in Cornwall *alone*, (as stated by Dr. Paris,) amounts at least to thirty thousand pounds *annually*. Mr. Colman, in his European Agriculture, speaking of the immense quantities taken up on the coast of Ireland, says, "The number of one-horse carts, especially near Cork, which I found engaged in the transportation of it, was remarkable. To the large proportion of phosphate of lime contained in the crustaceous remains, and the nitrogenized matter of the fish, much of its importance, doubtless, is due. In Cornwall, England, vast amounts are found near the sea-shore, and carried into the country. In examining this sand, which is obtained in inexhaustible quantities near parts of the coast, it appeared in an extraordinary degree to abound in broken shells. — A company has been formed for calcining this sand, which serves to make it more soluble, and renders its action upon the soil more speedy. It is called the '*Cornwall Patent Manure.*' These sands (continues Mr. Colman) are full of comminuted shells, and very rich in animal matter. They are applied at the rate of ninety bushels, or even double that quantity of bushels, to the acre."

J. M. IVES.

Salem, *Jan.* 1, 1850.

For the New England Farmer.

HISTORY OF AGRICULTURE. NO. III.

Mr. Editor: Agriculture engaged the attention of the Romans, theoretically as well as practically. Their time was divided between husbandry and war. In the early days of the republic, their greatest men employed themselves alternately in the one and the other. Cincinnatus was called from the plough to fill the office of dictator.

Among the Romans, the ox was the principal beast of burden; and there are many directions for breeding, working, and feeding this animal, to be found in the writings of Pliny, Cato, and others. Bees were also held in high estimation among the Romans, and directions for their management may be found among the writers above mentioned. With regard to the implements of husbandry used by the Romans, we cannot speak very definitely; but it is certain they used ploughs of some sort, both with mould-boards and colters and without them. Pliny speaks of a reaping machine, that was propelled by an ox. Their grain was beaten out by flails, or trodden by cattle. Haying was performed much in the same manner as at present.

On the decline of the Roman empire, agriculture shared the fate of all other arts, and during the long ages of anarchy and barbarism which succeeded the fall of this empire, agriculture was almost wholly abandoned, and continued to be neglected till the introduction of the feudal system, in the fifteenth century. This gave every man a distinction and rank according to the quantity of land he occupied. Nothing contributed more to give an importance to agricultural pursuits than the introduction of this system, which gave the tenant, that cultivated the soil, as well as the landlord, who owned the land, political privileges that were enjoyed by no other members of the community.

England has, for the last fifty years, done much for the advancement of agriculture; and her efforts have been crowned with success, as her agricultural productions have more than doubled during this period.

The agriculture of the French suffers in common with every other species of industry, from the effects of bad government. Since the revolution, they have made some advancement, but are still far behind Great Britain, notwithstanding they have a climate and soil adapted to every variety of vegetable growth. In all parts of the continent of Europe, increasing attention is being paid to this subject. In Lombardy and Flanders, it is carried to the highest state of improvement.

ROCKINGHAM.

For the New England Farmer.

PROFIT OF HENS.

Mr. Editor: I have kept, since January last, about forty hens. They have had their full liberty over my premises, from day to day; and though, at times, they have been rather inclined to mischief, yet, upon the whole, I am very well satisfied with their product, since they began to lay, which was about the middle of February; and, though I have lost seven of them by disease and accident, they have produced up to this time about four thousand eggs, and raised me about sixty chickens — being an average of over one hundred eggs per hen, besides raising the chickens.

The eggs which I have sold amount to nearly $45, at fourteen cents per dozen, the average price for the time in our market; and the chickens are worth, on an average, twenty-five cents each, which is $15. Total product, to this time, $60. They have been fed but very little grain, since the opening of spring; but have picked and scratched for a living about the farm. I have kept a good heap of pounded oyster shells in their walks, of which they daily avail themselves — frequently several times in a day. A part of my hens, during the warm weather, have roosted on the trees, near the house; part of them in an open shed; and a part of them in the barn. I have no hen or "poultry house," as they are called, nor any thing of the kind. Now, what I wish to know is this: How should I manage with my hens, in order to have them *continue* laying through the cold season? as I have observed that, as hens are generally managed in this part of the country, they lay but very few eggs from the first of December to the middle of February, or later. I should like to know how my hens should be fed, where I should make them roost, and also what quantity of eggs hens, that are well taken care of, will produce, compared with warm weather. I should wish to have the directions in a plain, familiar style, and in as economical a form as will answer the purpose intended.

Yours, &c.,

C. B. AYER.

Preston, *Conn., Nov.* 24, 1849.

THE LATE REV. HENRY COLMAN.

To the Editor and Publisher of the New England Farmer.

Gentlemen: Holding the responsible position of sentinels on the environs of agriculture in New England, as you do, I venture to ask your attention to the enclosed notice of one who spent the latter part of his life in laboring to advance the cause in which we all feel a common interest. The trustees of the Essex Society felt it to be their duty distinctly to take notice of the services of Mr. Colman. When a man generously offers his life for the good of others, it is right that his name and memory should have the

credit of what he did. The confidence that noble action will be duly appreciated by those who come after us, is one of the strongest incentives to noble efforts.

My particular purpose, in taking pen in hand, was to inform you that I have just now received the entire agricultural library of the late Mr. Colman, purchased at a cost of $250, to form the basis of an agricultural library, for the use of the Essex County Society. It is confidently believed, that a subscription adequate to the purchase will readily be obtained. But if it should not, it may be doubted whether one half of one year's income of existing funds could be better applied, than in the purchase of four hundred volumes of the best books on agriculture.

I know there are some who say, those who want to read had better buy their own books; — and if they conveniently could, perhaps they had. But is it not true, that there are hundreds who do not now read a volume in a year, who would read many, if they could have access to a library, judiciously selected and freely offered?

The fear of violating my own rule, in multiplying words without ideas, forbids my saying more. If what I write, or what is enclosed, is worthy your notice, it is at your service.

Very respectfully and truly yours,

Nov. 20, 1849. J. W. P.

The committee appointed at the late meeting of the Society, to report to the trustees such action as is proper to be taken in relation to the Rev. Henry Colman, who died at Islington, near London, August 11, 1849, æt. 64, submit the following preamble and resolutions. J. W. Proctor, *Chairman.*

Nov. 19, 1849.

The journals of our own and foreign lands have recently recorded the death of Rev. Henry Colman, and borne ample testimony to his eminent private worth and public usefulness.

The church, at whose altars he ministered with distinguished ability, has already rendered a beautiful tribute to his memory.

The homes of affluence and ease, of penury and suffering, — in all of which his presence was greeted with equal cordiality, imparting to the one additional delight by his agreeable vivacity and intelligence; diffusing, in the other, unwonted joy by his sympathy and charities — are now saddened with grief.

A distinct expression of the deep sense of bereavement sustained by this Society, with whom he had so long been connected as associate and trustee, should be placed upon our records. The vivid impressions on our minds should be preserved for the benefit of those who may come after us. Services so valuable should not be forgotten. A character like his should be registered for imitation. The possession of his virtues would brighten and bless every farmer's life, and gladden every farmer's home. He was, in truth, one of whom it may justly be said, "We shall not look upon his like again." With a childlike simplicity of character, that adapted itself to every circle, and to all occasions, he was every where at home, and always, in whatever company he might be, the centre of attraction. He was never at ease, except when actively engaged in doing good. Few men have accomplished so much in a life of the same length; and what he effected causes a deeper regret, that he could not have been spared to complete what he had contemplated.

Mr. Colman was always an ardent lover of Nature, and accustomed to find recreation and delight in the study of her works. In the various branches of agriculture and horticulture, he ever manifested a special interest. His aid was freely given, and not without marked results, to every effort to encourage the study and to improve the practice of these arts. Immediately on coming into this county, he became a member of this Society, and has been distinguished as one of its most active supporters. The farmers of Essex imperfectly know the obligations they are under for the many services freely and voluntarily rendered for their benefit. The pages of our Transactions bear testimony to the zeal and ability with which he accomplished whatever he undertook. Whoever shall glance his eye over these, for the ten years next following 1830, will find more than *two hundred* from his pen, covering the entire field of the farmer's labor, and marked by a keenness of perception and felicity of expression rarely found in such productions. The same sparkling brilliancy which beamed from his eye, radiated from all his paragraphs. His inimitable humor never failed to arrest and enchain the attention of the reader. However repulsive the subject, he had the faculty so to present it as to avoid offence, without the least sacrifice of truth. No subject was too abstruse for his philosophic reflection — none too minute for his searching observation. It is not too much to say, that to him are we indebted, as much as to any other, while he was among us, for interesting and instructive communications. When a commissioner for the commonwealth was to be appointed, his ardor in the pursuit of agricultural science marked him as the fit agent to accomplish the desire of the state. In discharging the duties of this office, he became favorably and extensively known. The fruits of his labors are plainly to be seen in the improved methods of farming, and in the increased interest and respect with which the pursuit of the farmer is regarded. He inspired many with fresh courage and hope, who were disheartened by repeated failures, or discouraged with little success. He awakened a generous emulation, which brought into active operation a great amount of dormant energy, and replaced, by industry and skill, what, in many cases, had been lost through sloth or ignorance. If there are any who were inclined to question the utility of this commission, there are probably few who could match the industry and perseverance with which its duties were discharged. If there are any who are disposed to cavil at the accuracy of Mr. Colman's facts and opinions, there are probably none who will deny the salutary impulse he gave to agricultural improvements.

In the autumn of 1842, Mr. Colman embarked for Europe, intending to make such a survey of the industrial and agricultural pursuits of other lands, as would not only gratify his own long-cherished desires, but would enable him to present to his countrymen examples worthy of imitation. Upon his arrival in England, he became the object of attention and respect, such as had rarely been shown to any private citizen. The privilege of familiar intercourse with the highest classes of society was freely accorded to him, securing, at once, the most refined social and intellectual enjoyments. The field now open before him, expanded beyond his utmost expectation; and though it offered much to encourage and gratify, yet, to explore it fully, and to reap its fruits, demanded the most exhausting labor. All the energies of body and mind were put in constant requisition. Nor should it be forgotten, how the finer sympathies of the heart, always active, were intensely excited by the examples of suffering and misery constantly presented to his view.

After six years' absence, Mr. Colman returned in the autumn of 1848; but his health was so impaired, that he was compelled to relinquish many of the plans that he had contemplated. His ever active benevolence prompted him to many efforts, which his failing strength could no longer sustain. At the unanimous request of this board, he readily assented to deliver the address at our late anniversary, (if life and health permitted — a condition, added by him,

with that devout reference to the overruling Providence which characterized every movement of his life ;) and the hope was fondly indulged by all, of being again enlivened by his wit, and instructed by his wisdom. But our hope was to be disappointed; and death has now sealed that disappointment forever.

To his examples and instruction are we greatly indebted for what we have been able to accomplish. He was ever ready to hold or drive, as opportunity presented. His willingness to help awakened a corresponding zeal to help ourselves. He not only sustained us in youth, when our FATHER was called away, but he inspired us with strength and confidence to go alone. Now, having arrived at years of discretion, shall we be unmindful of the guide of our youth? Shall we not prove, by our works, that the good seed he planted has taken root, is springing up, and ready to flourish?

We would that our own minds should be impressed with the great lesson of our lamented friend's life and death — a life of preëminent usefulness — a death of calm submission and enduring hope. We would commend his example to all whom our pages may reach, and especially to the farmers of our own county, in the belief that by copying his virtues, they will best honor his memory and promote their own usefulness.

It grieves us to reflect that we shall see his face no more forever. It pains us to remember that his bones are mouldering in a land far away, "by strangers honored and by strangers mourned." With grateful acknowledgments to the kindness that watched and soothed his dying bed, and closed his "dim eye on life and pain," and to the noble generosity that solicited the privilege to rear a monument over his mortal remains, we would respectfully suggest to the farmers of our own commonwealth, whose citizen he was, by birth in her metropolis, and by adoption in all her borders, that a monument be reared in their midst, which, with a generosity as noble, and a grief no less sincere, shall point to the world the name and the memory of the FARMER'S FRIEND.

At the annual meeting of the Essex Agricultural Society, held September 27, 1849, a committee was appointed, consisting of Messrs. John W. Proctor, of Danvers, Frederick Howes, of Salem, Ebenezer Moseley, of Newburyport, James H. Duncan, of Haverhill, Daniel Adams, of Newbury, to consider and report, at the next meeting of the trustees, such measures as should appear to them most suitable to express the sense of this Society, for the memory of the late Rev. Henry Colman.

At a meeting of the trustees, held November 19, 1849, the committee reported the following preamble and resolutions, which were unanimously adopted.

[*See preamble, as above.*]

Resolved, That we cherish, with great regard, the memory of the late Henry Colman, who, during many years, and until his decease, was a member of this Society, and distinguished for his zeal, activity, and intelligence in the cause of agricultural improvements; for his various and persevering efforts to obtain and communicate information concerning the practice and present condition of agriculture, in other states of the Union, and in foreign countries, as well as our own commonwealth; and for his numerous and valuable publications, tending to promote and diffuse among his fellow-citizens the knowledge of this most important department of human industry.

Resolved, That we sincerely sympathize with the family of the deceased, in the painful bereavement they have sustained.

ALLEN W. DODGE, *Secretary.*

HAMILTON, *Nov.* 26, 1849.

WIRE FENCE.

One of your correspondents makes some inquiries in relation to wire fence, its cost, &c.

WIRE. — The wire can be obtained in Pittsburg at $8.50 per hundred, and perhaps a shade lower if taken by the ton. Townsend & Co. have it constantly on hand. No. 11 is the size usually employed for the purpose of fencing; but some prefer No. 10, on account of its being somewhat stronger and stiffer. Either size answers the purpose very well. It can also be obtained annealed and painted; but in this form it comes a little higher. Allowing five strands, the cost of the wire would be from thirty-five to thirty-seven cents per rod.

POSTS. — The proper size for the posts is three inches by four at the larger end, and three by two and a half the smaller. They should be made of locust, or some other durable wood. The posts do very well thirty-six feet apart, if the fence is designed to turn cattle and horses only; but for hogs they must be set much closer. Between the posts, twelve feet apart, should be placed strips of boards, an inch and a half by three quarters of an inch thick, to support the wires, and keep them from laying. These strips are placed one on each side of the fence, places being made in one of them for the wires to lie in, and nailed together. The wires are fastened to the posts with steeples made of strong wire, and these are driven so tightly that the strands are prevented from slipping, or, in fact, moving in any way.

To make a fence to turn all kinds of beasts, the posts should be placed eighteen feet apart, with a short post, eighteen inches above ground, between each of the long ones. Two boards, each six inches in width, may be put on the bottom, and the top of the fence finished out with wire. This makes an excellent, permanent fence, that will do good service to the farmer. The former kind will answer all purposes where a close fence is not required; but the latter is to be preferred where it is exposed to hogs and other small animals.

ELIZABETH, ALLEGHANY Co., *Pa.*, 1849.

— *Philadelphia Dollar Newspaper.*

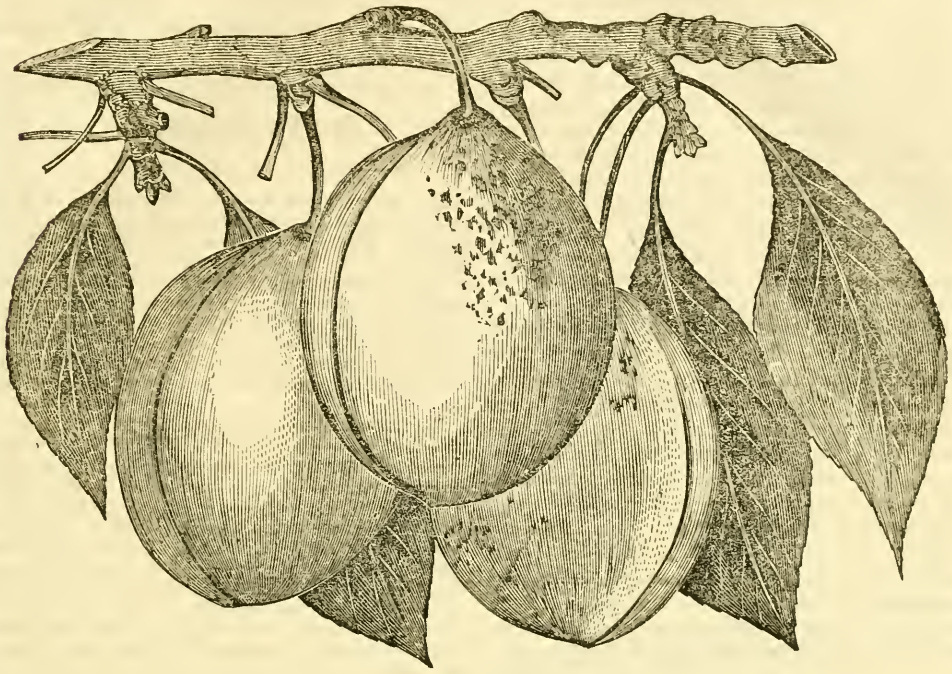
WOOD-HOUSES.

There is no convenience attached to a farm establishment of more importance than the wood-house. It need not be an expensive structure; although both convenience and economy require that its size, and the materials of which it is formed, should be adapted to the size and circumstances of the family. As a general thing, it should be a *wood-house*, and nothing less nor more. No tools or farming implements should be housed there, for these require a separate place; nor should the hog have his quarters in one end. The fuel required for the use of the family, of whatever kind or description, should always be found here in ample abundance, and at no time should there be a deficiency either as regards the quantity or quality of the same. Dry wood, where coal is not used, should be kept constantly on hand the year round; and in order to secure this convenience, a wood-shed of ample dimensions is utterly indispensable. B.

BENSALEM, *Nov.* 7, 1849.

— *Germantown Telegraph.*

The first plank road in New Jersey is about to be commenced at Newark. It is to run from that place to Jersey city.



COE'S GOLDEN DROP PLUM.

This plum is distinguished for its large size and superior flavor. When it is well ripened, it is of the highest quality. But in this climate, it is rather uncertain about coming to perfection, as it is a very late plum; yet in warm locations and favorable seasons, it succeeds well. Some cultivators, whose situations are not more favorable than usual, say that it always does well with them. Therefore the point as to its adaptedness to this climate is not yet well settled. We should not advise its culture north of this, excepting in warm locations, as there are other late plums more to be depended on. Even in this climate, it is better adapted to the amateur than to the cultivator who raises fruit, in orchard culture, for the market.

As this fruit has not been tried extensively in New England, more extensive trials may give a different view of the subject. One great advantage in this plum is its long keeping. It hangs long on the tree, and sometimes it keeps a month or two after it is gathered. This variety was raised from seed by a Mr. Coe, near London. In this region, it generally ripens from the middle of September into October. Mr. Henry Vandine, of Cambridgeport, who has raised fine specimens of this fruit, has exhibited it at the shows of the Massachusetts Horticultural Society five weeks in succession. We are indebted to Andrew Lackey, Jr., of Marblehead, for fine specimens which he furnished last fall, from which our engraving is made.

The fruit is very large; oval, tapering considerably to the ends, a distinct suture on one side; yellow, mottled with green, and occasionally patches of scarlet in the sun, covered with light bloom; stem of medial length, rather slender; flesh yellow, firm, fine texture, melting, rich, sugary, and of a delicious, sprightly flavor; clingstone.

The tree is a good grower; but as it branches low, it does not form a good handsome tree in the nursery, like vigorous upright growers. The shoots are purple, short-jointed; the leaves rather small, deep green, and very glossy. It is a good bearer.

PLOUGHING THE PLAIN LANDS OF LONG ISLAND.

Dr. Peck states, that with the Worcester Eagle D plough, with three yoke of cattle attached, he has succeeded in ploughing these lands well, immediately after the wood was cut off, and without the previous operation of grubbing. This he has done at an expense of $3 per acre, while the old grubbing process alone would have cost from $12 to $16 per acre. The trees and bushes cut off previous to ploughing, stood very thick on the land; and their roots, when he put the plough in, were not only of ordinary size, but green and tough. Many farmers came from his immediate neighborhood to see his ploughing, having little faith in removing scrub-oak and pine stumps and roots in this summary way. We have only to add, that the manufacturers of these ploughs are now at work on a model, which will be decidedly more efficient than the one used by Dr. Peck. As soon as some are finished, they will be sent to our warehouse, where we shall be glad to have the Long Island farmers, and others interested in such matters, call and look at them. — *American Agriculturist.*

Domestic Department.

Management of Domestic Affairs. — The prosperity, happiness, and reputation of a family depend, in a very great measure, on the judicious and prudential management of the household department. With economy and skill, a family may be made comfortable, happy, and respectable, with one half the expense on the part of the husband that is required with the extravagance and mismanagement that prevail in some families. This will make all the difference between prosperity and the accumulation of a competency, and a failure and want.

This shows the importance of woman's influence; and she has not this influence merely on the comfort of the family, and its prosperity in the acquirement and saving of property, so essential to its well being, but her influence is equally great in training the infant and youthful mind to virtue and learning, and rendering the subjects under her care an ornament and blessing to the community, and a credit to themselves and their parents.

Strict economy and skilful management, while they contribute to the acquirement, preparation, and arrangement of those possessions that are essential to independence and happiness, exercise a wholesome discipline over both body and mind, laying a foundation for health, strength, and those principles which insure present comfort and satisfaction, and a well-founded hope for future prosperity.

No woman should think of taking charge of a family without being well versed in her profession, so as to act upon the best principles, and practise in a skilful manner. Science and skill are as important in the kitchen as on the farm, and the one is no more disreputable, difficult, or unpleasant to a woman, than the other is to a man.

Every person should endeavor to excel in his or her avocation, and consider nothing, however minute, as unworthy of attention. No person, who is not skilled in domestic affairs, should ever have a family subjected to her mismanagement or neglect. Labor is the necessary lot of all animal beings throughout creation, and it is essential to health and happiness. Then how important that it be directed by intelligence and skill, which are absolutely requisite to success!

To bake Apples. — Take sour apples, those of a keen acid, and to every square tin filled with them, pour over a tea-cup full of water, and one tea-cup full of sugar. Bake them slowly till done. Eat them with cream and the juice which cooks from them. Nobody knows much of baked apples who has not eaten them in this way. No quince, pear, peach, or plum preserves are equal to this simple dessert.

Dancing. — "I am now an old fellow," says Cowper, in one of his letters, "but I had once my dancing days, as you have now; yet I could never find that I could learn half so much of a woman's real character by dancing with her, as conversing with her at home, when I could observe her behavior at table, or at the fireside, and in all trying scenes of domestic life. We are all good when pleased; but she is the good woman who wants not the *fiddle* to sweeten her."

Youth's Department.

Thoughts for the Young. — The Garden of Eden was undoubtedly a place of surpassing loveliness. Its beautiful groves, its fragrant flowers, the melting richness of its fruits, its cool streams and limpid rivers, the choral strains of its feathered songsters, and the soft and balmy atmosphere, must all have conspired to render it a most delightful abode. We wonder that Adam and Eve could not have been contented, and let the forbidden fruit alone, so that we, their posterity, could have had access to the garden also.

But instead of mourning over the loss, we may as well look around us, and see whether there is not something yet left worth possessing. There is, after all, much that is lovely and beautiful in the earth, notwithstanding the dazzling glories of Eden have departed. The glowing beauties of the maiden have faded, but traces of that beauty still beam in the face of the matron. That man must have a morbid disposition, who can look out upon the face of the earth, on a bright morning in spring, when vegetation is bursting its fetters and unfolding its beauties, when the feathered tribe is filling the air with rich melody, and when the balmy fragrance of the atmosphere is courting into life the buds and blossoms of a thousand different plants, and discover no beauty, no loveliness. The mind endued with a right spirit will perceive much to admire, and will look through all these clustering beauties of nature up to nature's God, and discover his handiwork in the development of life, and all the various arrangements for the growth and maturity of the vegetable and animal world.

It is interesting to notice the perfect system and order that nature exhibits in all her works. She seems like a chemist in a vast laboratory, nicely weighing and measuring out various simple elements, and compounding them in such exact proportions, as to produce the most beautiful experiments in countless numbers. Man can only faintly imitate her, and wholly fails in the ability to give the life-inspiring principle, which fills the earth with joy and gladness.

How mysterious is the agency of light, at first serving to keep the vital principle dormant, but when it has once burst into activity, becoming so essential to the growth and beauty of the plant! The power and goodness of God are magnificently displayed in this element. As we look out on the landscape, lighted up by the glorious orb of day, and relieved by the various shades of verdure; as the eye wanders over hill and valley, mountain and plain, streamlet and lake, or as we gaze with admiration on the blue vault above — the summer clouds, or the stupendous arch of varied light which so frequently spans the heavens as the rainbow — how can we refrain from bowing down with grateful adoration before the Being who has, by the creation of this one simple element, contributed so wonderfully to the happiness of his creatures, and saved them from the horror of groping in perpetual darkness! And how excellently does the divine goodness and wisdom shine out, in constituting this light, of seven different colors, as it is exhibited in the rainbow, or separated by a prism. Different objects absorbing different rays, and reflecting others, produce an endless diversity of shades, and we are charmed with the varied and gorgeous hues of creation. — *Vermont Agriculturist.*

Health Department.

To keep the Feet warm. — "Being told by an experienced bush farmer of the effectual method he used to keep his feet warm on the coldest days in the winter, I have tried it with success; and I think the same means have the most beneficial effect in complaints of the bowels, when *resorted to on the first approach of pain*, and, what is of the greatest importance, the remedy is always at hand, and may be applied instantaneously, either up, or in bed, or in the dark. In short, it is obtaining heat in the feet by friction. The farmer's mode: 'I,' said he, 'stand upon one foot on a log, and throw out my other as far as I can, and in drawing it back I let the bottom of my foot strike the log upon which I stand. Thus I continue, swinging it off and on speedily as far as I can reach, and striking the log on every return with the fore part of the bottom of my foot, till it feels quite hot; this will be done in general with eight or ten swings and strokes. Having thus warmed one foot, I proceed in the same way to warm the other.' Now, sir, experience has taught me, that the same effect will be produced, (viz., heat in the feet obtained,) by swinging out the leg and thigh, and striking the foot in the manner described upon any hard substance, when a person is up; and when in bed, upon being attacked suddenly by pain in the bowels, I have found *immediate relief* by subjecting the bottoms of my feet to friction, rubbing them up and down alternately upon the clothes, thus obtaining extraordinary heat in them. I am fully persuaded that, in the summer of 1832, when the cholera was raging, I was saved of an attack thereof by this simple means, being on a journey, in bed, at a tavern." — *Selected.*

Mechanics' Department, Arts, &c.

For the New England Farmer.

Thoughts on Mechanics. — I am a mechanic; but consider it no cause for pride or mortification. My own choice, partly modified by circumstances, made me one; and so I shall probably continue, till I can better my condition. Hence it cannot be entertained that I am an enemy to the working classes, that I flatter them for favors, or despise them through pride. It is much the fashion, at the present age, for men coveting power and popularity — men who secretly fancy themselves above manual labor, and who in fact despise the laborer and his employment — to expatiate eloquently on the dignity of toil; to sit in their closets and invent schemes for the elevation of the hard-working poor; and to make speeches at their gatherings, and encourage them in their "strikes." And it is remarkable how many simple mechanics, who fancy that all change is reform, are caught in their nets. Is there not intelligence enough among the mechanics to manage and improve their own affairs? If the clergymen, lawyers, and doctors should strike for greater pay, and should meet in solemn assembly to consider their present and prospective condition, is it to be supposed that they would listen to the speeches and theories of mechanics?

But I propose a word to my fellow-laborers. That mechanics have grievances to contend with — such as inadequate labor, insufficient pay, humble social position, &c. — is not denied. That this is true is partly their own fault, partly that of their employers, and still further incident to the unavoidable mutations in the march of civilization. If most of these evils were not a standing complaint among all classes, there would be more hope of a speedy reform. What are they but the general evils of life, which must be encountered by individual intelligence, temperance, virtue, industry, economy, &c.? No "strikes," "mass meetings," and conventional decisions will prove a remedy for them, for it lies in a great measure in the individual sufferers. Some of Franklin's old maxims, such as, "What maintains one vice would bring up two children;" "Spend one penny less than thy clear gains;" "At the workingman's house hunger looks in, but does not enter;" — these common-sense sayings will weigh down a thousand "Resolutions" passed for the special benefit of laborers, with a score of new "Theories" thrown in.

Insufficient pay among mechanics is a standing complaint. There may be at times cause for it. Clerks make the same complaint; so do the members of the learned professions. In fact, there is not a calling exempt from it. Each vocation thinks all others better paid than its own — which shows the bias of partiality. But are not all of us as well paid, if not better, than our fathers were? and are not many of the necessaries of life cheaper than they were fifty years ago? Besides, how can the price of labor be regulated for any length of time? Labor, like a commodity in market, will bring what it is worth at the time; and its worth is regulated by the kind, (or quality,) the supply and demand. Hence good, steady, and active workmen will procure higher wages than those of an opposite character; and it is just they should. If a certain price is given for making an article, (a coat, for instance,) the man who can be *relied upon* to make it, not only well, but promptly, will receive the better wages and more steady employment.

Intemperance has had a more baneful influence upon mechanics than upon any other class — if, indeed, it will admit of any comparison. Numerous instances have come under the writer's observation, where competent workmen have suddenly disappeared for a few days, or a week, in the midst of a busy time, and return with excuses of sickness, or of being unexpectedly called away — when in fact they have been on a pilgrimage to Bacchus, and spent their last dollar, perhaps cent. In a short time the mission is repeated; the employers ascertain the cause of absence, and discharge them for more steady workmen. Their reputations being hurt, to procure employment they are obliged to come down in prices. The consequence is, they get some employment: but continuing to spend for that vice enough to "bring up two children," their families necessarily suffer. Added to this vice is very frequently laziness, or extravagance; sometimes the latter may exist without much of the former. Men in these desperate circumstances are always ready for a "strike," when some bold spirit, with more influence than themselves, presents himself as a leader. The consequence is, a temporary noise and bluster, and all settles down into the quiet old shape — the most competent and industrious receiving the greatest wages, who flourish and frequently rise to the means of competence upon it, while those discontented spirits, who are continually exciting rebellion against their employers, and forgetting that a trade, to be good for any thing, must be constantly worked, continue in poverty, repining at their lot, till the day of their death.

Mechanics frequently complain that they cannot rise in the world. If the complaint is well founded, may not others make it? No man can rise without the necessary virtues; and is not, generally speaking, the mechanic's lot (in his own vocation) as good as the merchant's or professional man's? If the former frequently fails, does not also the latter? Mechanics ought not to expect to rise to eminence as statesmen, any more than lawyers expect to be famous as

mechanics or artists. Each class should expect to rise only in its own calling. The names of our statesmen, divines, physicians, and merchants echo from the old world with no more distinctness than those of our artists and mechanics — particularly our sculptors, painters, machinists, and ship-builders. Few men can rise to eminence in any calling; but I think the laboring class, *as such*, (setting aside our Franklins, our Shermans, and our Rittenhouses,) furnishes a generous share. Let the mechanics emulate the talents and virtues of such men, and endeavor to rise — not hastily, by anarchy and confusion, without merit, but rooted upon good principles — gradually to rise, by challenging the sunshine of public favor.

Every man can be engaged in something profitable, without losing scarce a moment; and he who is thus industrious has little time to complain of his position. The industrious man is happy; and "Poor Richard's" maxim, "Flee pleasures, and they'll follow you," is emphatically true. There are but few persons who know what the sweetest pleasures are; they can only be found in the path of duty. If mechanics would generally give more attention to the cultivation of their minds, they would find themselves gradually ascending in the scale of respectability, and would look with less envy upon the rich. Their path would be lit up with the most cheering rays of light, and many an unhappy hour would be redeemed from despondency.

The mechanics of this country ought to be thankful that they were not born the subjects of any European government; for in these, public policy throws many impediments in the way of the laborer which are not met with in this. Wealth there is more the basis of respectability than character. That old unjust system of perpetual entail of real estate, keeps a few, and perhaps unworthy, families rich, and many respectable families poor. Nothing tends so much to the welfare of a nation, and nothing makes so good subjects, as easy access to real estate — to some tangible property. In England, immense numbers of aged parents are thrown upon their children for support, or into the almshouse; and young men, instead of receiving from such parents a little capital, with a fair education, are bound to support them, while hardly able to support themselves, and in due course are compelled to take their places. And thus a ruinous system of government for the masses keeps them (with few exceptions, perhaps) forever poor. Here in this country, the case is different. We have plenty of land, which can be had cheap, in small and desirable quantities. The government is emphatically for the masses; it diffuses intelligence and opens the avenues of power and respectability. But industry and prudence are needed, and these qualities no government can supply.

Many mechanics, as well as merchants, have, I think, a false idea of business. Enterprise, with some, is only a softer name for knavery. The greater number of young men, when they set up in business, repudiate old-fashioned economy, and think it necessary to make a great noise and show. They are full of hope, and verily believe that fortunes are easily made. Hence they live beyond their means; and, finding themselves sinking, hang with desperation upon pride till every resource fails them, and then, not only fall into bankruptcy themselves, but carry more honest men down with them. If reinstated, many again pursue the same course, thinking that a character for enterprise requires it; and down again they come, by continually attempting to jump over their own heads. Others fail from sheer idleness. "He that hath a trade, hath an estate; but then the trade must be worked," says Franklin; and we might add, that the trade must be worked by himself, and that faithfully and diligently. It will not do for a man to stand on his dignity, and simply *oversee* a petty job, as many do; but he ought to keep himself employed till his business is extensive enough to warrant his continual superintendence.

Success in life is difficult to define. If it requires wealth, then few are successful; if an honest competence, then many are. There is no calling so elevated as to be above failure; none so humble as to be beneath ordinary success. That magic word, "Labor," is the true and only philosopher's stone; and blessed are they who believe in its omnipotence. Poverty will always be a public burden; but it does not continually rest upon the same shoulders. By industry and economy, one escapes it; by idleness and extravagance, another takes his place.

Let mechanics beware of visionary communists, socialists, levellers, and the whole buckram phalanx of Utopian reformers, who (in the language of Pope) "quitting sense call imitating God," and apply themselves sedulously to their business, and, in the natural course of God's providence, they have every guaranty of success. L.

Glass Varnish. — The Maine Farmer states that a kind of soluble glass may be made, which, being applied to wood, will render it fire-proof. Take fifteen parts of powdered flint or quartz rock, ten of potash, and one of charcoal. These are melted together, then worked in cold water, then boiled with five parts of water, in which it will dissolve. It may then be applied to wood work or any other substance. As it cools it dries into a transparent varnish or glass, and the substance thus becomes coated in such a way as to render it incombustible. The editor adds, that he has never tried the experiment himself, but that it would not be difficult or expensive to give it a trial.

New Razor. — The London Patent Journal contains an engraving of a *guarded* razor, warranted not to cut the skin in the process of shaving. Mr. Wakely, in the London Lancet, calls it a splendid invention, and affirms that it "can be used by the operator in almost any situation. It can be used in bed, on a railway, or even in a carriage on the common roads. The operation of shaving is effected in an inconceivably short space of time, even by the most timid or nervous.'

DAIRY MANAGEMENT.

This is a subject of great importance to the farmer. In numerous cases, where the cows and their food are equally good, and they are managed with equal skill, and the expense of dairy management is about equal, there is a difference of one half in the value of the products. All this wide difference is owing to skilful dairy management on one side, and negligence and mismanagement on the other. The best butter is sold in this market 100 per cent. higher than the poorest.

We copy, from the Transactions of the Essex Agricultural Society, the report of the committee on dairy products, of which J. W. Proctor, Esq., president of the Society, is chairman. It is a very able and elaborate document, and our farmers will find in it much valuable information. We shall continue the report, and give several statements of the competitors for premiums, with occasional remarks of the committee.

REPORT ON DAIRY PRODUCTS.

The committee on dairy products were gratified to find so many entries, and such fine specimens of butter. The parcels were entered as required, by the numbers only, and were examined without any knowledge of the persons by whom they were made. The several parcels of June butter were first compared with each other, and the several parcels of September butter likewise. After the opinion of the committee was made up, upon the specimens presented, the several statements were examined and compared. Although there was found to be important differences in the quantities produced in different statements, still there was no sufficient reason to vary the awards as made upon the quality. Some of the statements were found to be not in strict conformity with the conditions on which the premiums were offered; but no material variations were noticed in those of the successful claimants. That no injustice may be done to any claimant, the statements will be published as presented, in connection with the report. They have been carefully scrutinized, and such of their characteristics as are worthy of special remark will be particularly noticed; not for the purpose of censuring any one, but in the hope of instructing those who are willing to learn.

The processes of keeping the milk and of making the butter are so nearly alike, that it would seem all of the claimants had been taught in the same school. It is not strange that this should be so, as they knew before whom their lesson was to be recited. Those modes which had been found most successful in years past, would be most likely to be imitated.

It should be remembered that our premiums are offered "*for the best produce on the farm*," and not simply for the best specimens exhibited.

It is expected of the claimants to state distinctly the amount produced in the month of June; and also in the *four months* next following the 20th of May. It is highly important that all the particulars in the management, from the first milking of the cow, to the moulding of the butter for the market, should be carefully noted. If these facts could be presented in a journal form, so that the feed of each week, and the produce of each week, could be distinctly seen and compared, it would be a source of much instruction.

The design of requiring statements for particular periods of time, is, that all statements should have reference to the same period, so that they may with propriety be compared together. If, for instance, one person takes fifty days, from May 20 to July 10, and another fourteen days, from June 10 to June 24, there can be no fair comparison between the two. We can easily conceive of such an arrangement of the pastures, and of the feed of the cows, for a period of *fourteen days*, as would show a very different result from what could be produced in *fifty days*. These facts are adverted to, because some of the statements are made in this manner. We want no forced statements; — we care not how good they may be; but we want them in the ordinary way; we want to see the whole truth, without any artificial appliances. We do not want to meet the *dairy-maid* in the parlor, arrayed in her silks and ruffles; but we want to meet her in the *dairy-room*, with a smiling countenance, clean hands, and a neat apron, ready to show how the cream is daily taken off, and how the butter is daily taken care of.

There are many facts in relation to the making of butter, of great importance, to be distinctly noted. Instance: from some we learn that the quantity of butter is materially influenced by the manner of milking the cows; — by being careful entirely to exhaust the bag at each milking; — *one pint* at the close being said to be of as much value as *four* at the *commencement*.

It is presumed that there is a certain point of time, after the milk has been set, when the cream can be severed from the milk to the best advantage. We have looked through the statements to ascertain when this is. We find them varying from twenty-four to seventy-two hours; about as definite as the size of a *piece of chalk*. What is wanted is, a rule for the guidance of those who shall undertake to manage the business without having had experience. Without doubt, many of these successful butter-makers have the right rule in their minds, but have never yet so defined it as to be able to convey it to others. The probability is, the longer the cream remains, the more there will be of it; but may it not remain so long as to impair the quality of the butter? This may depend much upon the character of the *place where* and the *vessels in which* it is set. Nearly all speak of setting the milk in *tin pans*; — *how deep* it shall be, whether two, four, or six inches, they do not say. All concur in assigning a clean, airy, and cool place for the milk to be set in; and all concur in approving of entire cleanliness in all the departments.

What shall be done with the cream, after it is collected? Some place it in a bucket in the well; others in pots, in vaults constructed for the purpose. The best position we have noticed is, to have a neat apartment excavated below the ordinary cellar, and there to keep it, until the convenient time for churning. This should be as often as a sufficient quantity is accumulated, to be churned to advantage. The kind of churn, and the temperature of the cream at the time of churning, are both to be considered. It is said a temperature from 60° to 65° is the most favorable. If this be so, it should always be brought to this temperature, before the agitation of the cream is commenced. Crowell's thermometer churn is constructed with special reference to this point. It also professes to promote a proper circulation of the air, at the time of churning. Whether this *air movement* is fanciful or real, I leave to wiser chemical heads than my own. The quality, as well as the quantity, of the butter depends much upon the churning process. When dog-days come on, we have frequently heard complaints that the cream was *bewitched*, and the butter would not come; when, in truth, the fault was not in the cream, but in those who managed it.

Many of these little things, which a skilful manager of a dairy is accustomed to observe and practise, and which are thought too trifling to be noticed, may, in fact, constitute the real differences between the making of good and ordinary butter. That such differences do exist, we see exemplified every week. Take, for instance, in any of our towns, two farmers, situate side by side, on lands similar: you will find one of these going into market on Saturday, with butter soft and greasy, with small particles of buttermilk oozing out of it; while the butter of the other is in neatly-formed lumps, hard and regular, of a bright yellow color; the one is slowly sold for *a shilling* a pound, when the other readily commands *a shilling and a half*, from purchasers much better satisfied with their bargains. Why this difference in price, unless it be in the management of the dairy? One of these farmers will be able to thrive and flourish, with painted buildings, and neatly-arranged fences; while the other will have his windows stuffed with rags, and his fences going to ruin.

It is not enough for claimants to say, in their statements, that *about* an ounce of salt is applied to each pound of butter; or that it was salted to suit the taste. Such expressions afford no rule for the instruction of others. Tastes may vary as much as hands in weight, or feet in measurement; and the word *about* has too much of the quality of *india-rubber* to fasten any thing. For example: in the statements before us, there is a variance in the quantity of salt used of *one half* — say from three fourths

of an ounce to one and a half ounces to the pound. We are aware that there may be differences in the quality of the salt, and that the condition in which the butter *comes*, may at some times require more salt than at others, and, consequently, that the judgment of the persons *working it* is to be exercised; but still, we think it is in their power to define how this judgment is to be applied; and this is the very thing we want to be informed about. These little peculiarities which enable good dairy-maids to present the nicest of butter.

On looking over the statements presented, several difficulties occur in instituting a comparison. Some speak of *cows only*; others of *cows and heifers*. Some speak of *old cows*; others of *young cows*. What the fair proportion is which a heifer bears to a cow, we have no certain means of determining; but, for convenience sake, we assume that *three heifers*, the first season in milk, may be reckoned equal to *two cows*. We are also embarrassed by the fact, that different families may consume very different quantities of milk and cream in the family. Ordinarily, we expect to find on a well-regulated New England farm, a man and wife, five children, a man servant, a maid servant, and a boy to drive the cows, &c., — *ten in number*, — for whose use the milk of one cow, at least, should be appropriated. There may be variances from this. There may be *bachelors*, who take care of their own dairies; but such care will never be considered as a recommendation for premium. Although their butter may be *sweet* in the *churn*, ten chances to one it will be *rancid* before it comes to the *table*.

Another embarrassment, and one that should be remedied by the trustees themselves, is in the *variances of time* for which the statements are made. Some we notice from May 20 to July 5; some from June 1 to July 9; some from May 20 to September 25; some for fourteen days only in June — periods that cannot accurately be compared with each other. Such statements not only vary from the rule prescribed, but they present also insuperable difficulties in the way of just estimates. We have been thus particular in enumerating these, that claimants may understand, if they would expect others to judge *rightly* of their claims, they must *begin right* in their statements. It is not enough for them to say, that the offer of the premium is not made exactly as it should be: when they present their claims, they assent to the propriety of the offer.

We present, in a tabular form, an abstract of the several statements, supplying deficiencies by the *best guesses* (exercising our privilege as Yankees) in our power to make.

	Names.	Residence.	Cows.	June Average to a Cow.	Four Months' Average to a Cow.	Total in Four Months.
1	John Stone, Jr.	Marblehead,	4	45 lbs.	155 lbs.	620 lbs.
2	Daniel Putnam,	Danvers,	6	30 "	120 "	720 "
3	Elijah Pope,	Danvers,	4	28 "	111 "	444 "
4	Charles P. Preston,	Danvers,	7	30 "	112 "	784 "
5	George Pearson,	Saugus,	6	30 "	109 "	654 "
6	Nathaniel Felton,	Danvers,	8	32 "	110½ "	884 "
7	Jonathan Berry,	Middleton,	8	30 "	97¾ "	790 "
8	Duncan M'Naughton,	Byfield,	5	25 "	94½ "	490 "
9	John Preston,	Danvers,	4	26 "	91½ "	366 "
10	Nathan D. Hawks,	Lynnfield,	4	25 "	85 "	340 "

This shows an average product of *one pound* to a cow, *daily*, through the month of June, and *seven eighths of a pound, daily*, to a cow, for the four months from May 24 to September 24.

When the extraordinary drought of the months of August and September are taken into view, as also the family consumption of milk before adverted to, it is but fair to say, that the statements presented the present season give evidence of a production of *one pound of butter, daily*, for each cow, for the four best months of the season.

How this will compare with former years, is not distinctly in mind. We remember, when the Society first commenced their offer of premiums, Colonel Jesse Putnam was successful in obtaining the first premium, and that his cows averaged a produce of two hundred pounds each, in a period of six months. This was thought a large product, and was accounted for by the extraordinary feed of the cows; the colonel being a man not accustomed to leave any thing he undertook half finished. We have known some of the present claimants, with whom we have been acquainted *as such* for nearly *thirty years*, to present statements of a produce of eight pounds of butter a week, to each cow, for a number of successive weeks. These were among the best products, in the *natural way*, that we have known. We have often heard of cows that yielded two pounds of butter a day, and more; but we have never known a herd of such cows, or any considerable number together, that would do it, without using a feed for them that would "cost more than it came to." If such can be found, we should consider attention to such a stock one of the best modes of using a farm.

There is so much time misspent, and labor lost, in the making of poor butter, that we feel it to be an imperative duty to endeavor to impress the minds of farmers, and of their wives and daughters, with the importance of giving heed to this subject. There are some things in relation to it so well settled, as to be universally known by all those who have any knowledge in the matter. There are others, on which there remain great differences of opinion and variance of practice; as, for instance, in the statements before us, we find some of the makers of butter apply *cold water* freely to the butter, both before it is taken from the churn and afterwards; "to aid in extracting the buttermilk, and to harden the butter," as they say. Others bring it into form without the use of water, and say that its use impairs the flavor, and essentially injures the quality of the butter. How shall it be determined which of these is right? This is a practical question, applicable to every churning; quite too important, therefore, to be left in doubt. Probably most persons do as their mothers used to do, without inquiry whether there is any better mode of proceeding. In an intelligent article upon this subject, from one of the most successful makers of butter in this county, (see Transactions for 1840, p. 72,) we find this sentence: "More depends on this than any part of the process, in making good butter. If our dairy women would apply double the labor to half the quantity of butter, and thereby thoroughly remove all particles of buttermilk, this one half

would be worth more than the whole, in the condition it is usually sent to the market."*

The churning process is an essential part of the making of butter. At our request, Mr. Felton, who has for several years obtained the first premium on butter, has annexed to his statement an account of his mode of churning. We looked in vain through the several statements, for information on this point. If it be true, as it is said to be, that some kinds of churns will bring the butter in one half the time, with less than half the labor, that others require, this is a fact of great importance in determining the best mode of making butter.

We have heard of many improved churns, but have seen none, the structure and principles of which better correspond with our ideas of utility, than Crowell's Patent Thermometer Churn. We cannot so well express the idea we wish to convey, as in the letter annexed, from a gentleman, himself expert in all the arts of butter-making.†

* I am informed by a lady, who was instructed by her mother, who, for a period the memory of man runneth not to the contrary, had the reputation of making the very best of butter, that she never applied cold water, or any other water, to the butter, after it was churned. She considered such application injurious, especially if the butter was intended to be put down, as she said; that is, to be preserved for future use. That it would not keep so well when soaked in water; was not so fine flavored; and was more likely to become rancid. Perhaps my respect for this lady (who is my mother) influences my opinions; nevertheless, there are hundreds, in Salem and vicinity, who for years used their butter, when they had vigor to work it, who will bear testimony that no more reliable authority could be cited. In a matter of this kind, I should place more confidence in the practical experience of a sensible woman, than in all the chemical analyses of all the Davys and Liebigs combined.

† Dear Sir : I have used the "Thermometer Churn" this season, and have been much pleased with it. It possesses a decided advantage in the spring and autumn, when the cream is generally so cold as to be a long time in forming butter in other churns, as by filling the space between the zinc and the outer side of the churn with hot water, the cream may be easily brought to the proper temperature for churning. In warm weather, however, I do not think much is to be gained by filling this space with cold water, as the cream should be sufficiently cooled before it is put into the churn; and if it is not, it could hardly be done by cold water, in the short time generally occupied in churning. Still, in warm weather, I have found that the Thermometer Churn will bring the butter in much less time than any other I have ever used; and this, I think, may be owing to the form of the slats of the dasher. These have a wide and flat surface, obviously producing more agitation of the cream than the round slats of Galt's churn and of Kendall's churn. On one occasion, I have churned thirty quarts of cream into butter in eleven minutes, in the Thermometer Churn, though it ordinarily takes a longer time, an average at least of half an hour; and a shorter time than this I do not think desirable.

It is claimed for some of the lately invented churns, the Atmospheric Churn, for example, that they will produce butter in four or five minutes; but I think it is very questionable whether, in so short a time, all the butter can be extracted from a given quantity of cream, or the butter can be of the best quality. What, to me, seems the greatest desideratum in churns is, some improvement in the application of the moving power, by which the amount, or rather the severity, of labor may be lessened in churning. As it is now, it is work, and often hard work, too, for an able-bodied man. But if a churn could be made to work so easily that a boy could operate it without fatigue for three or four successive churnings, it is evident that a great gain would be made in the expenditure of labor. "Blessings on the man who invented sleep!" exclaimed the renowned Sancho Panza; and equal blessings have I often been inclined to invoke for the individual who would make churning easy.

Very respectfully, yours,
ALLEN W. DODGE.

Hamilton, *Oct.* 23, 1849.

Mr. Howard, of the Albany Cultivator, authority second to none other in the country, says, "According to our experience, the best butter is not produced by a very *short* nor a very *long* period in churning. If it is churned too quick, the separation is not complete, and the butter, besides being less rich, is deficient in quantity; if the process is continued too long, the butter is likely to be *oily*. We think our best butter-makers would decide that churning for ordinary quantities, say from ten to twenty pounds, should occupy from *thirty* to *fifty* minutes." This corresponds entirely with the opinion expressed by Mrs. Nathaniel Felton, who said "she did not want the butter to come in less than thirty minutes; it is not so good when it comes in a shorter time."

We are informed, by some of those who have been most successful in the management of their dairies, that they look more to the *quality* of the milk given by the cow, than the *quantity;* and in selecting their cows to be kept for this purpose, they choose only those which give milk adapted to the purpose. It is unquestionably true, that one quart of milk from some cows, will yield as much, or more, butter than two quarts from others. In selecting cows, therefore, the quality of their milk should be tested, either by making butter from it, or by the use of a *lactometer*, which shows the comparative thickness of cream that will rise on similar quantities of milk. Mr. Holbert, an experienced farmer of New York state, says, "I find, by churning the milk separate, that *one of my best cows* will make as much butter as *three* of my poorest cows, giving the same quantity of milk." We have heard the same thing, substantially, from dairy women themselves. Let those cows which abound in *quantity only*, be turned over to those who care only for filling their measures; and let those that afford *substance* as well as *show*, be kept to supply the churn.

[TO BE CONTINUED.]

NOTICES OF PUBLICATIONS.

The American Fowl-Breeder; containing full Information on Breeding, Rearing, Diseases, and Management of Domestic Poultry; also, Instructions concerning Pure Stock, Crossing, Caponizing, &c., &c., with Engravings; by an Association of Practical Breeders. Published by John P. Jewett & Co., Boston.

This cheap work contains a large amount of useful information, embracing valuable contributions from some of the most skilful fowl-breeders and fanciers in the country. It should be in the hands of every one who keeps fowls, or is well situated to attend to this pleasant business or recreation. The mechanical execution of the work is highly creditable. The engravings are by Brown, and in his best style. See advertisement on cover.

The American Agriculturist. This sterling work continues to sustain its high reputation. It is devoted to the general agriculture of the whole country. Messrs. Allen, editors, who are well known as able, practical writers. C. M. Saxton, 121 Fulton Street, New York; J. C. Butters, 19 State Street, Boston.

The Fruits of America. This beautiful and splendid work, by C. M. Hovey, Esq., author of the Magazine of Horticulture, contains richly colored engravings, accompanied with the wood and foliage

of all the choicest fruits cultivated in the United States, from paintings from nature, by W. Sharp, and chromolithed under his direction. The letter-press contains full descriptions of fruits, habit of trees, &c., &c. As a work of accuracy and fine taste, this holds an elevated rank, highly creditable to the author, the artist, and to the country.

Hovey's Magazine of Horticulture. Mr. H. is among the most indefatigable of editors, sparing no pains, either by expensive experiments, or by thorough investigations, to describe and introduce new and valuable productions, and clear the nomenclature of fruits of the great confusion for which it has long been noted, and which is a great difficulty with the fruit grower.

Address of Hon. Marshall P. Wilder, before the Norfolk Agricultural Society. We had the pleasure of listening to this able address, and we noticed it in our report. The important subject of agricultural education receives a good share of the author's attention in this address, and we shall at another time present our readers with some interesting extracts on this subject.

Address of Hon. Asa T. Newhall, before the Essex Agricultural Society. This sensible discourse is distinguished for its practical character, giving useful instructions in the details and results of the author's experience in various branches of farming.

Letters to Ladies, in favor of Female Physicians, by Samuel Gregory, A. M., Secretary of the American Medical Education Society. Pamphlet, 48 pages. Boston: sold by Bela Marsh, 25 Cornhill. In this work, the author has ably maintained his commendable position by numerous and substantial reasons. Such is the peculiar innate modesty and delicacy of woman, that, in many cases, she should by all means be attended by physicians of her own sex; and we are happy to find a strong movement in favor of this natural privilege. This work should be in the hands of every lady in the country. Price 12½ cents. It may be forwarded by mail.

The Scholar's Leaf of the Tree of Knowledge, by Walker & Barrett, Portland, Me. Book form, semi-monthly, at fifty cents a year. This is one of the most interesting and instructive works for youth. Its plan is excellent, and it is ably conducted. A new volume commences with the year.

Transactions of the New Haven Horticultural Society. This work contains the excellent address of S. B. Parsons, Esq., of Flushing, N. Y., with the doings of the Society.

Report of the Annual Exhibition of the Cincinnati Horticultural Society, containing various reports, &c., &c.

Address before the American Institute. An able discourse on the Progress and Improvements in the Mechanic Arts, by Rev. J. Alburtis, Assistant Editor of the Farmer and Mechanic.

Pathfinder Railway Guide, with a map of railways in New England. A valuable work to every traveller. Boston: Snow & Wilder.

A COUNTRY HOME FOR ME.

I do not ask that city spires
May round my mansion rise,
But that my home may be where trees
Are pointing to the skies;
Where flows the silvery mountain rill
With a sweet and merry sound,
And the echo of the hunter's gun
Shall through the woods resound.

I cannot love the city's pomp,
Its fashion and its pride;
I had rather dwell in a humble cot
Upon the mountain side,
Where sweetly blooms the acacia-tree,
The tulip, and the rose,
And where, beside the rivulet,
The early violet grows.

I would not give my quiet home,
Its happiness and health,
For all the city palaces,
Its pleasures and its wealth;
I love to breathe the mountain air,
And roam where all is free.
Let others choose a city life,
But a country home for me.

THE OLIO.

Argument and Assertion. — Assertion is like an arrow shot from a long bow; the force with which it strikes depends on the strength of the arm that draws it. But argument is like an arrow from a cross-bow, which has equal force, whether shot by a boy or a giant.

"I don't know where that boy got his temper; he did not take it from me." "Why, no, my dear; I don't perceive that you have lost any," was the affectionate reply.

"Give me a kiss, my charming Sal,"
A lover said to a blue-eyed *gal*.
"I won't," said she; "you lazy elf,
Screw up your lips, and help yourself."

Courtship of the late Dr. R. — "Dear Sir: I am sorry that I cannot accept your kind offer, as I am already engaged; but I am sure my sister Ann would jump at it. Your obliged, Eliza L."

"Dear Miss Eliza L.: I beg your pardon — I wrote your name in mistake; it was Miss Ann I meant to ask — have written to her per bearer. Hoping soon to be your affectionate brother, J. R."

An Irish veterinary student, when under examination, was asked what he would recommend if there was a horse brought to him with a particular disease. "Och! by the powers," was the answer, "I would recommend the owner to *get rid of him immediately.*"

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be neatly bound at 18¾ cents, or elegantly bound in muslin, embossed and gilt, at 25 cents a volume. As it is stereotyped, back numbers can be furnished to new subscribers.

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VOL. II. SATURDAY, JANUARY 19, 1850. NO. 2.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

AGRICULTURAL MEETINGS.

On Tuesday evening of last week, the first agricultural meeting was held at the State House. By some mistake, the meeting was called a week before the appointed time — on the second Tuesday of the month, instead of the second Tuesday of the session. On this account, the meeting was not large, but it was quite respectable as to numbers, and still more so as to the zeal and interest that were manifested in the great cause that claimed attention.

The meeting was organized by the choice of the following officers: Hon. William B. Calhoun, President; Hon. John Daggett, Hon. George S. Boutwell, and J. M. Earle, Esq., of Worcester, Vice-Presidents; Mr. Buckminster, of the Ploughman, Mr. Cole, of the N. E. Farmer, Mr. Punchard, of the Traveller, and Mr. J. C. Moore, of the Atlas, Secretaries and Reporters; Hon. William B. Calhoun, Samuel Carpenter, Esq., of Attleborough, and Paoli Lathrop, Esq., of South Hadley, Business Committee.

As Mr. Calhoun was absent, Mr. Daggett was called to the chair, and presided.

Voted, To commence the meetings at 7 o'clock, and close at 9 o'clock, precisely.

Voted, That the speaker who opens the discussion of a subject, be limited to thirty minutes, and the speakers that follow, to fifteen minutes.

On suggestion, the president announced that the general subject of agriculture was open for discussion. Several gentlemen made desultory remarks on various branches of this subject, particularly on the great improvements that have been made in this country; the various improvements of which agriculture is susceptible; the importance of education, connected with progress in this art, &c. There seemed to be a general feeling in favor of having lectures before the meetings, a part of the time this season.

"Agricultural Education" was proposed and accepted for discussion at the next meeting.

IMPROVE WET LANDS.

In many cases, gravel or sand can be hauled on to wet lands more conveniently in winter, as the ground is frozen, than at any other season; and, with the farmer, this is usually a less busy season than any other. If the gravel be taken from the bank, the ground's being frozen will not be any serious hindrance.

Gravel is the best article for the improvement of wet lands, as it is porous, and allows of ready drainage; next in order is sand, and then loam. Even clay and mud are advantageous, as they cover up vegetable matter, and cause it to decay and form rich vegetable mould; and they serve also to elevate the surface and promote drainage.

In some cases, low lands are too moist merely from their locality, or lowness and flatness, that prevents drainage, the soil being light and porous. Such lands, after being well drained, would be benefited by clay, mud, or loam, rather than by more porous substances.

In many cases, gravel or sand is not only necessary to elevate the surface of wet land, and render it drier by more thorough drainage, but herdsgrass, and other productions, need silex or sand to give firmness to the stalk. When a soil consists wholly of mud or vegetable matter, the grass often falls down before fully grown, while the soil contains all the elements of nutrition excepting silex, which is indispensable to the perfection of many plants, particularly herdsgrass, redtop, cane, Indian corn, wheat, rye, and other plants of firm stems.

MANAGEMENT OF BEES.

As the days are becoming longer, and occasionally more mild, bees require extra care, else they will come out on warm days, and becoming chilled by cold winds, they will fall upon the snow and perish; for they are suddenly affected by the cold snow, and cannot recover.

The most simple mode of preventing this evil, is to shade the hive; then the bees will usually keep within, until it is warm enough for them to go at large without danger. In a warm location, the sun will often strike with considerable force upon a hive, which, with the natural heat of the swarm, will make the hive so warm that the bees will be induced

to come out when they are unable to endure the cold winds.

Without regard to the loss of bees in this way, it is far better to keep them shaded in winter, to avoid the extremes between cold nights and the warm sun of noonday. By keeping them in an equilibrium of temperature, as far as possible, the bees will be in a more healthy state; and, as they will lie dormant, they will consume far less honey than will be required when they are occasionally active.

By very exact experiments, in weighing bee-hives weekly, we have found that a swarm would consume honey much faster in July or August, in time of severe drought, when the flowers afforded no honey, than in the coldest months of winter.

We have put feeble swarms of bees, that had only a few pounds of honey, into a cellar, early in winter, and let them remain till spring, when the weather was sufficiently warm for them to go abroad; and the difference in the weight of the hive, at the time of putting it into the cellar and taking it out, was not perceptible, without weighing.

Bees require attention, but they are often neglected. A friend of ours had seven hives of bees, early in winter, which he put into a closet, in a central part of the house, where the temperature was nearly even, and they were all in good condition in the spring. The same season, another apiarian had six hives, which stood out in a shed, open at the south, exposed, during the winter, to occasional hot sun, cold winds, and the most rigorous cold by night, and one extreme often following another in rapid succession. The consequence of this improvidence was, a loss of one half of the swarms.

Large Hogs. — Major Daniel Tenney, of Sutton, sends us the following account of the weight of hogs raised and slaughtered by Mr. Daniel Day, of Northbridge: Two hogs were killed November 2, 1849, when fifteen months old, and weighed one thousand and sixty-one pounds. Two others were killed December 27, 1849, when sixteen months and twenty-seven days old, and weighed one thousand two hundred and fifty-nine pounds. As productions so large must be, in a great measure, the result of skill in management, we should be pleased to have Mr. Day's mode of feeding.

The next Patent Office Report. — The Commissioner of Patents has employed Dr. Daniel Lee to aid him in the preparation of the Patent Office Report, assigning to him the Agricultural Department of that office. Dr. Lee has edited the Genesee Farmer, and Southern Cultivator, with distinguished ability, and we are pleased to learn that so able assistance is employed in a document that may be made the medium of diffusing a large amount of highly valuable matter, but which has often been burdened with selections without taste or judgment.

CATTLE MARKETS.

For some time past, a cattle market has been held at Cambridge on Wednesdays. We understand that the sales at Cambridge are as large as those at Brighton; and, from the superior advantages of the location, it is supposed that Cambridge will become the principal market. It is on the Fitchburg and Lowell railroads, which, with their extensions and ramifications, run great distances into different parts of the country. The cattle driven from Maine pass through Cambridge, when on the way to Brighton.

We have engaged an able reporter, to give us an accurate account of this market, condensing the markets of the two weeks into one, with remarks that will show when there is any change from one week to the other.

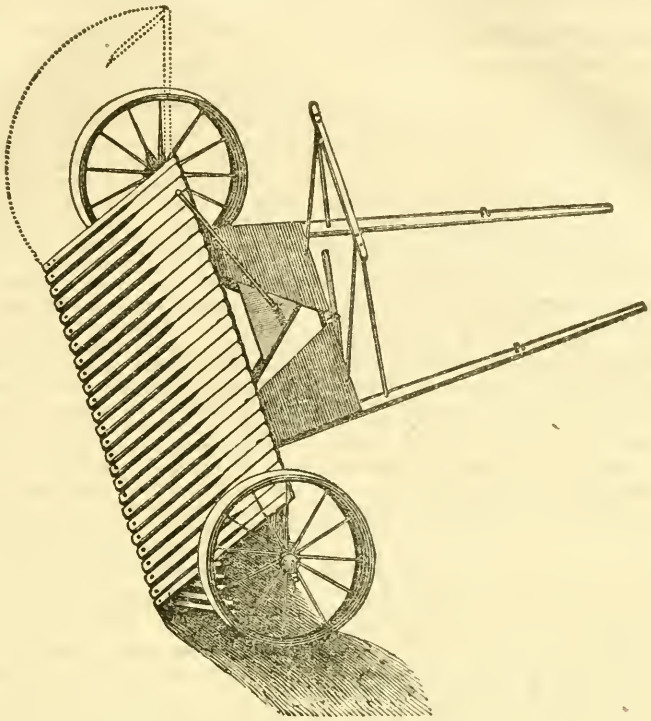
Bureau of Agriculture. — Our attention has been particularly called to the suggestion that a certain gentleman should be placed at the head of the Bureau of Agriculture, should one be established at Washington. We would observe to those who make these suggestions, that we consider it altogether premature to nominate candidates for professorships before they are established, and that it is a movement that will have a tendency to defeat the whole plan. We hope that nothing further will be published on this subject at present.

Maple Sugar. — A good man will make six or seven hundred pounds in three or four weeks. The man that took the premium at the State Show at Auburn, N. Y., in 1846, kept all vessels clean. He run the hot sugar into conical vessels, having a half-inch hole, plugged at bottom, until the sugar was thoroughly hard; then put three layers of woollen cloth on top, and poured on a pint of water every morning, for three weeks in succession. The water looked like brown molasses, and the sugar, when done, like loaf sugar.

MOSS UPON APPLE-TREES.

We suppose it is a fact that no apple-tree that is covered with mosses can be considered a healthy tree. It is, however, a matter of doubt with us, whether these mosses fasten upon the tree while it is vigorous and healthy, and reduce it to a diseased state; or whether it is necessary that there should be some diseased condition of the bark, before it will afford suitable ground for them to flourish in. These mosses or lichens are, to the trees on which they flourish, what lice are upon animals. Their effects upon the vegetable system are analogous to the vermin above named upon the animal system. It is, therefore, necessary, in order to insure a perfectly healthy circulation to the tree, that they should be removed and destroyed.

Diffusion of Seeds. — In boring for water, at a spot near Kingston-on-Thames, some earth was brought up from a depth of three hundred and sixty feet. This was carefully covered with a hand-glass, to prevent the possibility of any seeds being deposited on it; yet, in a short time, plants vegetated from it.



INDEPENDENT HORSE RAKE.

This rake was invented by Calvin Delano, East Livermore, Me., and patented by him, Feb. 1849. It is fitted to the hind wheels of a single horse wagon, and tended by a man or boy, who can *ride and rake*, and manage the horse with ease and certainty. As each tooth acts separately and independently, being suspended by a rod or hinge over the axletree, it is peculiarly adapted to *rough land*, as any tooth may rise over an obstruction without disturbing others. It works well also on smooth land.

The following remarks on this rake are from Hon. Moses Newell, West Newbury, one of the best practical farmers in Essex county: —

"I formerly used the revolving and spring-tooth rakes, and I think Delano's possesses all the valuable qualities of both the others, and has other improvements that add greatly to its value as a labor-saving implement. Among them are the following: It requires only one hand to tend the rake and drive the horse, and a feeble man may accomplish the work without much effort. It leaves the hay in better condition for cocking than the revolver; and is not liable to the objection made to the spring-tooth rake, by incorporating dust with the hay. A horse works it easier than he does either of the others; and it is moved from field to field like a cart, at any ordinary speed, carrying a crew of hands upon it. The teeth are less liable to be broken; and the horse being harnessed in the shafts, he never steps upon the rake, as he is frequently liable to do in backing, when harnessed to the revolver. It can be used on uneven or stony land, across dead furrows, or lengthwise of them, with the same certainty of raking clean, as on a level surface; and the whole ground is raked over as effectually as it would be by a hand rake.

"I hardly know how this model can be improved upon for the purpose for which it is designed. The rake accomplishes its work far better than I anticipated when I first viewed it; and I can, from several trials, on smooth and rough land, cheerfully recommend it to any one needing a first-rate article of this description."

These rakes are for sale by Messrs. Ruggles, Nourse, Mason, & Co., Quincy Hall, Boston; and by Mr. Charles Gill, Exeter, N. H.

REMEDY FOR THE POLL-EVIL.

In looking over the interesting pages of your paper, I have learned some very valuable recipes, for which I return you the following one, in exchange, viz.: one pint spirits turpentine, one half vial oil of spike, an ounce Spanish flies one ounce camphor, one ounce sal ammoniac pulverized; mix all together in a jug or bottle; let it stand about a week, and shake it well before using; make it almost boiling hot; after which pour it on the part afflicted; then heat in with a hot iron. Repeat this operation once a week for three weeks, keeping the horses in the dry.

Wetting Brick. — Few people, except builders, are aware of the advantage of wetting bricks before laying them. A wall twelve inches thick, built of good mortar, with brick well soaked, is stronger, in every respect, than one sixteen inches thick, built dry.

For the New England Farmer.

FERTILIZING INFLUENCE OF THE ATMOSPHERE.

Mr. Editor: Farmers are indebted, in a great measure, to atmospheric influences, in restoring their land to fertility. The continued cropping of land will reduce it to sterility, unless a constant stimulus be kept up by the application of manure; nor does it appear that manure of itself will prove a substitute for particular fertilizing elements derived from the air. Our knowledge of making manure is so limited that we are dependent upon the atmosphere to supply the deficiency, which our chemical knowledge is not adequate to perform, in composting our dung heaps. It is known to every experienced farmer, that his land will improve on having rest from exhausting crops; over stimulating produces premature decay; and land, like the animal or vegetable, stimulated to excess, will prematurely exhaust itself, and fall into decay. The fertilizing qualities derived from the atmosphere are not sent down in sudden showers, but the process is a gradual one: whether these fertilizers descend in the rain, frost, snow, or proceed from the winds, or are blessings unseen, which a drought produces, is a question I shall not attempt to answer.

The land must have rest at stated periods. In this time of rest, the air is administering its restoratives. In a time of drought, the land is unproductive, and consequently in a state of rest. It was said by an ancient farmer, that dry seasons would enrich his land equal to a good manuring. Be that as it may, after a succession of a few dry seasons, and on the return of rainy ones, I have seen the grass revive and grow on lands which previously had been almost barren, producing fine crops of a good quality without the aid of manure. In the twenty-fifth chapter of Leviticus, we find these directions from God himself to the children of Israel: "Six years thou shalt sow thy field, and six years thou shalt prune thy vineyard; but the seventh year shall be a Sabbath of rest unto the land;" "thou shalt neither sow thy field nor prune thy vineyard; and the Sabbath of the land shall be meat for you," — intimating that there should be great increase. It is not probable that God would have given these directions to the children of Israel, but for wise purposes. In this year of rest, the land was receiving a supply of "atmospheric influences" which tended to fertilize the soil by decomposing vegetable matter, or distributing their imperceptible fertilizers. It is to be wished that there could be some method contrived to enrich our land, less tedious and expensive than the never-ending and back-breaking process of composting manure.

Physiologists tell us that vegetables derive a considerable portion of their nutriment from the air. The ploughing in of grass crops would render the ground no benefit, if the nutriment which supplies the green crops was all derived from the earth, as the earth can restore nothing but its own. The same prolific principle, supplied from the air, which nourishes the growing plant, fertilizes the earth in its Sabbath of rest. I have an idea that the nutritive gases which escape from manure into the air, descend again to the earth, on meeting a condensing agent, and assist in the growth of vegetables, as well as fertilize the soil. The atmosphere is a magnificent chemical laboratory, where affinities, attractions, and combinations take place. Whatever this fertilizer may be, — whether nitre, ammonia, or some other agent, — we are much indebted to it for assisting us in making our fields more productive.

SILAS BROWN.

Wilmington, Mass., *Dec.* 22, 1849.

For the New England Farmer.

IMPROVING GRASS LANDS, &c.

Mr. Editor: I have read your paper with great profit and pleasure for the last year, and I promise myself the like advantage another year. I believe you have fully redeemed your promises to the public. There is a field in agriculture which is well occupied by the New England Farmer. I write now to express my sympathy in your views, and the object of your paper, and shall endeavor to gain for it more readers in Petersham. I wish you a happy new year, and many new subscribers and contributors.

I have some interest in farming, although my profession calls me to other pursuits. If it will not weary you too much, I will say, in few words, what I have done in the way of farming. I purchased, last year, some forty or fifty acres of land — pasture and mowing; the pasture grown up to brush, and the mowing run out. I have caused the pasture to be mowed *twice*, and thoroughly cleared up. By that operation, with the addition of "fixins," I can pasture four cows, where before I was told two could only be pastured. If you will remember, the early part of December, a year ago, was very mild. I improved it by buying manure and top-dressing some of the old mowings, which, I venture to say, for ten years had never known manure, save what was dropped by cattle feeding them down to the roots.

I made experiments of top-dressing with loam, and with horse and pig-pen manure, upon wet "runs" and high land. And my experience is very strongly in favor of this mode. Many have asked, in passing, why certain parts of the mowing seemed so green, when other parts were so brown and dry. I spread on a small square of a few rods some ten bushels of ashes; the grass *there* was almost three feet high; while all around the spot, with equal advantage — except the ashes — the grass was hardly five inches high in July. You may be sure that no theory against top-dressing shall prevent my pursuing a plan that works so well. Of course, I do not hope to renovate the land otherwise than by thorough ploughing. But it is idle to talk against the advantage of top-dressing, when properly done.

I will only add one experiment on making soil. I ploughed up a piece of land, formerly a barn-yard, and carted off on to the wet and uneven mowings the sods, and filled up hollows, grass side up. I then ploughed up the soil which was under the sod, and spread that also on the grass land. This last spring, I ploughed the spot over and over again, putting on ashes, charcoal, plaster, and privy manure, with long green manure from the cattle, and from that piece of land, stripped of sod and soil, I raised, by accurate calculation, at the rate of seventy-two bushels of corn to the acre; while in the field where I manured in the hill, besides spreading green manure, I could get only sixty-six bushels to the acre.

Mr. Editor, I want to make manure enough for ten acres of land. I have four cows and one horse, and have had, through last summer and spring, two pigs. How shall I do it?

JONAS AGRICOLA.

For the New England Farmer.

FOWLS.

Mr. Editor: Notwithstanding the subject of "fowls" has been pretty fairly discussed, for the past three months, I am induced, by a good feeling towards all poultry-raisers and venders, to offer a few remarks to add to this mooted subject. I consider myself among the number of those who have been keeping hens for profit, and can truly say that I feel

pretty well satisfied with the results. I consider myself amply paid for my trouble, with a clever net profit for my luck. I have raised no fowls to sell for an "extra price," nor any that I thought were suitable to offer for "public exhibition," although I have those among my flock of fowls which would be no discredit, when placed alongside of some that were offered for show and sale at the late Exhibition. I keep, on an average, one year with another, from twenty to twenty-five hens. They deposit from 2800 to 3000 eggs annually, besides raising from fifty to sixty chickens.

I have contented myself with keeping the pure-blooded, old-fashioned Yankee hens — those raised on Rhode Island soil.

This last fall, after having heard and read so much about the different breeds and varieties, I was induced to rise one step on the ladder, in order to be in the fashion; and, accordingly, I purchased a pair of the "Chitterpoats," a kind they tell me lay everlastingly, (and have no disposition to sit.) This is rather unnatural doctrine, but I'm bound to prove it by experience. I will give this breed a fair trial, and if they do not fulfil their "recommendation," I shall get rid of them; for, so far as size and beauty are concerned, my Yankee hens outdo them. I will venture to assert that I will select out one dozen of them, and a rooster to match, that will compete with the same number of most of those fancy breeds which brought $10 and $12 per pair at the late Exhibition; — that is, in the number of eggs and chickens in the course of a year.

"What's in a name?" The name *Yankee* here may not have so high-sounding title as the *Dorking*, Plymouth Rock, Cochin China, &c., &c.; but this is all owing to the familiarity of the name *Yankee*. It will not be many years before some of these new breeds of fowls will be in less demand. Many of them will not meet the purchaser's expectation. After having been fairly proved, those who have paid an "extra price" for some particular kind, may be glad to exchange, on our terms, for a pair of the old-fashioned barn-yard fowls. Every thing must be proved and judged by experience, to test its real value. The first introduction of a thing in market gives it a price, oftentimes, beyond its real value.

The Rohan potato, for instance, was eagerly sought after when it first made its appearance; but as soon as its qualities were tested, it was found *wanting* in those qualities which are found in good potatoes. It did not rank in the same neighborhood with the old-fashioned red and white potato. So it will be with many of the new breeds of fowls. Those who have paid as high as $15 for a pair of fowls, may, in less than five years, be glad to dispose of their whole "stock in trade" for that money.

It is not my design to discourage any one from purchasing whatever fowls he pleases; but my object simply is to build up the old-fashioned Yankee hen.

A. TODD.

Smithfield, R. I., *Dec.*, 1849.

For the New England Farmer.

CHEAP DRAINING.

Mr. Editor: I observe, in a late number, that you strongly recommend the adoption of tiles for draining purposes, and most properly, too; but the time required to introduce and establish tile-manufacturing will be necessarily so extended, as to justify my mentioning a very excellent substitute for the tile, which, with many of its greatest advantages, has, also, that of being within the reach of every one's power, as a recommendation.

About six years ago, I walked over one of the best farms belonging to the Duke of Portland, in the west of Scotland, when my attention was drawn to a field situated, as to natural conditions, similar to those around it. The latter had been all tile-drained, and was in excellent order. The former had been drained some thirty-two years previously, and looked equally well, although the trenches had been filled with *brushwood*, instead of tiles. Curiosity led me to open one of the drains so constructed, when I found the branches, therein deposited, in a remarkably sound state. I do not exactly know the organic structure of the soil; but my impression is, that it was formed from the debris of the *trap* formation, that prevailed in the locality. At the part of the brush drain opened, as well as at the outlets from each trench, the oxide of iron was liberally present; and what effect these natural circumstances would exercise on the preservation of the *brushwood*, I am not sufficiently acquainted with chemistry to show. Perhaps some of your scientific readers would furnish this information.

The practical conclusion I would draw from the foregoing is obvious. Farmers might avail themselves most conveniently of that material which they usually destroy by fire, and apply it to a permanently useful purpose. I say permanent; for it is well known that, so far as permanence is concerned, tiles do not, on an average, last more than twenty years, and the brush drains mentioned had worked well for thirty-two, and, I have no doubt, are working well at present — nearly forty years from the time they were constructed.

In the instance mentioned, the trenches were made two feet deep; but the soil was of an indurated character. Had the land been soft, or marshy, another six inches would have been necessary to make up for the subsidence of the soil, which always accompanies the withdrawal of water, and the solidifying of that part above the level of the drains.

The brush was chopped, so as to be placed in the trench evenly, and to the height of some twelve inches. The turf (inverted) was placed on the top, and *tramped* in, after which the trench was filled up.

I am not aware whether this system has been acted on or no. I furnish the fact on the supposition that it has not, and will be glad to find that I have been forestalled by practice. I am, &c.,

A FIRESIDE FARMER.

Boston, *Dec.* 29, 1849.

Remarks. — Since the introduction of subsoil ploughing, it has been a general custom, in England and in this country, to make drains about three feet deep, whether constructed of stones, tiles, or other substances, in order to allow of sufficient depth below the surface for subsoil ploughing. — *Ed.*

For the New England Farmer.

FRUIT — FOWLS.

Friend Cole: I am pleased that you sent me the New England Farmer, for one article is sometimes worth the cost of a volume. I think you have the right theory about the curculio sparing the plum-trees over paved ground. They know that they labor there in vain. This instinct of the insect is an important matter. I succeeded in raising a fine crop of Duane's purple plum, over a pavement, last year, after I had tried shaking the trees, and almost every other remedy, to no effect. I raised fine peaches last year, but no apples.

I have paid some attention to fowls. I like the Polands pretty well, for layers. Still, there is one great drawback on them, which I have never seen mentioned; therefore it may not be universal. I refer to their dying, from some imperfection in the formation of the egg, causing it to break in the body,

inducing violent inflammation, which generally proves fatal. What is the cause? Is it the incessant laying of this race, or are they a tender breed, and cannot stand the vicissitudes of the season? Some people say that they do not winter well. I think the defect I have named is not altogether owing to their excessive laying; for this evil attends them at the commencement of their laying. I am trying them this winter in a warm, plastered room, in order that they may be in an even temperature, and escape inflammation and fevers. If they do not succeed better than heretofore, I must give them up. My losses have been about one out of every four. I think that a cross of the Polands with the common fowl is better for laying than the pure Polands; but they die also. We now have some of the Shanghae, and mixtures; they do well. I say we, as my boy carries on the hennery.

I have been trying several years to make an "odd year" Baldwin. I obtained scions from a tree that bore large crops, invariably, in odd years. I set the scions in odd years, and then — odd enough — the first show of blossoms was in 1848. I picked off every blossom; and the tree blossomed tolerably well last spring, but it perfected only a few apples. Perhaps that was owing to the season; and my tree may yet be right. I fear not, however. We see by this how exceedingly strong is the disposition of the Baldwin to produce its fruit in even years. I think your odd-year Baldwin a fine affair. If I finally fail in this experiment, I shall be glad to avail myself of your aid in this matter. Yours, &c.,

ACTON. H. COWDRY.

REMARKS. — Several of the foreign breeds of fowls are rather tender, and the shells of their eggs are very thin. We think that this peculiarity is not owing to frequent laying, as we have had some races that laid only every second day, that laid eggs with shells so thin that we could not take them up, excepting with great care, without their breaking. Although the Poland fowls are distinguished as great layers, they require a warm place and extra care in winter, else they will not lay so well as our common hens, which are more hardy.

Unfavorable weather, the past season, is probably the reason that the Baldwin tree, under experiment, did not produce fruit, as it blossomed well. As to the year of grafting, even or odd, having an influence on the year of bearing, we have no facts or experiments; but as most early bearing trees come into bearing the third year after grafting, if the tree is rather old and thrifty, and other circumstances favorable, we should graft a tree in an even year, with a view to make it bear in odd years; as it would generally commence bearing in odd years, and so be likely to continue. This is, with us, hypothesis, and we should be pleased to hear the result of practice. We know of some cases that confirm the supposition, but there may also be cases to the contrary. Will our correspondents report facts that will throw light on the subject? — ED.

BUREAU OF AGRICULTURE.

The establishment of a "Bureau of Agriculture," at Washington, is a subject that has received considerable attention for the year past; and, as the President is disposed to encourage agricultural improvement, we hope that Congress will take up the matter, and do something for this great subject, that has been so long neglected by our government. Every other important branch of industry has received the fostering aid of Congress. Millions of dollars have been expended to encourage commerce, and the tariff has often been arranged with a view to protect manufactures. But agriculture, the foundation of all other arts, and far more extensive than all others, has received little or no attention; and the time was when this great branch of industry was not even named in the President's Message as a subject for action, and sometimes not even introduced into that important document incidentally.

But now the people demand that something shall be done for agriculture; and in obedience to this sovereign voice, something must be done. Our rulers should be wiser than the people, and anticipate their wants, and lead off in improvements; but in this particular they have been behind the age; yet we trust that they will respond favorably to the call that is now prevailing in every section of our country, to have legislative action in favor of agriculture.

At the late session of the Vermont legislature, a joint committee was appointed to inquire into this subject, of whom Hon. F. Holbrook, of Brattleboro', was chairman. This committee made the following able report, which was accepted by the legislature and approved by the governor: —

The founders of our government were desirous for the organization of a Home Department, devoted to the fostering and encouragement of agriculture, and other industrial arts; but it seems that for want of proper persons to organize and manage such a department, it was laid aside.

At a later period, Washington recommended an organization, entitled "A Home Department of Agriculture." His conceptions upon this subject — like every thing else emanating from his practical, far-seeing mind — are exactly to the purpose, comprehending, more or less directly, about all that need be said in its favor. They are as follows: —

"It will not be doubted that, with reference either to individual or national welfare, agriculture is of primary importance. In proportion as nations advance in population, and other circumstances of maturity, this truth becomes more apparent, and renders the cultivation of the soil *more and more an object of public patronage*. Institutions for promoting it grow up, supported by the public purse; *and to what object can it be dedicated with greater propriety?* Among the means which have been employed to this end, none have been attended with greater success than the establishment of Boards, composed of proper characters, charged with collecting and diffusing information, and enabled, by premiums and small pecuniary aid, to encourage and assist a spirit of discovery and improvement, by stimulating to enterprise and experiment, and by drawing to *a common centre*, the results every where of individual skill and observation, and by *spreading them thence over the whole nation*. Experience has accordingly shown that they are very cheap instruments of immense national benefits."

The methods of agriculture pursued by our fathers, in a new country, with a virgin soil and sparse population, were, perhaps, necessarily rude and improvident; but with a rapid, an unprecedented increase of population, improvements in tillage have not advanced with corresponding steps, or, generally speaking, been of long standing. By no more than a half century of bad cultivation, the soil of the older

states has become either entirely run down, or greatly impoverished of fertility; and insects, blights, noxious weeds, &c., the usual attendants of imperfect tillage, have increased and become accumulated to an alarming extent.

But the evil does not stop here. Too many of our intelligent, enterprising young men, observing the sad condition of the soil, and trained to false impressions, suppose that the agricultural profession, instead of being an open field for the efforts of science to improve, is but an arena, fit only to be occupied by the illiterate and unenterprising, under the guidance of blind tradition. They accordingly press in masses into other callings, filling them to overflowing, and leaving the "art of arts" to its fate.

The same process of deterioration, which has been so nearly completed in the Atlantic States, is now going on at the west. Although nature, by a long and a most liberal process, has endowed the lands of that section with a fertility elsewhere unknown, still they can be impoverished by the hand of man. The gradation to the same climax which has obtained in the older states, may be slower, yet, in the nature of things, it must be sure. Many of the occupants of those now generous soils, under the same mistaken impression that they are inexhaustible, which possessed the first settlers of the more fertile tracts of the Eastern States, will probably live long enough to find that, under a constantly depleting and careless husbandry, what has been done can be done again. These remarks are, of course, subject to exceptions; but they are still quite too generally true.

While this rapid destruction of fertility has been going on among us, several of the states of Europe have been as rapidly advancing in productiveness. There, agriculture is fostered and encouraged by government; men of the first attainments, and in the highest walks of life, devote their time and talents to its improvement; the lights of several sciences have been shed upon it; lands, under the cultivation of ages previous, have been so changed within sixty or seventy years past, by a judicious rotation of crops, and a system of manuring adapted to the soil and the crop, as to increase threefold in productiveness; thousands of acres of wet lands, heretofore of little or no value, have been drained, and are now under profitable cultivation; agricultural schools and colleges have been established; and the breeding of agricultural animals has been carried to so high perfection in England and Scotland, that any other breeds in the known world may be improved by a cross with them.

It may be said that such high cultivation cannot be profitable here. Neither can we afford to pursue *our* exhausting system of cultivation much further; for the decreased and decreasing crops will not remunerate our labor. If the state of things in our country will not warrant high farming, to the extent to which it is now carried in the countries spoken of, we certainly are warranted in the employment of far more enlightened and correct principles of tillage than are now common.

It has been well said, that "a prosperous agricultural district is not without patriots to defend it;" and it is undoubtedly true, that a high state of intelligence and scientific knowledge among our farmers, would conduce, more than any thing else, to the stability and perpetuity of our republic, and to the rapid and full development of its vast agricultural capabilities. We may truly say, in this connection, that "every accession which man gains to his knowledge, is also an accession to his power; and extends the limits of his empire over the world which he inhabits."

About three fourths of the population of our country are engaged in tilling the soil. Legislation to promote the prosperity of this interest, directly benefits the greater portion of the people; and indirectly, but not less surely, the remainder also. Now, our legislators and others have not been wanting heretofore in eulogy upon the antiquity, dignity, importance, and pleasures of agriculture; but where has been that fostering care which would seek to encourage and promote it? Where have the farmers been, who would demand for the cultivation of the soil that conspicuous place to which it is so justly entitled?

But we are happy to observe that an improved sentiment is becoming prevalent. That "agriculture *is* of *primary* importance;" that our nation has *already* "advanced in population, and other circumstances of maturity," to that position which "renders the cultivation of the soil an object of public patronage;" that there is no "object to which it can be dedicated with greater propriety;" — these truths are gradually making their way into the minds of intelligent, thinking men.

We have, at length, a Home Department; and the question presents itself, Can it, and will it, do any thing for agriculture? It can, and we trust that it will. The politicians *may* seek to make it an instrument for the furtherance of party; and, with the bugbear of "constitutional objections," they *may* tell us that nothing can be done for agriculture under this Department. But let the farmers, moving in a mass, call loudly for a Bureau of Agriculture, with proper and suitable patronage from the government. Let it be managed by "proper characters," selected with reference to their fitness for, and devotion to, the promotion of agriculture. They should be men above political contamination; and having a love for science for its own sake; and keeping constantly in view the one great object which they were placed there to promote, they would not be induced to "give up to party what was meant for mankind."

A Board of Agriculture, thus "composed of proper characters, charged with collecting and diffusing information, and enabled, by premiums and small pecuniary aid, to encourage and assist a spirit of discovery and improvement, by stimulating to enterprise and experiment, and by drawing to a common centre the results, every where, of individual skill and observation, and by spreading them thence over the whole nation," would soon be found to be "*a very cheap* instrument of immense national benefits."

1. This Board might be in correspondence with scientific men in all parts of our country, and with Boards of Agriculture in foreign countries, — thus drawing to a common centre, and from thence spreading broadcast over the land, all new facts and improvements of utility, all valuable suggestions, derived from the improvements and new lights of the various natural sciences which are intimately allied with agriculture.

2. Proper premiums might perhaps be offered to stimulate ingenuity, in the invention and production of the most valuable farm implements and machines; and by awarding to those which, upon proper test, were found best to answer a desired purpose, competition, and an ambition to excel, would be excited to the highest degree.

3. Persons in the employment of our government, abroad, might be directed to collect and transmit to the Department those new or improved seeds, fruits, plants, animals, implements, &c., which were deemed desirable. As it would be a part of the business of this Board to institute extensive inquiries into the utility of introducing, for cultivation among us, the various valuable productions of other countries; and as the great range of latitude, of soil and climate, which our country embraces, undoubtedly admits of cultivating the products of almost every other country; we may reasonably suppose, that a proper effort, in this direction alone, would be attended with very important results.

4. Premiums might be offered for the most able essays and the most satisfactory experiments to elucidate vexed questions and undeveloped principles in agriculture, — if deemed proper and desirable.

5. Extensive inquiries might be instituted into the habits of insects troublesome to cultivation, and the best methods to exterminate them, or prevent their ravages. As the nation "advances in population, and other circumstances of maturity," it becomes more and more an object, pecuniarily, with our cultivators, to raise many sorts of fruits, and tender plants, comparatively unimportant at an earlier period. Now, it is a fair estimate, that one half the productions of man, of this description, go to feed the insect world. Indeed, of some kinds, in some seasons, they take the whole. Their depredations upon the various field crops are oftentimes extensive, also. The subject of entomology is vast and inexhaustible; it requires such extensive, and yet particularly minute, and often microscopic, investigations, that the efforts of ordinary associations of men can avail but little. But it is believed that a National Board of Agriculture would have resources, peculiar to itself, that might effect important results. Its inquiries might be very extensive, drawing in contributions from individuals and societies, in every quarter, the sum total of which would be highly useful.

6. The various state and county societies throughout the land, might be in correspondence with the Department, — thus receiving and imparting information upon these and other subjects.

In short, in a hundred ways, such an organization might forward the great interests of agriculture. Indeed, we may conclude that no other establishment could parallel this, as a promoter of the interests, not exclusively of either section, but of the whole country.

The advocates for such a movement may, by some, be called enthusiasts. They are so; for the magnitude and importance of the thing very properly awaken them to enthusiasm. It is right that our own state of Vermont should be a foremost, a zealous pioneer in this business. Our people are an agricultural people; and they are awake to those measures which will foster and promote this commanding interest. Other states will join us in endeavoring to form an organization so desirable; — and thus the great sentiment of Washington, that "the power of the nation alone can carry out their high thought," will be realized.

In view of these considerations, your committee recommend the adoption of the accompanying Resolutions.

1. *Resolved*, That the General Assembly of Vermont earnestly recommend the establishment of a Bureau of Agriculture, in the "Department of the Interior" at Washington, whose province it shall be to superintend and promote the great interest of agricultural improvement in the nation.

2. *Resolved*, That the governor is requested to transmit a copy of the foregoing Resolution, and of the accompanying Report, to the President of the United States, to the Secretary of the Department of the Interior, to the Governor of each state of the Union, and to each of our senators and representatives in Congress, to the end that the attention of Congress, and of the several state legislatures, may be properly invited to the propositions embraced therein.

3. *Resolved*, That the senators and representatives of this state, in the Congress of the United States, are hereby requested to use their influence to procure the necessary legislation, by Congress, for the speedy establishment, on a firm and permanent basis, of a Bureau of Agriculture, as suggested in the first foregoing Resolution.

MANURING.

It is a beautifully wise and sublimely grand provision of Providence, that the decomposition and decay of all matter, both animal and vegetable, is so closely connected with reproduction, thus forming a continual transmigration of matter, and verifying practically that great truth in philosophy, that not a particle of matter can be lost, although it exists at different times in different forms. This transformation is going on constantly before our eyes, in the growth and decay of vegetables, trees, &c.; as, for instance, the plant that is growing luxuriantly in genial summer, imbibing nutriment from decomposing materials, will itself, in turn, mature, die, decay, decompose, and its elements contribute to the growth of successive vegetation in its vicinity.

These truths involve principles no less important or advantageous to the farmer than the moralist and the philosopher, as it comprehends manuring in all its variety; the only object of manure being to furnish nourishment to the growing plant, and whatever undergoes decomposition, whether animal, vegetable, or mineral, does that. Every farmer should be aware of the fact, that carbonic acid gas is actually necessary to the health and growth of vegetation, and that whatever furnishes this gas should be applied as manure as far as practicable. With this view of manures, I make it an object, when preparing new ground for cultivation, not to draw off any rotten or decayed wood that can be ploughed in, but rather to draw it on land where there is none, believing it to be as good manure as any other, although its effects may not be seen immediately. Every one who has cultivated a farm, must have observed that grain — Indian corn in particular — will grow much larger than usual near an old fence, or a rotten stump, or log, if there are any in the field. Now, it is evident that it is not owing to superior cultivation, that such is the case; but, on the contrary, land is seldom ploughed as good close to a fence, or around a stump or a log, as other places; and we are left to the conclusion that it is the nourishment they impart that produces such effects; and when we have arrived at such a conclusion, we cannot fail to see how much better it would be to apply such things as fallen leaves, rotten wood, and all other substances that emit carbonic acid gas during decay, as manure, than to leave them to waste their richness in an uncultivated place. J. H. G.

Romulus, N. Y., 1849.

— *Philadelphia Dollar Newspaper.*

PLOUGHING THE PLAIN LANDS OF LONG ISLAND.

Dr. Peck states, that with the Worcester Eagle D plough, with three yoke of cattle attached, he has succeeded in ploughing these lands well, immediately after the wood was cut off, and without the previous operation of grubbing. This he has done at an expense of three dollars per acre, while the old grubbing process alone would have cost from twelve to sixteen dollars per acre. The trees and bushes cut off previous to ploughing, stood very thick on the land; and their roots, when he put the plough in, were not only of ordinary size, but green and tough. Many farmers came from his immediate neighborhood to see his ploughing, having little faith in removing scrub oak and pine stumps and roots in this summary way. We have only to add, that the manufacturers of these ploughs are now at work on a model which will be decidedly more efficient than the one used by Dr. Peck. As soon as some are finished, they will be sent to our warehouse, where we shall be glad to have the Long Island farmers, and any others interested in such matters, call and look at them. — *American Agriculturist.*

SAW-FLY OF THE RASPBERRY.

Selandria hoplocampa rubi.

A. Raspberry leaf, showing how it is eaten.
B. The caterpillar or worm state.
C. Cocoon of earth.
D. Perfect insect or fly.
E. The same at rest.

Miss Grace Darling, of New Haven, Ct., has politely furnished to us an excellent drawing, from which our engraving is made. We are much obliged for this valuable contribution to the science of entomology. On page 164 of our first volume is a very instructive article, from the same source, on this subject.

Saw-flies (*Tenthredinidæ*) are a numerous race of insects belonging to the order Hymenoptera. They are not stingers, but piercers, and are very destructive to vegetation, as they feed on the leaves of plants. Dr. Harris, the distinguished entomologist, remarks as follows of these insects : —

"But the most striking peculiarity of these insects consists in the double saws wherewith the females are provided. These are lodged in a deep chink under the hinder part of the body, like the blade of a penknife in its handle, and are covered by two narrow, scabbard-like pieces. The saws are two in number, placed side by side, with their ends directed backwards, and are so hinged to the under side of the body that they can be withdrawn from the chink, and moved up and down when in use. They vary in their form, and in the shape of their teeth, in different kinds of saw-flies; but they generally curve upwards and taper towards the end, and are toothed along the lower or convex edges. Each of the saws, like a carpenter's fine saw, has a back to steady it; the blade, however, is not fastened to the back, but slides backwards and forwards upon it. Moreover, the saw-blade is not only toothed on the edge, but is covered, on one side, with transverse rows of very fine teeth, giving to it the power of a rasp, as well as that of a saw.

"The female saw-flies use these ingeniously contrived tools to saw little slits in the stems and leaves of plants, wherein they afterwards drop their eggs. Some, it appears, lay their eggs in fruits; for Mr. Westwood discovered their young within apples that had fallen from the trees before they had grown to the size of walnuts. The wounds made in plants by some kinds of saw-flies swell, and produce galls or knobs, that serve for habitations and for food to their young. The eggs themselves, of all these flies, are found to grow, and increase to twice their former size after they are laid, probably by absorbing the sap of the plant through their thin shells. Most of the larvæ or young of the saw-flies strikingly resemble caterpillars, being usually of a cylindrical form, of a greenish color, and having several pairs of legs. Hence they are sometimes called false caterpillars."

In the communication referred to, Miss Darling remarks, that specimens of the saw-fly of the raspberry had been sent to Dr. Harris, of which he remarked as follows : —

"It appears to be an undescribed insect. It belongs to the genus *selandria*, and resembles in form and size the saw-fly of the rose, (*selandria blenocampa rosæ*,)* but is referable to a different group of the genus called *hoplocampa* by Hartig, on account of the spines with which the larva is armed. The insect may be named *selandria* (*hoplocampa*) *rubi*, the latter term being given in allusion to the scientific name (*rubus*) of the raspberry."

There are various ways of destroying saw-flies. A solution of whale oil soap is usually effectual. It should be strong — one part of soap, in measure, to thirty-six parts of water. It should be applied after the sun is nearly down, or on a cloudy, but not rainy day, else, with the sun, it will destroy the foliage.

As the saw-fly of the raspberry resembles that of the rose, it may be destroyed in the same way; and on this subject Miss Darling observes, —

"I said, in my paper on the saw-fly of the raspberry, that the *rose* slug, being perfectly smooth, ashes or lime would not stick to them. On a more particular observation, I found that these slugs retired to the under side of the leaf during the night, and did not come out on the upper side of the leaf to eat until the dew was dried away; and by sifting ashes over the bushes very early in the morning, and repeating it every few days, I saved my bushes fresh and green, as the slugs did not find the ashes very palatable food, while my neighbor's bushes were very badly eaten."

Domestic Department.

Maternal Influence. — The mental fountain is unsealed to the eye of a mother, ere it has chosen a channel, or breathed a murmur. She may tinge with sweetness or bitterness the whole stream of future life. Other teachers have to contend with unhappy combinations of ideas. She rules the simple and plastic elements. Of her we may say, she "hath entered into the magazine of snow, and seen the treasure of the hail." In the moral field she is a privileged laborer. Ere the dews of morning begin to exhale, she is there. She breaks up a soil which the root of error and the thorns of prejudice have not preoccupied. She plants germs whose fruit is for eternity. While she feels that she is required to educate, not merely a virtuous member of society, but a Christian, an angel, a servant of the Most High, how does so holy a charge quicken piety, by teaching the heart its own insufficiency!

The soul of her infant is uncovered before her. She knows that the images which she enshrines in that unoccupied sanctuary must rise before her at the bar of doom. Trembling at such tremendous responsibility, she teaches the little being, whose life is her dearest care, of the God who made him; and who can measure the extent of a mother's lessons of piety, unless his hand might remove the veil which divides terrestrial things?

"When I was a little child," said a good man, "my mother used to bid me kneel beside her, and place her hand upon my head while she prayed. Ere I was old enough to know her worth, she died, and I was left too much to my own guidance. Like others, I was inclined to evil passions, but often felt myself checked, and, as it were, drawn back, by a soft hand upon my head. When a young man, I travelled in foreign lands, and was exposed to many temptations. But when I would have yielded, that *same hand was upon my head*, and I was saved. I seemed to feel its pressure as in days of my happy infancy, and sometimes there came with it a voice, to my heart a voice that must be obeyed — 'O, do not this wickedness, my son, nor sin against thy God.'" — *Michigan Farmer.*

To keep Silk. — Silk articles should not be kept folded in white paper, as the chloride of lime used in bleaching the paper will probably impair the color of the silk. Brown or blue paper is better; the yellowish smooth India paper is best of all. Silk intended for a dress should not be kept in the house long before it is made up, as lying in the folds will have a tendency to impair its durability by causing it to cut or split, particularly if the silk has been thickened by gum. We knew an instance of a very elegant and costly thread-lace veil being found, on its arrival from France, cut into squares, (and therefore destroyed,) by being folded over a pasteboard card.

A white satin dress should be pinned up in blue paper, with coarse brown paper outside, sewed together at the edges.

The best way of keeping ribbons is to roll them round the blocks made for the purpose, and then wrap them in soft paper. You can easily obtain a few blocks from the stores where ribbons are sold. The block should be a little wider than the ribbon, that the edges may not be injured. When you have wound it smoothly around the block, secure the end of the ribbon with a little minikin pin. A large pin will leave holes, and perhaps green ones.

In rolling two pieces of ribbon round the same block, place the first end of the second piece *under* the last end of the first piece, otherwise there will be a ridge where the two came together. Take care, in rolling, not to make the slightest crease.

Never wrap silk or ribbon, or indeed any thing that is to be worn without washing, in printed paper, as the printing ink will rub off and soil it. — *Miss Leslie's House Book.*

Youth's Department.

One Thing at a Time. — Step among your neighbors, reader, and see whether those among them who have got along smoothly, and accumulated property, and gained a good name, have not been men who bent themselves to one single branch of business; who brought all their powers to bear upon one point, and build on one foundation. It must be so.

Go out in the spring, when the sun is yet far distant, and you can scarcely feel the influence of his beams, scattered as they are over the wide face of creation; but collect those beams to a focus, and they kindle up a flame in an instant. So the man who squanders his talents and his strength on many things, will fail to make an impression with either; — but let him draw them to a point, let him strike at a single object, and it will yield before him.

Two Ways of Hearing. — A clergyman of superior abilities preached a sermon on a certain occasion; and on his way home, his wife said to him, "My dear, that was a most miserable sermon; I think the poorest I ever heard from you." Some years after, he drew at random from his pile, and found that he had hit upon this very sermon. He preached it again. And as he was going home, his wife said to him, "My dear, you gave us a most excellent discourse to-day. I think I never heard you preach a better one." "My dear," said her husband, "you are the stupidest hearer I have ever known;" and then told her what she had said of this very discourse when he preached it before.

Health Department.

Bathing and Washing. — We have occasionally published articles on the importance of bathing and thorough washing. We now select from the Phrenological Journal a most excellent article on the mode of performing ablution according to different conditions of the system.

Bathing, with Directions for adapting its Temperature to the State of the Patient. — Of the utility of bathing, a very considerable portion of our communities are becoming so thoroughly convinced, that thousands practise it now where one adopted it ten years ago. The change is really astonishing. Mothers, by thousands, bathe or wash their children all over regularly. In the intelligent circles of Boston, for example, probably more bathe themselves and children than omit it. And this health-promoting practice is rapidly extending throughout villages and towns, so much that an inquiry touching the best *forms* of bath, their temperature, times, etc., is becoming quite desirable and important. Hence this article.

Many, hearing cold ablutions so highly recommended, try them, at first, perhaps, with benefit, but afterward with serious injury, which they attribute to the *bath*, whereas it belongs to the *temperature*.

For many years after I began to bathe daily, I received unmingled benefit therefrom, and a great amount of it. By and by, my system became so reduced by excessive mental application, that reaction did not always take place, and it injured me. I therefore took it less frequently, and only when I was sure I possessed sufficient vitality to secure that reaction. Under this regimen my skin became weaker and weaker, colds and slight fevers began to make their appearance, and I became apprehensive for the future, till Dr. North, of Saratoga, recommended not only the warm bath, but a *very* warm one; commencing at about ninety-eight degrees Fahrenheit, and rising, at successive baths, to one hundred and ten; remaining in from fifteen to thirty minutes, as I could bear it. "Never mind," said he, "if it prostrates you for the time being. You require that your blood should be brought to the *surface*, and this will do it, and thus fortify you against the winter's cold." He added this general rule, which struck me both as so reasonable and important, that I write this article mainly to promulgate it, namely — "When the system is over-excited, feverish, and requires to be reduced, take the *cold* bath; but when it is so debilitated as to require tonics, employ the *warm* bath." These warm baths did for me the very thing I required — namely, relieved my internal organs and head by directing the blood to the skin. A few hot baths so restored the action of the skin that it was benefited by the *cold* bath, which is always best when there is sufficient vitality in the system to produce the required reaction. He said he prescribed the *warm* bath instead of bitters, tonics, and stimulants — or where these were considered requisite in general practice; — but the *cold* bath where *depletion* and salivation were formerly prescribed; that is, where the pulse was hard, the skin feverish, and the system required to be *reduced*. And this rule is undoubtedly correct. It will generally be found to agree with the patient's *feelings* — and this is, after all, the great test.

Another important rule is this: Whenever the patient instinctively shrinks from *cold* water, because it really pains him, use the *tepid* bath; but when cold water produces an agreeable sensation, and leaves a pleasant glow, the cold bath is preferable. Mark, I do not say when the bather *thinks* cold water will produce a painful shock; for many imagine it will affect them unfavorably, whereas, properly applied, it would produce delightful sensations. When the skin is hot and the system restless, and whenever there is positive pain, local or general, apply cold water; but when you feel weak or exhausted, use the *warm* bath.

Those whose nerves are over-excited or diseased, should generally use the tepid bath, because their nerves require quiet; whereas the shock caused by cold water only re-irritates them, and thus enhances disease; whereas tepid water soothes the nerves, and carries off diseased matter, besides opening the pores.

Our general rule, then, is this; that temperature of bath *is* best which *feels* best to you. But mark these three important directions: 1. Always, after the warm bath, wash off in cold water; for this closes the pores, and helps prevent taking cold after them, besides bracing the system. 2. Always, when you wash or bathe in cold water, employ sufficient *action*, by swimming, or rubbing, or something else, to produce a subsequent *glow*; for this is indispensable, and its absence renders the bath injurious. 3. Keep up the circulation by subsequent *exercise*.

Many persons go shrinkingly and slowly into their baths. This is all wrong. Spring from your bed as though a great snake was crawling over you, jerk off your night clothes instantly, dash into the water as if for your life, rub as though you would blister your skin, wipe quickly, on with your clothes in double quick time, and go at something with might and main, till the blood courses briskly throughout your whole system, and you will feel almost like a new being.

The *quantity* of water bathed in is by no means unimportant. The body is charged with electricity, and water is a rapid conductor of this element. Hence none but robust persons should stay long in large bodies of water. One minute is too long for me to stay in a river, even in hot weather. Invalids should go only into *small* bodies of water, and will generally find the sponge, or hand bath, preferable, because small bodies of water become soon saturated with electricity, so that you can apply it the longer without its reducing the vital force below the reacting point.

Are warm or cold rooms best? Whichever *feels* best. When vigorous enough to insure reaction, I decidedly prefer cold rooms, and ice-cold water; but when not, warmer water and rooms. All these conditions each patient must determine for himself, and determine by that infallible guide, *his own sensations*. Yet let all employ *some* kind of bath, either daily, or, at farthest, semi-weekly.

Mechanics' Department, Arts, &c.

An Important Mechanical Invention for Casting Iron Pipes. — The Baltimore Sun notices at length an important improvement in casting iron pipe, at the foundery of Thomas J. Lovegrove, in that city, which is the invention of that gentleman. By the ordinary mode of casting pipe, it is necessary to make a sand mould for every separate piece of pipe, and a "core," which is formed by wrapping hay around a rod, this again being coated carefully with clay, to preserve the tubular or hollow form of the pipe. The improvement dispenses entirely with this tedious arrangement, and centrifugal power is applied to produce the same results in a quicker and better manner.

The invention consists of an iron mould, suspended horizontally, and arranged for the introduction of the melted metal, by means of a trough at one end. As the metal is introduced, a slight depression at one end is effected by means of suitable tackle, and the revolutions of the mould immediately commence. By the time all the metal is introduced, the mould is elevated to its true position, the gravitation having carried the fused metal to the end of the mould, and it suddenly revolves for about half a minute with considerable velocity, distributing the metal equally to the surface throughout the entire length of the mould, from the centrifugal force of the revolution. The vacancy in the centre is of course regulated by the amount of metal, the pipe being made of any degree of thickness required.

In a few seconds, the revolution ceases, the mould is separated, the upper half is hoisted off, and the pipe removed. There is no adhesion; the pipe, in the instant of cooling, undergoing contraction sufficient to obviate this, were there no artificial protection against it. The time occupied, from the tapping of the furnace to the lifting of the perfect pipe from the mould, is precisely two minutes. And it is obvious that, with a range of two or three moulds in operation, pipe could be turned out as rapidly as the metal could be drawn from the furnace. The invention will not be confined to the mere casting of iron pipe. It is evidently applicable in various departments, throughout the whole range of the mechanic arts. It is not limited in its effects, either, as we understand it, to a mere surface, but, while retaining a circular form, it will adapt itself to every variety of external shape and ornament. It is impossible to foresee the

wide range of service to which the principle may be adapted; for, susceptible as it is of application for the casting of iron pipe thin as sheet-iron, and adapted for stove-pipe, on the other hand it may be applied to the most colossal cylindrical work that art and science may require, multiplying it to any extent, immensely reducing the cost. Of the general pecuniary effect upon hollow cast-iron, there is ground to anticipate, from the use of this principle, an ultimate great depreciation of cost. — *Farmer and Mechanic.*

Machine for dressing Stone. — We saw tested, on Saturday last, a machine for dressing stone, invented by our worthy townsman, Capt. Robert Eastman; the entire success of its operation adding greatly to the already well-known reputation of its author. The machine has a rotary motion, and, by means of burrs or cutters, gives some millions of blows in a minute. These cutters are so constructed that they can be replenished at a cost of one and a half or two cents each — being the simple expense of renewing a stonecutter's chisel. We saw it dress a piece of common grindstone, cutting in about one inch in depth, and leaving a square edge and beautiful surface, as smooth as if cut by a chisel. A very important point is, that it will flute a column in marble, or prepare mouldings in any desirable form, with great beauty and expedition; doing its work as perfectly as is now done in the ordinary way. Jason Smith, of Troy, N. Y., has taken the agency for the United States, to whom all communications regarding it may be addressed. — *N. H. Patriot.*

Zincographic Printing and Engraving in Colors. — We noticed, says the Philadelphia Ledger, a few days ago, the transfer of copper and steel engraving to zinc plates, by Mr. Bourquin. A German artist, Mr. Louis Rosenthal, has taken a step far in advance of this, and has presented for our inspection some beautiful specimens of zincographic printing and engraving in colors. The engravings are prepared upon zinc plates, by Rosenthal, from designs by artists. The printing in black from zinc plates, has been practised in Europe, but the mode of coloring is an invention of Mr. Rosenthal. One of the specimens is a hawthorn flower and fruit, from nature, arranged for an ornamental border, which has received ten different impressions, and is beautifully painted. Another is an original design of grass and flowers, arranged for cotton printing; another is a design in chalk of a frieze from an ancient painting at Pompeii. This is an important improvement in the arts.

Artificial Mahogany. — The following method of giving any species of wood, of close grain, the appearance of mahogany in texture, density, and polish, is said to be practised in France, with such success that the best judges are incapable of distinguishing between the imitation and mahogany. The surface is first planed smooth, and the wood is then rubbed with a solution of nitrous acid. One ounce of dragon's blood is dissolved in nearly a pint of spirits of wine; this and one third of an ounce of carbonate of soda are then to be mixed together, and filtered, and the liquid, in this thin state, is to be laid on with a soft brush. This process is to be repeated, and in a short interval afterward the wood possesses the external appearance of mahogany. When the polish diminishes in brilliancy, it may be restored by the use of a little drawn linseed oil.

From the Transactions of the Essex Agricultural Society.

DAIRY MANAGEMENT.

[continued from page 23.]

But one parcel of cheese was presented to the committee. This was such as to leave no hesitation as to the propriety of awarding the premium offered. If our recollection is right, a similar state of facts occurred the last year. Why it is that the farmers of Essex are so indifferent as to be unwilling to present their claims for this branch of the products of the dairy, we are unable to imagine. It cannot be that they have discontinued the making of cheese, for this will never happen while people have an inclination to use it. That it is still used, every well-furnished table bears testimony. That those farmers who live in the immediate vicinity of a ready market for milk or butter can turn it to better account than to make it into cheese, we have no doubt; but when two pounds of good cheese will readily command as much money as one pound of well-preserved butter, we think there are many farms on the sea-shore, and on the banks of the Merrimack, where their milk will be most advantageously used for the making of cheese. We remember to have seen splendid collections of cheese made in West Newbury and Andover; and if such are now there, we can only regret that they are not brought forward. Farmers should remember that they owe something to the public, as well as to themselves; and that they have not done their whole duty when they have simply pocketed the money offered as premiums. The design of these exhibitions is to present a fair specimen of the products of the county; and every one who has a spark of patriotism in his breast, should be willing to lend a helping hand. I wish those *good women* who labor and tug day after day in turning and rubbing their cheeses, would occasionally jog the elbows of their husbands, and urge them to go ahead in the way of their duty. Every man who loves his wife as he ought to do, will be proud to exhibit the products of her industry. If they will not, let the women themselves do as others we could name have creditably done — exhibit their own cheeses with their own hands. What more interesting part of the exhibition could there be, than to have the products of a dozen dairies, under the superintendence of the ladies themselves, ready to explain how they were made?

On looking over the statements, we were struck with the fact, that but *two* of the cows were of foreign breeds, (so called,) viz.: Mr. McNaughton's, of Byfield, whose produce was the seventh in quantity. These two were Durhams. There were no Ayrshires, no Devons — unless our natives may claim affinity thereto. Why it is that the farmers of Essex are so slow in introducing these classes of animals, we are unable to determine. Specimens of them have been among us, on the farms of Parsons, Derby, Poore, and others, for years, and many efforts have been made to make known their superiority; but still the real *hard hands* do not take hold of them. On whose judgment, then, shall we rely, the *gentlemen farmers*, or the *operative farmers*? The *theory* of one recommends the Durhams and the Ayrshires for the dairy, as being the greatest producers; the *practice* of the other adopts the natives. We leave this to be decided by those of more experience than ourselves. We are willing to prove all, and hold on upon the best.

One general remark must close what we have to offer on this subject; and our commentaries upon the statements particularly, must be appended to each.

The premiums are offered, not so much for the *superior quality* of the *article presented*, as for the *superior process* by which it is made so, that others may go and do likewise.

We recommend the premiums to be awarded as follows: —

For June Butter.

To Nathaniel Felton, of Danvers, first premium, $10
John Preston, of Danvers, second premium, 8
Elijah Pope, of Danvers, third premium, 6

For September Butter.

To Charles P. Preston, of Danvers, first premium, $10
Jonathan Berry, of Middleton, second premium, 8
Nathaniel Felton, of Danvers, third premium, 6

For Cheese.

To David Choate, of Essex, first premium, $8

In behalf of the Committee,
J. W. PROCTOR, *Chairman.*

DANVERS, *October* 25, 1849.

NOTES. — Butter made in Orange county, New York, has the highest reputation in the market — so much so, that most New York butter passes under that name. Here the *milk* is churned, and not the cream. It is said "to give a peculiar firmness and fineness of texture, and wax-like appearance when it is fractured, which butter made by churning the cream seldom or never has." The art of making *Orange County Butter* is said to be in the *women*, and not in the *cows* or *pastures*. You take a good *dairy-maid* from there, and she will make equally good butter hundreds of miles distant. In churning the *milk*, it takes about *one quarter part* more to produce a pound of butter, than it does when the cream is severed from the milk.

On examining the products of Mr. Hall's dairy, of Chemung county, who took the first premium in the N. Y. State Society, 1846, we find nineteen cows yielded three thousand one hundred and eighty-nine pounds of butter, in one hundred and eighty days, or about one hundred and sixty-eight pounds to a cow. In the same time, our fifty-six cows yielded nine thousand one hundred and seventy-four pounds of butter, or one hundred and sixty-four pounds to a cow. This comes so nearly up to the products of N. Y. state, that we are satisfied our farmers, by proper attention to selecting their cows for the dairy, can, if they will, do as well as the best. Let them apply their true Yankee tact in this matter, and they may challenge the world.

As a matter of curious information, we have collected, in a condensed form, the products of several of the most extraordinary cows in Massachusetts, that have come to our knowledge.

Date.	Name.	Place.	Weekly Produce.	Length of Time.
1826	Oakes Cow,	Danvers,	16 lbs.	16 weeks.
1824	Nourse Cow,	"	14 "	16 "
1828	Sanderson Cow,	Waltham,	14 "	16 "
1830	Homer's Cow,	Bedford,	14 "	12 "
1830	Hazeltine Cow,	Haverhill,	14 "	12 "
1830	Barrett Cow,	Northampton,	15 "	12 "
1845	Buxton Cow,	Danvers,	16 "	12 "

These cows show a product of more than two pounds per day, each, for a period of three months. We think it would be difficult to collect together such a herd.

STATEMENTS.

JOHN STONE, JR.'S STATEMENT.

To the Committee on Dairy.

GENTLEMEN: I present for your examination twenty-six pounds of butter, being a sample of two hundred and twenty pounds, made from the milk of four cows, in thirty-nine days, from the 1st of June to the 9th of July. During this time, we sold eight quarts of cream, and used one quart of milk a day in the family. We have ascertained that nine quarts of our milk yield one pound of butter, and that one quart of cream will make a pound of butter; consequently the produce of the four cows, in thirty-nine days, was equal to two hundred and thirty-two pounds, or one and a half pounds a day to each cow. Finding that our milk could be used to better advantage than in the making of butter, after the 20th of July we discontinued making; and therefore I cannot give an account of butter made in September. From the quantity of milk given by the cows in September, I am of the opinion that eight pounds of butter a week to each cow, could then have been made. Our cows had pasture feed only. Our pasture contains between four and five acres, gravelly bottom — has been ploughed and well cultivated. I have taken pains to select cows of good quality for butter-making. Three of my cows I obtained from Mr. Daniel Buxton, Jr., of Danvers, a man who has and does every thing in the best manner. The mother of this stock was remarkable for her milking properties. They are of the breed called Buffalo, without horns, and above the middling size. Two of them have not done so well this season as formerly; and I attribute it to their having been confined too closely during the winter. The old cow became farrow, and was killed at the age of thirteen years, weighing dressed six hundred pounds. I have several young animals of this stock. I am thus particular in stating these facts, because I consider them of the first importance in an attempt to establish a good dairy — a point at which I have been aiming for years.

Process of Making. — The milk is strained into tin pans and set in a cool cellar: when the cream is sufficiently risen, it is taken off and placed in stone pots. We churned twice a week this season. The buttermilk is worked out by hand, without the application of any water, and salted with an ounce of ground rock salt to a pound.

JOHN STONE, JR.

MARBLEHEAD, *Sept.* 26, 1849.

REMARKS. — Our curiosity being awakened by the account given by Mr. Stone, of his cows, we have learned, on inquiry, that the mother of this stock was purchased by Mr. James Wilson, from a drove, about twenty years since. Proving to be an excellent cow, her calves were raised and distributed in the neighborhood; and have uniformly been of superior quality. Many of them, by reason of associating with strangers, have lost their peculiarity of wanting horns, but still have good bags, well filled. Eight quarts of milk from these cows have produced a pound of butter; and when well fed, they have yielded sixteen quarts of milk per day. How important is it, when a person wants to have a good dairy, and can find a cow of this description, that her offspring should be reared! It is equally important, also, to take care with what animals she comes in contact; because the character of her offspring will depend very much on the company she keeps. We are fully persuaded that the milking properties depend quite as much upon the *male parent* as the *female*.

DANIEL PUTNAM'S STATEMENT.

To the Committee on Dairy.

GENTLEMEN: A firkin, containing twenty-seven pounds of June butter, a specimen of ninety-four pounds, made from the milk of six cows, in two weeks, averaging seven and five sixths pounds per week for each cow, is forwarded for your taste and judgment.

For some days, the milk was carefully measured at the time of straining, and it was found to require ten quarts of milk to make one pound of butter.

The process of making you have known in previous years, and I will merely say, that tin pans are used; cream is kept in large tin pails; churned twice a week; the butter is much rinsed in cold water, and one ounce of salt is allowed to each pound of butter; the cellar is airy and cool.

The chief requisitions in butter-making are known to be, the free and faithful use of soap and hot water

in the cleansing of the vessels used, and the separation of the buttermilk from the butter, after churning, with the hands; how far we may have been successful in the sample before you, remains (in part at least) for your decision.

The feed of the cows at the time the butter was made, was nothing more than a common pasture.

Very respectfully yours,
DANIEL PUTNAM.

DANVERS, *Sept.* 26, 1849.

REMARKS. — We were quite surprised when we found that, by the *tasting process*, Mr. Putnam's butter had not secured favor; and can only explain it upon the maxim that "the best may miss it sometimes." We certainly know that Mrs. Putnam and her daughters have often been successful in presenting the very best of butter. Our respect for their management of the dairy is equal to that of any other. We perceive that they apply water in getting out the buttermilk: possibly this may explain why their butter fell behind the butter of those to which no water was applied; and possibly the fault may have been in the imperfect taste of the judges, of which their statement has a slight indication of fearful apprehension.

ELIJAH POPE'S STATEMENT.

To the Committee on Dairy.

GENTLEMEN: I offer for your inspection a jar of June butter, containing twenty-five pounds, being a specimen of one hundred and twenty-seven pounds, made from the milk of four cows, from the 1st of June to the 5th of July.

Also, three boxes of September butter, containing twenty-two pounds, being a sample of four hundred and forty-five pounds, made between the 24th of May and 24th of September, from the same cows, with the addition of the milk of a two-year-old heifer, since the 23d of June.

Their feed has been common pasture, until the 20th of August; since that time, green corn fodder once a day.

Process of Making. — The milk is strained into tin pans; it stands in a cool cellar from thirty-six to forty-eight hours, when the cream is taken off, put into tin pails, and stirred every day.

We churn once a week. During the warmest weather, the cream is placed in the well, from twelve to twenty-four hours before churning. After it is churned, the buttermilk is thoroughly worked out, and the butter is salted with three fourths of an ounce of ground rock salt to the pound. After standing six hours, it is again worked and weighed, each pound separately.

ELIJAH POPE.

DANVERS, *Sept.* 26, 1849.

CHARLES P. PRESTON'S STATEMENT.

To the Committee on Dairy.

GENTLEMEN: I offer for your examination one pot of June butter, containing twenty-seven pounds, being a specimen of two hundred and eighty-eight pounds, made between the 1st of June and the 9th of July, from the milk of five cows, and four heifers three years old, all of native breed.

Also, two boxes of September butter, containing twenty-eight pounds — a sample of seven hundred and eighty-six pounds made between the 20th of May and 24th of September, from the milk of the same cows.

The cows have had common pasture feed until the 1st of August, when we commenced feeding with corn fodder, once a day.

Process of Making. — The milk is strained into tin pans, and placed in the cellar, where it stands from twenty-four to thirty-six hours; it is then skimmed, and the cream put in stone jars, and set in a vault made for the purpose. Churn twice a week. We are very particular to work every particle of the buttermilk out, and salt with one ounce of rock salt to the pound.

CHAS. P. PRESTON.

NORTH DANVERS, *Sept.* 25, 1849.

NATHANIEL FELTON'S STATEMENT.

To the Committee on Dairy.

GENTLEMEN: I present for your examination twenty-six pounds of butter made in June, and twenty-seven pounds of butter made in September, as samples of eight hundred and eighty-four pounds, made from the milk of eight cows and a heifer, in four months, from the 24th of May to the 24th of September. One of the cows has been in milk thirteen months. We have used milk in the family for ten persons, and regularly sold two gallons on each Saturday. Annexed is a statement of the quantity made each week. The cows had common pasture feed until the middle of August; then for a fortnight I gave them shorts, and continued to feed them with corn fodder while their feed was short in the pasture. I consider good pasture feed, with good spring water, the very best supply for the making of good butter. When this fails, I supply the vacancy with other things, that can be obtained with least inconvenience.

Process of Making. — The milk is strained into tin pans, and placed in a cool cellar, where it stands from thirty-six to forty-eight hours, when the cream is taken off, put into pails, and stirred daily. We churn once a week. During the warmest weather, the cream is hung in the well about twelve hours before churning. After the butter comes, the first thing to be done is to work out the buttermilk. This is done by hand, without the application of any water — believing such application to be no benefit, and in some respects injurious. About one ounce of best salt is usually applied to a pound, varying in some measure according to the condition of the butter, to be determined by the taste of the person working it. After standing about one hour, it is worked over a second time, and then weighed, each pound separately. The June butter was preserved by the application of a strong brine, made of common fine salt. I consider that I have used about the milk of eight cows through the season, for the making of butter, and that their average yield has been about *one pound of butter a day to each cow.** I find a great difference in the milk of different cows, in the making of butter; and in selecting cows for this purpose, make a point of ascertaining their butter-making qualities, by actual experiment with their milk.

NATHANIEL FELTON.

DANVERS, *Sept.* 26, 1849.

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* *Weekly Account of Butter made.*

May	24th	40 pounds.
"	31st	50 "
June	7th	50 "
"	14th	67 "
"	21st	55 "
"	28th	56 "
July	5th	58 "
"	12th	52 "
"	19th	45 "
"	26th	45 "
August	2d	40 "
"	9th	40 "
"	16th	42 "
"	25th	41 "
"	30th	43 "
Sept.	6th	42 "
"	18th	41 "
"	20th	42 "
"	24th	35 "
	Amounting to	884 "

DUNCAN McNAUGHTON'S STATEMENT.

To the Committee on Dairy.

The sample presented is one wood box, of twenty-five pounds, made in June, 1849. Milked five cows; made one hundred and twenty-one pounds in all. The cows were three natives and two Durhams, kept in a very ordinary pasture.

Method of Making. — The milk was strained into tin pails, and kept in a dairy cellar made for the purpose. The milk stands three days before it is skimmed, and the cream stands three days, (stirring it every day,) in a stone jar, before it is churned. Churn every third day. The butter is taken from the buttermilk, and worked through three waters, taken cool from the spring, until the buttermilk is entirely removed; then it is well salted, and remains one day, when it is worked over again, working out all the extra salt, and made into pound lumps. The churn is soaked and cooled with cold water from the spring before the cream is put into it.

Lot No. 2. — The sample is twenty-five pounds made this present month. Milked six cows, and made seventy-nine pounds from the 1st to the 22d of this month. The cows were three native and three Durham, kept principally in the same ordinary pasture, with a feed of corn fodder every evening. The care of the milk, the method of making the butter, is the same as No. 1, except that now the milk stands four days before it is skimmed, and the cream stands four days in the jar before it is churned. Churn every fourth day.

DUNCAN McNAUGHTON.

Byfield, *Sept.* 26, 1849.

Remarks. — This statement is not in exact conformity with the conditions on which the premiums are offered. One remark we would make is, inasmuch as Mr. M. appears to have been free in the application of *cold water* to his butter, its quality was not improved thereby. From all we can learn, our impression is very strong that such application is not beneficial. If any one entertains a different opinion, we hope next year they will exhibit a parcel of June butter, purified with water, that shall be worthy of the first premium. Until this is done, we think the chances will be in favor of the butter to which no water is applied.

JOHN PRESTON'S STATEMENT.

To the Committee on Dairy.

Gentlemen: I offer for your inspection one jar of June butter, containing twenty-six one half pounds, it being a sample of one hundred and seventy-one pounds, made between the 20th day of May and the 9th day of July, and of three hundred and sixty-five and three fourths pounds made between the 20th day of May and the 24th day of September.

I have milked four cows, all of native breed — one nine years old, two four years old, and one three years old. I have used in the family about four quarts of milk per day.

Their keeping has been common pasture, with corn fodder once a day since the middle of August.

Process of Making. — The milk is strained into tin pans, and set on the bottom of a cool cellar, where it remains from twenty-four to thirty-six hours. The cream is put in stone pots. We churn once a week. The buttermilk is thoroughly worked out, and the butter is salted with one ounce of rock salt to the pound. JOHN PRESTON.

North Danvers, *Sept.* 27, 1849.

DAVID CHOATE'S STATEMENT.

To the Committee on Dairy.

Gentlemen: I offer, for your inspection, sixty-six and one half pounds of new milk cheese, being a sample of eight hundred pounds made between the 1st day of June and the 1st of August last. We had seven cows in milk during that time. After the 10th of August we milk nine.

The whole produce of the dairy has been as follows, viz.: eight hundred pounds of new milk cheese, as above, and forty-four pounds of four meal do., with a small quantity of an inferior kind; also, two hundred and nineteen pounds of butter. The butter has been chiefly made since the 1st of August.

The farm is situated upon Hog Island, so called, in this town, and has suffered from drought and from grasshoppers beyond any former year. The cows had no feed beside what they found in the pasture, until about the 10th of September, after which time they were occasionally let into the mowing grounds a few hours in the day. All the cows are of native breed, except one of the two which we began to milk about the 10th of August. This cow has had a quart of meal a day for ten or twelve days past only.

The whole number of new milk cheeses made is fifty-five. In making the first twenty-three, the night's milk was made blood warm, after taking off the cream in the morning; after which, the milk of both night and morning, with the cream of the night milk, was put together, and the rennet put in as usual, at the rate of half a pint to eight pails of milk. The other thirty-two cheeses were managed somewhat differently. A curd was made of the night's milk immediately after drawing it. This was left to drain through the night, and was mixed with the curd of the next morning. The quantity of rennet was the same as before, and the salt in both cases was a tea-cup full of the ground rock salt to a cheese of about fifteen pounds weight. We press from twenty-four to thirty hours. Milk has been used freely in the family through the summer, say about five quarts a day.

DAVID CHOATE.

Essex, *Sept.* 26, 1849.

[to be concluded in next number.]

LONG VITALITY OF SEEDS.

So completely is the ground impregnated with seeds, that if earth is brought to the surface from the lowest depths at which it is found, some vegetable matter will spring from it. I have always considered this fact as one of the many surprising instances of the power and bounty of Almighty God, who has thus literally filled the earth with his goodness, by storing up a deposit of useful seeds in its depths, where they must have lain through a succession of ages, only requiring the energies of man to bring them into action. In boring for water lately, at a spot near Kingston on the Thames, some earth was brought up from a depth of three hundred and sixty feet; this earth was carefully covered over with a hand glass, to prevent the possibility of any other seeds being deposited upon it; yet in a short time plants vegetated from it. If quicklime be put upon land which from time immemorial has produced nothing but heather, the heather will be killed, and white clover spring up in its place. A curious fact was communicated to me respecting some land which surrounded an old castle, formerly belonging to the Regent Murry, near Moffat. On removing the peat, which is about six or eight inches in thickness, a stratum of soil appears, which is supposed to have been a cultivated garden in the time of the regent, and from which a variety of flowers and plants spring some of them little known even at this time in Scotland.

NOTICES OF PUBLICATIONS.

The Albany Cultivator. — This paper, which has long held a very prominent position among the most valuable publications of our country, has, accompanying the January number, a very beautiful pictorial number, made up of numerous engravings that have appeared in that work, arranged in good taste, and very handsomely executed.

The Rural New Yorker. — This is a large sheet, in quarto form, published and conducted by D. D. T. Moore, Rochester, N. Y., late publisher and associate editor of the Genesee Farmer. It is devoted to agriculture, horticulture, and miscellaneous intelligence. As this work is ably conducted, handsomely illustrated, and neatly executed, it is well worthy of an extensive patronage; and from brother Moore's enterprise, we have no doubt it will receive it. Weekly, at $2 per year.

Transactions of the Worcester Agricultural Society. — We are indebted to Col. J. W. Lincoln for this pamphlet, containing forty-eight pages, embracing various reports and essays, from which we shall make some extracts.

Pathfinder Railway Guide for January. Price five cents.

URINE OF ANIMALS.

I have thought that, as a general thing, our farmers do not consider sufficiently the value of this excellent agent of fertility. In how few instances, indeed, do we find any effort made to economize it, or render its great wealth available for the sustenance and support of vegetable life. According to an English agricultural author of great intelligence, the quantity of liquid manure produced by a single cow in one year, is equal to fertilizing one and one fourth acres of soil, producing effects as permanent as do the solid excrements voided by the same animal in a like interval of time. A cord of good loam thoroughly saturated with this energetic and fecundating liquid, he estimates as equal, for all practical purposes, to a cord of the best, well-rotted manure. If the liquid and solid evacuations, including the straw or other materials used as litter, are kept separate, and soaking up the former by absorbent loam, previously well dried, it has been found that they will manure land, in proportion by bulk, of seven liquid to six solid, while their actual value is as two to one. One hundred pounds of cow's urine, says our authority, produce thirty-five pounds of the most powerful salts which have ever been applied in agriculture. No one, therefore, can doubt for one moment, that by neglecting to economize this powerful and valuable agent of agrestic enrichment, we deprive ourselves of an agent at once the most energetic in its action, and the most decidedly salutary in its permanent effects. If the liquid evacuations of our stock equal one half the value of the solid excrement, and if there be any dependence to be relied on the recent experiments of chemical men, this is a very moderate appraisal. Is it not richly worth saving?

A NEW CORRESPONDENT.

Philadelphia County, *Nov.* 12, 1849.

— *Germantown Telegraph.*

One kind act does more towards softening man's stubborn nature than all the sour looks and harsh language ever used.

THE OLD ARM-CHAIR.

BY ELIZA COOK.

I love it, I love it; and who shall dare
To chide me for loving that old arm-chair?
I've treasured it long as a sainted prize,
I've bedewed it with tears, and embalmed it with sighs;
'Tis bound by a thousand bands to my heart;
Not a tie will break, not a link will start.
Would ye learn the spell? A mother sat there,
And a sacred thing is that old arm-chair.

In childhood's hour I lingered near
The hallowed seat with listening ear;
And gentle words that mother would give,
To fit me to die, and teach me to live.
She told me shame would never betide,
With truth for my creed, and God for my guide;
She taught me to lisp my earliest prayer,
As I knelt beside that old arm-chair.

I sat and watched her many a day,
When her eye grew dim, and her locks were gray;
And I almost worshipped her when she smiled,
And turned from her Bible to bless her child.
Years rolled on, but the last one sped —
My idol was shattered, my earth-star fled;
I learnt how much the heart can bear,
When I saw her die in that old arm-chair.

'Tis past! 'tis past! but I gaze on it now
With quivering breath and throbbing brow;
'Twas there she nursed me, 'twas there she died;
And memory flows with lava tide.
Say it is folly, and deem me weak,
While the scalding drops start down my cheek;
But I love it, I love it, and cannot tear
My soul from a mother's old arm-chair.

THE OLIO.

Industry. — As the sweetest rose grows upon the sharpest prickle, so the hardest labor brings forth the sweetest profits.

True religion will show its influence in every part of our conduct; it is like the sap of a living tree, which penetrates the most distant boughs.

The soul of man, when contemplating God, is like a cloud at close of day, receiving glorious tints of beauty as it floats in the smile of the sun.

"Tell your father," said John Randolph to a young friend, "that I recommend abstinence from novel reading and whiskey punch. Depend upon it, sir, they are both equally injurious to the brain."

The more a man works, the less time he will have to grumble about hard times.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be neatly bound at 18¾ cents, or elegantly bound in muslin, embossed and gilt, at 25 cents a volume. As it is stereotyped, back numbers can be furnished to new subscribers.

☞ The Postage ☜

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

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BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, FEBRUARY 2, 1850. NO. 3.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

AGRICULTURAL EDUCATION.

At the agricultural meeting at the State House, on Tuesday evening, Jan. 15th, Mr. Calhoun in the chair, the above subject was discussed, in connection with legislative action.

Rev. Mr. Barry, of Hanover, opened the discussion in a rather lengthy and elaborate address, that would have done credit to an orator at a farmers' annual festival. He spoke of the great importance of agriculture, and the high estimation in which it had been held in various parts and in different ages of the world, and the attention which it had received from the greatest statesmen, and the most distinguished men in scientific and other pursuits. The establishment of agricultural schools in other countries, and the great call for information in our own, as evinced by the large number of agricultural papers in circulation, and various books, and other means of instruction, were urged as arguments in favor of agricultural schools, to satisfy the increasing demand for useful knowledge. The address was very able, and showed deep research and close observation.

Hon. Mr. Daggett remarked, that Massachusetts took the lead in all the great enterprises of the day; that the time had come for the establishment of an agricultural school, and he was ready for action on the subject.

Mr. Breck, of Brighton, was in favor of an agricultural school. There would be scholars enough to fill such a school; it should be located in the interior, in a retired situation, with a farm of two hundred and fifty acres. He mentioned various studies that should be pursued. The plan should be extensive; but a beginning might be made in a small way, and the outline filled up afterwards. Manual labor should be practised as a means of information, rather than for support.

Mr. Jenks, of Boston, had long been in favor of agricultural education. Young farmers need training for their profession.

Mr. French, of Braintree, said that our people are ready to receive instruction. This is shown by the great gathering here to night. He spoke of the improved state of agriculture in Europe, and the advantages from agricultural schools and model farms. Massachusetts has been first in many useful enterprises, and she ought to take the lead in this subject. Many wealthy men will give liberally to an agricultural institution, when begun aright.

Mr. Merriam, of Tewksbury, spoke of many great things which Massachusetts had done, and the importance of her taking the lead in agricultural education.

Mr. Gorham Brooks, of Medford, spoke of the course which the state had pursued in encouraging agriculture, by offering bounties on crows, foxes, and on raising wheat, all of which had done no good. Far better would it have been, to spend the money for the establishment of agricultural schools. But in this, we should commence on a small scale; and when the people see that a little money is well expended, they will be liberal in supplying what is wanted. His sensible remarks were listened to with great attention.

A very large number of gentlemen attended this meeting—the hall was nearly full.

January 22d, the same subject was discussed.

Mr. Cole, of the N. E. Farmer, said that for years there had been much talk in our meetings about agricultural education, and now it was high time to take some action on the subject. Some had doubts as to the success of the plan; but there was no more difficulty in teaching the sciences that are connected with agriculture, than in teaching other sciences, and branches of literature that fit men for other professions. And with a model farm, connected with an agricultural institution, under a good practical farmer, students could be instructed in the practice of agriculture also, and the application of the sciences to this art. But, although he was decidedly in favor of an agricultural school, he would have suitable books prepared, and have the elementary principles of the sciences appertaining to agriculture taught in our common schools, that the great mass of the people might be instructed. As academies and colleges would do but little for general instruction, or only prepare a few to govern the whole, so agricultural schools would effect but little for general instruction. There was no more propriety in sending boys to agri-

cultural schools to learn the elements of the sciences, than in sending them to college to learn A B C. Agricultural seminaries should be commenced on a moderate scale — then an imperfection in the plan could be corrected without much loss; but if begun on an expensive scale, any defects in the plan might occasion great loss, and finally defeat the whole design for a long time.

Mr. Jenks, of Boston, was in favor of agricultural education in common schools, but this would not supersede agricultural schools. He said that there should be agricultural schools for training teachers for our common schools, that they might give proper instruction to their pupils. In Ireland there are thirteen schools for this purpose. Mr. Jenks presented statistics showing the claims of the farming interest upon the state — as large sums had been expended in various institutions for the purpose of preparing men for other pursuits, but nothing had been done to educate farmers, and comparatively but a small amount for the encouragement of agriculture.

Hon. M. P. Wilder rejoiced to see the subject taken up in earnest. He considered agriculture as susceptible of improvements as manufactures or the mechanic arts. He thought it was time to begin, and he would cheerfully coöperate with those who feel an interest in the subject. He thought the science of agriculture ought to be taught in our common schools; yet we should have an agricultural institution, and some feasible plan should be prepared and presented to the legislature.

Mr. Asa G. Sheldon, of Wilmington, alluded to the improvements that had been made in agriculture for forty years past, and the improved education of females; but he thought that education which fitted them for good housewives had been neglected. And if an agricultural school was established, he hoped that while the boys were learning how to manage the farm, girls would be taught to manage household affairs. He said that he never knew a farmer to succeed well, unless he had a wife who could manage well. He considered industry in females necessary for their health. The great men of our country had industrious mothers. The seats in this hall are filled with men whose mothers were accustomed to labor; but if so great a change takes place in twenty-five years to come as has been made the twenty-five years past, as to female education and fashions, not only these seats, but those of Congress, and perhaps even that of the office of President, will be filled in the next century by those born of Irish women. Not one Yankee girl in ten is now educated so as to be able to manage a farmer's house. The farmer likes music, but if he comes from his field for his dinner, and finds it is not ready, and the fire has gone out under the pot, and the children crying, the sound of the organ will be a torment to him.

Mr. Merriam suggested that an agricultural school should be established on a farm of three or four hundred acres, which should be divided into different departments for farming and gardening, and that different breeds of animals should be procured.

Hon. J. C. Gray thought that those brought up on farms had much less need of instruction than others who had paid no attention to the subject. He thought it was best to begin on a moderate scale, and when the fruits of an agricultural school were seen, there would be no trouble in getting aid. He thought that such an institution might be connected with some of our present literary seminaries.

Mr. Elmer Brigham, of Westborough, thought, from what had been said, that an agricultural institution was designed for the sons of those who live in cities, but he thought that it should be conducted on economical principles, so that the sons of the laboring classes could have an opportunity to get agricultural instruction at a small expense.

Mr. Cole thought the state should provide elementary books on the sciences connected with agriculture for our common schools, and prevent the changes now so common in school books. These elementary studies would give great encouragement to higher agricultural institutions. He thought an agricultural college should be entirely distinct from all other institutions, and the studies should be only those that conduce to agricultural improvement, and of a useful character.

Rev. Mr. Barry, of Hanover, alluded to the success of agricultural schools in other countries, and he argued that they would be still more useful in this country, where farmers were owners of the soil.

Mr. Wilder alluded to the lectures which Professor Johnston is now delivering before the N. Y. State Ag. Society, at Albany, and he hoped that he might be engaged to deliver a course of lectures before these meetings.

Same subject continued.

LARGE CROP OF CORN.

Mr. R. W. Turner, Newton Centre, gives the following account of a crop of corn which he raised the past season. There was one acre and one hundred and forty-four rods of land. The produce was four hundred and twenty-four heaping bushels of ears. He thought that two bushels of ears would make one bushel of shelled corn. He says that this land was once a mud hole. He drained it, sowed it to grass, mowed it two years. He manured one half with compost, spread on; the other half with green manure in the hill. The corn was as stout where it was manured in the hill. The rows were three and a half feet apart, and the hills two feet apart.

CONVENTION OF FOWL BREEDERS.

The Committee who superintended the late fowl exhibition, have given notice that a public meeting will be held, at the Representatives' Hall, on Tuesday evening, February 12th, at 7 o'clock, for the purposes of hearing the report of the Committee, and forming a permanent association. It is hoped that all who take an interest in the promotion of so useful an object will be present, and aid in the proceedings.

SHORT HORN DURHAM HEIFER.

This engraving represents the prize heifer exhibited at the Christmas Club Show, at Smithfield Market, London, in December, 1843. This annual show is much the largest and best of fat cattle in the United Kingdom. To this heifer were awarded all the first prizes of that show: — £20, as the best cow of her class; the gold medal, as the best fat beast at the show; and a silver medal, to her breeder, &c., Sir C. R. Tempest.

This heifer was four years and nine months old. Her dead weight was one thousand seven hundred and seventy pounds. She produced two hundred and twenty-eight pounds of loose fat, which is included in her dead weight. Our engraving has been made by Brown, from a drawing taken from a cast which may be seen in our office — a *fac simile* of the original.

THE WORLD'S FAIR.

Among the great schemes that have resulted from steam navigation and travelling, is that grand plan for a monster exhibition, or the World's Fair, to be held in London in 1851. A few years ago, such a proposition would have been ridiculed as the height of folly, and an attempt would have resulted in a splendid failure. But now such are the advantages for rapid travelling by steam, that a person in the interior of this great country can go to its shores, and then cross the vast ocean of several thousands of miles in extent, and appear at the place of that great exhibition in the short space of two or three weeks; and on this rapidity of travelling is founded the fair prospect of so magnificent a scheme as the world's exhibition.

All nations are invited to bring to this show the products of their industry, taste, and ingenuity, from the raw material and the rudest, coarsest fabric, to the finest and most delicate specimen of fine taste and skill; from the simplest and smallest productions of art, to the most gigantic and complicated machinery.

Prince Albert has consented to take the presidency of this great enterprise. It is proposed to erect a fabric for the purpose, one mile in extent. The sum necessary to be raised is estimated at half a million of dollars. Prizes from five hundred pounds down to twenty pounds will be awarded.

At a meeting of the Executive Committee of the N. Y. S. A. Society, the Secretary read the following extract from a letter from James Cowden, Esq., American Consul at Glasgow: — "Since my letter to you of the 19th Oct., Prince Albert has come out with a proposition (under the patronage of the Queen) for a great fair or exhibition of the '*Industry of all Nations*,' to be held in London in the summer of 1851, to which I beg to draw your attention. It will be found in the Glasgow Chronicle, which I forward you. I am quite sure there is no nation on the face of the globe that can outdo the Americans in any thing they undertake. Sufficient time is allowed ere the proposed exhibition is to come off, to enable our ingenious mechanics to bring forth something worthy of our noble and beloved country, and secure to themselves a handsome reward, if successful competitors; as the prizes are to be one *money* prize, £2000 sterling, equal to near $10,000; and four £1000 prizes sterling, equal to $5000 each. If this be made generally known, (and no institution can so effectually do it as that with which you are connected,) I cannot doubt the United States will exhibit some of its exquisite Yankee notions, which will prove useful and ornamental at the 'Great Fair of all Nations.'"

For the New England Farmer.

BONE DISORDER IN COWS.

Mr. Editor: In my former communication upon this subject, (Vol. I. p. 389,) I attempted to show that there was such a disease, caused by the want of proper food. It will be my object, at this time, to show why it may exist in some sections of the country, and not in others. Those farmers, in this town, whose cows have been affected by it, have not been in the habit of raising stock, but they have sold their calves to the butcher. The farmer who keeps ten cows, usually sells annually eight calves. These, at five weeks old, will weigh one hundred and twenty-five pounds each. Where this course has been pursued for fifty years, there have been taken from the soil twenty-five tons of animal matter, and but small return made to it by the manure voided by calves at this age. Now it will be obvious to every one that this will sooner exhaust the animal matter from the soil, than where they raise stock; for the ox that is kept until he weighs as much as the eight calves, will have voided a larger amount of manure.

It is the practice of most farmers here to purchase heifers that are driven from New Hampshire, Maine, and Vermont, in the autumn, before they are three years old, which are expected to calve in the spring. This is a time when they will require the largest amount of animal matter to promote their own growth, and furnish nutriment for their offspring. It is these young cows that are most likely to be affected by this disease. On Mr. Preston's farm, alluded to in my last communication, for fifteen years before they began to use bone-meal, they were not able to keep any of these until they were six years old. They became so stiff and feeble that they were obliged to dry them. Many of them were driven to New Hampshire to a pasture that has always been used for fattening cattle. There they fatted as well as cows that had never been diseased.

I will give my reason why I think that this disease has not shown itself any more in Hamilton; — yet I think I have seen some signs of it there. When I see the boards about the cow-yard look as if the cows had been trying to eat them up, it is a sure sign of one form of this disease. The farmers in that town are in the habit of using a considerable quantity of hay from the salt marshes of Ipswich and Essex. I have never seen any analysis of this grass; but, from the large quantity of lime in the shells of clams and muscles, found about these marshes, the inference is that it contains a large amount of phosphate of lime.

The pastures there may be as much exhausted of animal matter as here; yet if a cow has had a full supply of it during the winter, she will be able to go through the summer without showing the want of it. It is the opinion of some there, that the manure made from salt hay is better than that made when the cattle are fed upon English hay. The inference from this is, that it furnishes something to the soil, which the other does not.

It is the practice of many there to keep a portion of their best salt hay until the time the cows go to pasture. They will often eat it then, when they will not eat the best of English hay.

If I am correct in supposing that it contains more lime, it shows that they were giving it to their cows at the very time they most needed it to prevent this disease.

It may not be, that those farms which have been cultivated the longest are most exhausted of animal matter. It depends more upon the manner of cultivation than upon the time.

Perhaps we may apply the same principle to feeding milch cows, that we act upon in feeding hens. When we see them trying to eat the lime from the walls of their coop, we think they need it to form the shell of their eggs, and we give it to them in oyster-shells, old mortar, and bones. So when we see a cow trying to eat old bones, we should think that she needs something of this sort to furnish milk.

Hens that have been well supplied with lime have enough in their system to enable them to form the shells of eggs for several days after they are deprived of it. When the ground is covered with snow they sometimes lay eggs without shells. This is the same as saying to us, — "If you will only furnish us with the materials, we will give you the eggs." Thus it is with a good cow that has not a supply of lime. She gives us so much of it in milk, that she has not enough to supply her own wants.

The same principle may apply here, as we act upon in regard to an orchard. We are often told that it is not well to plant a young orchard where an old one has just been removed. This is not because the soil has become so poor; but it has become deprived of the particular ingredients necessary for a young tree. If we supply this, the tree will do as well as the former one did.

In every instance where I have seen this disease, they have pursued that course which would be most likely to exhaust the animal matter necessary for a milch cow.

In Doctor Dana's Muck Manual, it is stated that the liquid evacuation of the cow contains a considerable quantity of phosphate of lime. When no attention is paid to preserving this, and the solid excrements are exposed to the air, the most volatile and valuable parts are lost. From this we may infer that where there is a barn-cellar for preserving the manure, the cows will not be so likely to have this disease, and experience will warrant the conclusion.

It is there stated also that peat-ashes abound in phosphate of lime. If our peat-meadows are reclaimed and cultivated, the hay which they produce then will probably contain more phosphate than that which grows upon them in their natural state. Cows that are fed upon hay that grew upon reclaimed meadows will not be affected by this disorder.

By carting muck to our barn-cellars, to be wet by the evacuations of the cows, we not only increase our manure, but it will abound in that particular ingredient which the soil needs to produce proper food for milch cows.

I think I can give an instance showing the beneficial results of muck in this respect. The farm of Mr. Joseph Putnam is near to Mr. Preston's. This has been for the last fifty years as much of a dairy-farm as any in this neighborhood; yet his cows have not been affected by this disorder. He has never brought much manure on to his farm, but he has annually carted a large quantity of muck into his hog-pen and cow-yard; so that, twenty-five years ago, his meadow mud-manure had become proverbial in this neighborhood. Now cows, that are fed upon grass that grows upon land which has been manured with this compost, will not be so apt to have this disorder, as where nothing but the solid excrements of the cow had been applied to the soil.

When I began, I intended to say something about this disorder where I have seen it in other places; but I have already trespassed too much upon your patience. WILLIAM R. PUTNAM.

North Danvers, *Dec.* 28.

Remarks. — The term *animal matter* is used by our correspondent in reference to the phosphate of lime, or bone-earth, which enters into the composition of the animal's bones. Before their formation, the materials may be called *mineral matter;* but after forming a part of the creature, they are animal matter, as much so as the flesh, horns, or hoofs.

These substances, in their elementary state, being minerals, they are not liable to evaporation, but they remain with the permanent parts of the liquid manure. On boiling this manure, or exposing it to heat, and consequent fermentation, the aqueous parts would escape in steam or vapor, and the volatile matters in gases, leaving the salts and other solid parts. — Ed.

For the New England Farmer.

HISTORY OF AGRICULTURE. NO. IV.

[CONCLUDED.]

Mr. Editor: — The soil of South America is rich and productive, but the bowels of the earth are stored with the precious metals; hence agriculture is generally neglected. The people are many years behind the times, both as it regards the implements of husbandry, and the mode of subduing the soil. But the United States were destined to happier scenes of action. Our fathers pushed the buisness of agriculture with nerve, resolution, and unexampled success. The forest fell before them, and the country soon began to smile, and promised what a more distant day has brought forth. While every other art and science is cultivated, that of agriculture has by no means been neglected. The different modes of subduing and cultivating the soil have, within a few years, engaged the attention of men of wealth and leisure. Many valuable publications have been diffused over our country, from which much valuable and useful information has been drawn. But in the agriculture of this country many improvements are still to be made. Many of our farmers blindly follow in the footsteps of their fathers, without deriving any benefit from reading, reflection, or experiment; and we frequently hear them complain that their agricultural labors are severe, and their crops small.

This is in some degree true; but its truth arises principally from the fact that they cultivate too much land to render agriculture profitable. I speak in relation to the means which they employ for fertilizing their land. Much may be done without the aid of manure; but the use of this article is the most ready and efficient mode of rendering the cultivation of the earth profitable. Instead, however, of increasing this article by compost, many farmers misapply that which is incidental to their farms. They are too apt to spread a small quantity of manure upon a large piece of poor land. The manure, in this case, is almost entirely lost, inasmuch as it remains in an inactive state. There is not a sufficient quantity to give an impetus to the cold and barren earth with which it is mixed. This is one great cause of poor crops; and the great surface over which the labor of the husbandman is spread, is the principal ground of excessive labor of which he complains. The farmer should only plough as much land as he can highly manure; then his labors would be comparatively light, his crops large, and his land constantly improving. By this mode of proceeding, the crops would not exhaust the land; and the quantity of manure upon it beyond what is necessary to the production of the crops, would, by its fermentation, fertilize, and render of the nature of compost the whole cultivated surface. Such land may, with a trifling expense, be kept very rich. Whilst this process is operating upon a part of the poor lands of a farm, the residue of them may lie fallow, or be fertilized by ploughing in such green crops as may be produced upon a lean soil. The means of enriching land are numerous, which are within the reach of every farmer. A little reflection upon the most common principles of philosophy will point them out. Different soils, and different manures, and different crops, must all be connected according to their respective and relative natures. Farmers should consult the nature and character of their farms, and regulate their tillage accordingly; and they should also remember that husbandry, of all arts, is the most improvable. ROCKINGHAM.

For the New England Farmer.

"CONVERSATIONAL MEETINGS."

Mr. Editor: — On page 344, Vol. I., of the N. E. Farmer, is an article, which doubtless interested many of your readers. That farmers should meet together, and discourse topics which belong to their vocation, is a subject of great magnitude and importance; and we have often urged the formation of a "Farmers' Club" in this place, but our labors have ever proved unsuccessful; and we now take this way of again introducing "the plan of creating public sentiment by means of popular assemblies." I believe there is such a union of feeling or spirit existing here relative to this object, that a speedy organization might be made. Who will throw the "first brick," or coöperate in bringing about such an enterprise?

Where is there a farmer in New England that does not reverence with hallowed emotions the land of his birth, as well as his highly honored vocation? That venerable band of "faithful few" who landed upon "Plymouth Rock," held this, their chief employment — subduing a wilderness — in high estimation; and they and their descendants have transmitted from generation to generation — yea, down even to the latest posterity — this, a noble gift or token for remembrance, — "a fruitful field." Say Morse and Parish, in their early history of New England, in speaking of the "character of first settlers," "They were destined to plant and subdue a wilderness, filled with savage enemies; to lay the foundation of a great empire, under the jealous eye of their parent country." Thus we see the manifest zeal or interest taken in the cultivation of the soil; and in order to give efficacy to their enterprise, or to coöperate in helping each other, so that all might stand on "equal footing," tradition says they found it necessary to congregate, or assemble together, that they might consult their best interest. We have it from oral account, that these meetings were generally held under the broad canopy of heaven beneath the shady boughs of some large and stately tree.

Would that such was the practice now, in all farming communities! What benefit, what vast amount of knowledge, might be derived from such means! Again we ask, Who will coöperate with us in bringing about this desirable enterprise?

Woburn, *Jan.*, 1850. D. W. J.

For the New England Farmer.

HOUSE LAMBS.

Mr. Cole: — Being a reader of the New England Farmer, I have often acquired new and useful information on various subjects of agriculture and rural economy. You have given us articles on breeding, rearing, and fattening neat cattle, sheep, and swine. But there is one subject which I have not seen noticed in your paper, or in your bountifully supplied markets. I mean *house lambs*, for which, if you advert to the prices of meat in the provision market of London, and other cities of Great Britain, you will find, at this season of the year and the two following months, the prices generally quoted.

I will admit that it is an article of luxury and of rather limited use; yet that does not preclude you from giving it a passing notice. As I have been particularly acquainted with this branch of rural econ-

omy, and have observed the results of others in the same branch, I will make a few remarks on the subject, with the results of my experience, which was in England.

Some few years since, in my farming operations, I purchased twenty ewes of the Dorset or Somerset breed, about the first of October, which cost about $12 per head. I fed them on rowen; and about one month after, the lambs began to come. They were allowed to run with the dams about two days, and then I provided a pen for them in an outhouse. The pen for the lambs, from this number of ewes, was ten feet by six or eight, raised about one foot above the ground. The floor was made of strips, one and one half inches wide, with spaces between just wide enough to allow the urine to escape, and not allow the lambs' feet to pass through. A little straw was spread over the floor, and changed daily. As the lambs were dropped, they were confined to the pen, as soon as they were strong enough. The dams were allowed to come and nurse them at seven o'clock in the morning, at noon, and again at evening; and so on, in rotation, as fast as the lambs came. In a few days the ewes will get habituated to this course, and usually feed till sucking time, and then come when called. A small lump of chalk should be put into the pen, and a little wheat or rye flour, in troughs, for them to lick, which they will do with avidity. The chalk serves to correct acidity in the stomach, and it is very good to give to young calves. The benefit arising from it is very great.

I have sold lambs, at seven or eight weeks old, whose weight per quarter was from seven to eight pounds, — an average of from twenty-eight to thirty pounds, — at one shilling and sixpence sterling per pound, which was ten to twelve dollars for each lamb. If I recollect, I sold the produce of nineteen of these ewes before the first of April. I think it was twenty-nine lambs, as more than half of the sheep had twins. And the net amount received was nearly equal to the fifty pounds sterling paid for the sheep. As the season advances, though the lambs may be made heavier, the price recedes. Some allow the ewes to associate with the buck again in two or three weeks from yeaning, a propensity for which this breed is proverbial, — and thus obtain a second produce the same year. But this practice is not an economical one, as it reduces the value of the dams; for they will not recover, so as to fatten during the coming season. The practice usually pursued is to fit the ewes, which the lambs leave so early, for the market soon after shearing. The only breed of sheep adapted to this mode is the Dorset or Somerset.

For the New England Farmer.

DITCHING.

Mr. Editor: — One year has passed away since I made my last communication on ditching, Vol. I., p. 2. Since that time, I have had an opportunity of witnessing the effects of my effort to improve fresh meadow through draining. Before I commenced, many parts of the meadow were so wet and swimming that all of the hay was removed by hand labor, with poles; and the quality of fodder was bad, by being constantly wet. Since I made the drains or ditches, the swimming or floating has ceased, and the meadow has become fine and dry; so that in most cases, I was able to go on with a cart with wide-rimmed wheels, drawn by oxen, and to carry from fifteen hundred to a ton of hay at a time; which was never done before. The quality of fodder is much better, equal to interval fodder. The quantity is not so great, but a new kind of grass is coming in, which I think, in a short time, will make the fodder worth twice as much as it was before draining. So far, the experiment has more than answered my expectation.

Before I drained the meadows, it was impossible to travel on them, without going into the wet ancle deep; but since draining, I can walk any where with shoes on, without the least danger of wetting my feet; and in summer and autumn, they are perfectly dry. Cranberries, also, are better than they were before, and less liable to be injured by frost.

I have no doubt that most of my meadows, in a short time, will be suitable to cultivate, as the mud proves to be only from two to four feet deep, and of the best kind of peat. If so, I shall have from thirty to forty acres of the best interval land for grass and vegetables, which will be worth six times as much as the high land that has been cultivated for the last century, and needs a larger quantity of manure to obtain decent crops. You shall hear from me in 1851, if we are in this mundane sphere then.

Yours respectfully,

S. A. SHURTLEFF.

Spring Grove, *Jan.*, 1850.

For the New England Farmer.

PROFIT OF HENS.

Mr. Editor: — The interesting communication of Mr. C. B. Ayer of Preston, Conn., contains a very important query, and one which I would wish to see satisfactorily solved; but the premises are defective, in so far as no statement is given concerning what breed of fowls Mr. Ayer possesses. It is well known that some varieties have a quality of protracted laying much beyond others, which compels a general, instead of a special answer to his query; besides, some kinds arrive much earlier at maturity than others. I refer to the inquiry — "How should I manage with my hens, in order to have them *continue* to lay through the cold season?"

The most practicable mode, that occurs to me, would be to coop up the earliest pullets of the season, after they are two months old, and keep them in durance until the middle of September, when they may be allowed full liberty. A week afterwards, they should be confined in a spacious enclosure, in company with the males from the former year's broods, and thus kept for a couple of weeks. They will shortly after begin to lay, and continue so to do — not every day, however — until the spring of next season.

The most fitting place to keep laying hens over winter is in the stable, or cattle-barn. The heat engendered by the cattle is sufficient to meet their wants.

Care should be taken that no access to the hay-rack be provided, as poultry do much damage to that article. When the weather is fine, and no snow on the ground, the stock may be allowed to go without doors an hour or two before or after meridian.

If so kept, there is no danger of mixing the laying stock with those fowls in the yard which may be barren; as the former, when about to be cooped up, will take to the barn in which they lay, and the others to roost in their usual places.

Grain, boiled and raw, for choice, and boiled potatoes, will furnish sufficient food. A box of sand, mixed with powdered oyster-shells, or lime, should be provided, and fresh water, in a shallow dish, which should be wattled across the top to prevent the hens wading or washing in it. The sand should be sufficiently plentiful to allow the hens to dust themselves in it. A box about eighteen inches deep, and two feet wide, filled about a foot high with sand, will serve the purpose. An old tea-chest is a good substitute.

The number of eggs to be expected in winter, compared with warm weather, will not amount to more than three fifths; but the difference between fourteen and twenty-two cents per dozen is to be added to the value of the winter produce, which will about equalize the receipts with those of summer.

The conditions under which the laying of hens can be protracted to the fullest natural extent, are systematic feeding, (taking care to prevent repletion,) warmth in the end of the fall and opening winter, and cleanliness in food, water, and roosting places.

I am, sir, &c.,

A FIRESIDE FARMER.

Boston, *Jan.* 7, 1850.

MAN AND THE SOIL.

BY M. GUIZOT, LATE PRIME MIMISTER OF FRANCE.

Movable property, or capital, may procure a man all the advantages of wealth; but property in land gives him much more than this. It gives him a place in the domain of the world; it unites his life with the life that animates all creation. Money is an instrument by which man can procure the satisfaction of his wants and his desires. Landed property is the establishment of man as sovereign in the midst of nature. It satisfies not only his wants and his desires, but tastes deeply implanted in his nature. For his family it creates that domestic country, called home, with all the living sympathies, and all the future hopes and projects, which people it. And whilst property in land is more consonant than any other to the nature of man, it also affords a field of activity the most favorable to his moral development — the most suited to inspire a just sentiment of his nature and his powers. In almost all the other trades or professions, whether commercial or scientific, success appears to depend solely upon himself, — on his talents, address, prudence, and vigilance. In agricultural life, man is constantly in the presence of God and of his power. Activity, talent, prudence, and vigilance, are as necessary here as elsewhere to the success of his labors; but they are no less insufficient than they are necessary. It is God who rules the seasons and the temperature, the sun and the rain, and all those phenomena of nature which determine the success or the failure of the labors of man on the soil which he cultivates. There is no pride which can resist this dependence, no address which can escape it. Nor is it only a sentiment of humility as to his power over his own destiny which is thus inculcated upon man; he learns also tranquillity and patience. He cannot flatter himself that the most ingenious invention, or the most restless activity, will insure his success: when he has done all that depends upon him for the cultivation and the fertilization of the soil, he must wait with resignation. The more profoundly we examine the situation in which man is placed by the possession and cultivation of the soil, the more do we discover how rich it is in salutary lessons to his reason, and benign influences on his character. Men do not analyze these facts, but they have an instinctive sentiment of them which powerfully contributes to that peculiar respect in which they hold property in land, and to the preponderance which that kind of property enjoys over every other. This preponderance is a natural, legitimate, and salutary fact, which, especially in a great country, society at large has a strong interest in recognizing and respecting.

ON THE NATURE OF SOILS.

An all-wise Creator, for some all-wise purposes, decreed that plants and animals should derive their subsistence from the soil; hence we find all the elements of vegetable and animated nature in the soil. For instance: in most soils we find iron abundant; then, if we look into the animal economy, we find iron in the muscles of both man and the lower orders of brute creation. And the wonder-working chemist detects nature in using the same ingredient in coloring all the fruits and flowers. All things having once been created, the making principle stopped, and a changing one immediately took its place, and has never ceased to act since mutability was indelibly stamped upon creation. In the formation of plants and animals, Nature, gradually collecting her material, slowly forms her most perfect specimens; but, like a human mechanic, inasmuch as she lacks one or more of the materials, in the same degree is the fabric imperfect. Thus we see that if the soil in the field lacks one or more ingredients in the formation of a vegetable, the plant assumes a dwarfish, sickly appearance, like an animal robbed of its food. Now, the farmer, to be a good husbandman, must plant the germ, and place around it all the materials of which it should be composed; then Nature, the handy workman, soon rears the perfect plant.

The question now arises, what those ingredients and materials are. The chemist has given us all the knowledge he has on the subject; the air and the water, the soil and the subsoil, have each a part in their possession, and should each be made to contribute a share. Nature, in the production of a perfect plant, does not restrict herself to the animal, vegetable, or mineral world. The opinion so generally prevalent that the soil, two or three feet below the surface, must consequently be entirely barren and useless, may be, and doubtless is, erroneous in many instances, especially in that called *hard pan*. If, in producing the perfect plant, nineteen may possibly be found in the surface soil, while the twentieth may be found in the subsoil. Instances have occurred where a good dressing from soil ten feet deep, entirely destitute, to all appearance, of vegetable matter, have had equally as good, or the same beneficial effect, as a good dressing of gypsum. This is truly an age of improvement. Many a farmer has found, while others have yet to find, a mine of wealth below the reach of his plough, of which he was as unconscious as the mountain of its ore. It is very reasonable to suppose that the newly-created world was, at first, entirely a mineral mass of matter, from which vegetables soon grew abundantly enough to support all animated nature. Geologists generally suppose the action of the elements, for an indefinite length of time, was necessary to fit it for the abode of plants and animals; but I believe the action of the frost, with the winter's rain and snow, to be a powerful fertilizer in this climate; hence fall ploughing and deep ploughing should go together. — *Selected.*

GEOMETRY APPLIED TO FARMING.

It may appear, at first sight, as if the science of geometry could have but little to do with agriculture; and yet there are few of the ordinary occupations of life in which it is of such general utility. The farmer does not plant a row of corn, or construct a drain, or a road, or even plough his ground, without applying, whether he be conscious of it or not, important mathematical principles. He cannot build a fence, or plan a dwelling, or a barn, without describing mathematical figures; and in doing this he can, by the application of a few of the most obvious principles of geometry, be enabled to save as well time and labor as money. I propose, in this short article, to demonstrate the above fact in such a manner as shall render it plain to all. And first, let us take fencing.

The main object to be sought in building fences is, of course, to enclose the greatest possible quantity of ground in the least possible fence. It may seem a self-evident proposition, that a certain number of rods of fence will enclose a certain number of acres of ground, no matter in what particular form said enclosure may be made; but there cannot be a greater mistake, as I will presently show.

Most of the fields in this country are enclosed in the form of either squares or parallelograms. A parallelogram (I will explain, as every one may not understand the term) is a four-sided, right-angled figure, having two long and two short sides; or, in other words, it is what is known in many parts of our country as an "oblong square." Now, suppose it be required to enclose a field with four hundred rods of fence, in what manner shall it be laid out so the said four hundred rods of fence shall enclose the most ground? If it be laid out in the form of an exact square, each side will be one hundred rods in length, and the field will contain exactly ten thousand square perches, or sixty-two and a half acres. If it be laid out in the form of a parallelogram, having two long sides, each one hundred and fifty rods, and two short sides, each fifty rods, it will still require four hundred rods of fence; but it will contain only seven thousand five hundred perches of land, or about forty-six and three quarter acres; showing the difference in favor of the square to be twenty-five per cent. A large majority of fields in this country are right-angled parallelograms, when squares would have been equally convenient, and a large portion of the labor and materials employed in constructing and keeping up the fences might have been saved. If fences were constructed without reference to other boundaries, as in enclosing a quantity of land on a prairie, the advantages of circles over every other form are still more obvious. For, suppose four hundred rods of fence be built in the form of a circle, it will enclose nearly twelve thousand seven hundred and fifty perches of ground, being two thousand seven hundred and fifty more than the square, and five thousand two hundred and fifty more than the parallelogram.

Hexagonal or six-sided figures, approaching nearer to the form of circles than do squares, offer similar advantages. This is the form in which the bees build their cells, and science shows that in no other form can an *assemblage* of enclosures be made with as little waste of material as in this, thus showing a beautiful coincidence between mathematical knowledge and animal instinct. On most farms circular or hexagonal fields would be impracticable, owing to the shape of the farm; but there are certain small enclosures where these forms are practicable. I have taken the above large enclosures as examples, because in them the advantage of one shape over another is more obvious. In small enclosures the proportion is equally great, though of course not equally glaring.

In enclosing gardens, barn-yards, sheep-folds, &c., the fences of which are usually built without reference to other boundaries, the circle offers advantages over all other forms. For if a certain piece of ground, for a garden or barn-yard, be enclosed with two hundred and forty feet of fence, it will contain, if laid out in a parallelogram, eighty feet on each long side, and forty feet on each short ditto; three thousand two hundred square feet; if laid out in the form of a square, it will be sixty feet on each side, and will contain three thousand six hundred square feet; if it be laid out in a circle, it will contain four thousand five hundred and seventy-nine square feet. This shows the advantages of one form over another very plainly.

The same principle applies to the construction of out-buildings, such as corn-cribs, ice-houses, smoke-houses, or hog-pens, in all of which a large proportion of materials and labor can be saved by adopting the circular or hexagonal form.

Houses and barns have, from time immemorial, been right-angled buildings, and I suppose, according to the immutable laws of custom, must still be built so; but even here, a large amount of materials and money may be saved. I now speak of country houses, where the builder is not obliged to plan his house according to the shape of a contracted town lot. Nine tenths of all farm buildings are in the form of right-angled parallelograms; and in thus erecting them, space is sacrificed without any saving in labor or money. For, suppose a house or barn be built twenty feet front by forty in depth, which is a very common *proportion* for buildings; it will then require one hundred and twenty feet *length* of wall to enclose it, and its floor will contain eight hundred square feet. If it be built in the form of a square, thirty feet on each side, the length of wall required to enclose it will be the same; but its floor will contain nine hundred square feet, being the difference in favor of the square of one hundred feet, which, to the farmer who likes a good roomy threshing-floor, or to the wife who rejoices in a roomy house, is an item of no small importance.

From the above premises, then, we may draw the following conclusions: —

1st. That all large enclosures should be, as nearly as possible, exact squares, not parallelograms or "oblong squares."

2d. That small enclosures, wherever practicable, should be circular, or of some figure approaching the circle as nearly as possible.

3d. That small out-buildings should be circular, and large buildings, where plenty of room is desired, should be square.

4th. By adopting the above forms, a large proportion of time, labor, and materials, and therefore of money, may be saved without any sacrifice of space.

COLA.

NOTE. — In endeavoring to make the above subject plain, I am aware that I have departed from the strictness of mathematical terms somewhat; but the conclusions deducted from the above will, I think, be found mathematically correct. C.

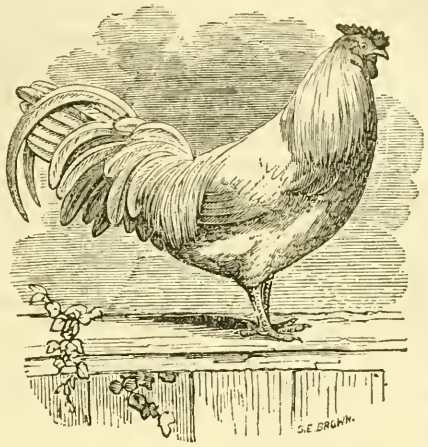
— *Phila. Dollar Newspaper.*

STARCH FROM INDIAN CORN.

The Ohio Statesman informs us that large quantities of starch are made from this grain in that state. An establishment near Columbus is said to use twenty thousand bushels of corn annually for this purpose. No attention is now paid to the color of the corn, as by the improved modes of manufacturing, as light-colored starch is produced from the dark-colored varieties, as from white. The quality of the starch here made is said to be superior, commanding a higher price in New York and New Orleans than that made from wheat. The offal of the grain is fed to hogs; and at the manufactory alluded to, five to six hundred head are annually fattened.

DURABILITY OF RED CEDAR.

We have heard of an old farmer, who, when asked how he knew that cedar posts would "last forever," said he had frequently tried the experiment. Some may doubt his assertion, yet its lasting powers have been found to exceed a long lifetime. At the head of one of the graves in "Old St. Mary's," Md., there stands a cedar slab, which, as the inscription indicates, was placed there in 1747, and is still perfectly sound.



DORKING COCK.

This beautiful engraving is taken from a daguerreotype likeness of one of Dr. Wight's fowls, which are regarded as among the finest in the country. He has long paid great attention to poultry, importing from various countries distinct and pure breeds. His white Dorkings are much admired for their beauty and genuineness. Dr. Wight, by his importations, correct observation in various experiments, and ready communication of valuable information, has done much to promote correct knowledge in regard to this important branch of rural economy.

The following is a copy of Dr. Wight's remarks on the Dorking breed of fowls, as communicated to the author of the American Fowl-Breeder: —

"As you have expressed a wish to have me report my experience in regard to the Dorking breed of fowls, I readily comply with your request.

"After an experience of ten or twelve years, (having been, in that time, the owner of many birds of different breeds,) I do not hesitate to give the Dorkings the preference.

"They have large and plump bodies, with a broad, full chest, like the partridge, and in this peculiarity, hold the rank among poultry which the Durhams do among cattle. When produced at the table, there is no other breed I have yet seen equal to them. They are also good layers, producing a good-sized, clear, white egg, and, as sitters and mothers, cannot be surpassed by any breed of fowls. To obtain the *pure* breed is difficult. Any one who has ever imported them will attest to this fact. No sure criterion is found in the appearance of five toes, as has been stated. But where it is not found, I should apprehend a 'cross.' To describe a true Dorking is difficult, although a breeder could at once recognize one. Many writers state that they are long in the body. But this is only true when they are young. As they come to maturity, the other parts are filled up, and they appear more like the form of the linnet than any other bird. The prominent points are these: A fine head, with brilliant, reddish-tinged eyes; single or double combs, in both sexes; a graceful neck, rather short than long; wide, deep, projecting breast; the body is not only long, but is round, rather than flat or square; and the legs, considering their large size, short, and invariably of a silvery white. They move with an approach to the majestic. Their colors are (those I have imported at various times) both white and speckled; but I preferred to retain the white, and have bred from them. My stock is now entirely white.

"I may add, that, when crossed with larger breeds, they invariably improve the form; and while the quality of the meat is also improved, the amount of offal is much reduced.

"They are a very hardy bird, and their young are easily reared — a fact of great importance in this climate."

PLANTING CHESTNUTS.

At a late farmers' meeting, in New York, Mr. Rice, speaking of planting chestnut timber, remarked, that he ploughed up a tract of unproductive hill side, several years ago, and planted it with chestnuts, in rows four feet apart every way. The first sprouts coming up rather crooked and scrubby, he went over the field and cut them down close to the ground, which caused new shoots to spring up straight and vigorous. The trees are very thrifty, completely shade the ground, and grow more and more rapidly as the soil becomes strengthened by the annual deposit of leaves. So well satisfied is he with the experiment, that he is now placing other worthless lands in a similar course of improvement.

AGRICULTURAL PAPERS.

Every farmer can well afford to take a good agricultural paper, to assist him in the erection of suitable buildings and fences; the making and saving manure; the selection of agricultural implements; the best kinds of stock and fruit; the feeding and fattening of cattle; and management of his land and crops: thus obtaining the united wisdom and experience of the best practical farmers, not only of our own country, but of the civilized world. I have known farmers to lay out, through mismanagement, within the short period of a year, enough to pay for *one hundred* copies of any agricultural paper published in the land. — *North Am. Farmer.*

Domestic Department.

Short Sermon for Parents. — It is said that when the mother of Washington was asked how she had formed the character of her son, she replied that she had early endeavored to teach him three things: obedience, diligence, and truth. No better advice can be given by any parent.

Teach your children to obey. Let it be the first lesson. You can hardly begin too soon. It requires constant care to keep up the habit of obedience, and especially to do it in such a way as not to break down the strength of the child's character.

Teach your child to be diligent. The habit of being always employed is a great safeguard through life, as well as essential to the culture of almost every virtue. Nothing can be more foolish than an idea which parents have, that it is not respectable to set their children to work. Play is a good thing; innocent recreation is an employment, and a child may learn to be diligent in that as in other things. But let them learn early to be useful.

As to truth, it is the one essential thing. Let every thing else be sacrificed rather than that. Without it what dependence can you place in your child? And be sure to do nothing yourself which may countenance any species of prevarication or falsehood. Yet how many parents do teach their children the first lesson of deception!

Preservation of Meat by Freezing. — Every body knows, or ought to know, that meat will keep perfectly sweet so long as it remains frozen. But every body does not know that their meat will be tender or tough, according to the method of thawing it.

If frozen meat is brought into a warm room, and thawed by heat — if you have not good teeth, and the digestive powers of an ostrich, you had best leave that part of the dinner for those who have. Therefore, bring from the larder, the night before it is wanted, the meat or poultry intended for dinner, and plunge it into cold water. The next morning, a thick coating of ice will be found encrusting the whole piece. Take it off, and change the water, and let it remain until the hour for dressing it. If to be boiled, put it over the fire in cold water; if for a roast, put it not before too brisk a fire, as there is always danger that the heart of a large piece may not be completely thawed, in which case it will be spoiled.

Vegetables should be thawed in the same way, and, with few exceptions, they will be better for having been frozen. Potatoes, however, acquire a disagreeable sweetness.

Lemon Pies. — In this year of scarcity of fruit, it may be desirable to know that a good pie can be made simply of lemon and molasses. Press out the juice of a lemon into two teacups full of molasses, grate in the dried peal of another, cover a plate with a layer of crust, spread over some of the mixture, lay on a thin crust, spread another layer of the mixture, and over that lay a top crust; bake thoroughly, and you will have an excellent and wholesome pie. One lemon will make two pies.

Muffins. — Take three pints of flour, one pint of water lukewarm, one teacupful of baker's yeast, one great spoonful of sugar, one teaspoonful of salt; make them up in the morning for tea, or at night for breakfast, and bake them in muffin rings.

Youth's Department.

Live for Something. — Thousands of men breathe, move, and live — pass off the stage of life, and are heard of no more. Why? They did not a particle of good in this world, and none were blessed by them; none could point to them as the instruments of their redemption; not a line they wrote, not a word they spoke, could be recalled; and so they perished; their light went out in darkness, and they were not remembered more than the insects of yesterday. Will you thus live and die? Live for something. Do good, and leave behind you a monument of virtue that the storms of time can never destroy. Write your name by kindness, love, and mercy, on the hearts of the thousands you come in contact with year by year, and you will never be forgotten. No! your name, your deeds will be as legible on the hearts you leave behind, as the stars on the brow of evening. Good deeds will shine as brightly on the earth as the stars of heaven.

The following advice was imparted to the late ex-President Adams, by his mother, in 1778, in a letter to him while he was in Europe: —

"Great learning and superior abilities, should you ever possess them, will be of little value and of small estimation, unless virtue, honor, integrity, and truth, are cherished by you. Adhere to the rules and principles early instilled in your mind, and remember that you are responsible to your God. Dear as you are to me, I would much rather that you would find a grave in the ocean which you have crossed, than to see you an immoral, graceless child."

Health Department

Hints on Diet. — "*An ounce of prevention is better than a pound of cure.*" A reasonable indulgence in the abundant supplies of nature, converted by art to the purposes of wholesome food, is one of the comforts added to the maintenance of life. It is an indiscriminate gratification of our tastes, regardless of the consequences that may ensue from it, that is alone blamable. But so great is our general apathy in these respects, that even on the occurrence of diseases, from which we are all more or less sufferers, we scarcely ever reflect on our diet, as the principal, if not the sole cause of them; we assign them to weather, to infection, to hereditary descent, to spontaneous breeding — as if a disease could originate without a cause — or to any frivolous, imaginary source, without suspecting, or being willing to own, mismanagement of ourselves?

We derive the renewal of our blood and juices, which are constantly exhausting, from the substances we take as food. As our food, therefore, is proper or improper, too much or too little, so will our juices be good or bad, overcharged or deficient, and our state of health accordingly good or diseased.

By aliment, or food, is to be understood whatever we eat or drink, including seasonings, such as salt, sugar, spices, vinegar, &c. — every thing, in short, which we receive into our stomachs. Our food, therefore, consists not only of such particles as are proper for the nourishment and support of the human body, but likewise contains certain active principles, viz., oils and spirits, which have the properties of stimulating the solids, quickening the circulation, and making the fluids thinner; thus rendering them

more suited to undergo the necessary secretions of the body.

The art of preserving health and obtaining long life, consists in the use of a moderate quantity of such diet, as shall neither increase the salts and oils so as to produce disease, nor diminish them, so as to suffer the solids to become relaxed.

It is very difficult, almost impossible, to ascertain what are the predominant qualities either in our bodies or in the food we eat. In practice, therefore, we can have no other rule but observing by experience what it is that hurts or does us good, and what it is our stomachs can digest with facility, or the contrary.

The eating too little is hurtful, as well as eating too much. Neither excess, nor any thing else that passes the bounds of nature, can be good to man.

By loading the stomach, fermentation is checked, and of course digestion impeded; for the natural juice of the stomach has not room to exert itself, and it therefore nauseates its contents, is troubled with eructations, the spirits are oppressed, obstructions ensue, and fever is the consequence. Besides that, when thus overfilled, the stomach presses on the diaphragm, prevents the proper play of the lungs, and occasions uneasiness in our breathing. Hence arise various ill symptoms and depraved effects, enervating the strength, decaying the senses, hastening old age, and shortening life. Though these effects are not immediately perceived, yet they are certain effects of intemperance: for it has been generally observed in great eaters, that though from custom, a state of youth, and a strong constitution, they have no present inconvenience, but have digested their food, suffered surfeit, and borne their immoderate diet well, if they have not been unexpectedly cut off, they have found the symptoms of old age come on early in life, attended with pains and innumerable disorders.

If we value our health, we must ever make it a rule not to eat to satiety or fulness, but desist while the stomach feels quite easy. Thus we shall be refreshed, light, and cheerful; not dull, heavy, or indisposed. Should we be tempted to eat too much at one time, we should eat the less at another. Thus, if our dinner has been larger than usual, let our supper be less, or rather, quite omitted; for there is no man, however careful of his health, who does not occasionally transgress in this way. — *Selected.*

Mechanics' Department, Arts, &c.

Purifying Feathers. — The London Journal gives the following process by which feathers may be purified: —

The feathers are first placed in what is termed a steam-cistern — a chamber of iron, having its floor formed of perforated metal, through which a current of air is made to enter with considerable force, to fill every portion of the cistern, and thoroughly saturate the mass which it contains. This continues for some time, the effect upon the feathers being analogous to that produced on metallic substances when exposed to the red heat of a furnace. Every particle of animal matter they contain is fused and driven off, being carried away by the steam as it rushes through the mass and escapes by an aperture for the purpose in the roof of the cistern. The feathers, now of course in a damp state, are next placed in a large, hollow cylinder of iron, into which, by means of a blowing machine, is carried a rapid current of air, heated by a furnace to a temperature of three hundred degrees. This, like the first cylinder, contains a revolving instrument of iron, but having arms, or bars of iron; and these, driven at a great velocity, passing through and through the mass, thoroughly separate it, and keep the feathers constantly in motion; thus allowing the current of hot and drying air to penetrate them freely, and effectually separating every fibre of them, while through a floor of wire work passes away a large quantity of dust and refuse, which must be disengaged. Lastly, the feathers are placed in a hollow cylinder of perforated metal, in which revolves a "fan," composed of four plates of metal, fixed at equal distances from each other, into a horizontal bar. This is driven with immense velocity, making about nine hundred revolutions in a minute, and carrying round the feathers with it, the dust not already removed in the drying cylinder is separated by the powerful current of air which is driven through them, and passing the perforations of the cylinder, is carried away by a drain beneath. By this means the feathers are rendered perfectly sweet, pure, and dry.

Cast Iron Furniture. — Our exchange papers are continually bringing to our notice some new article of furniture, or implement used in husbandry, or in the arts, which is now made of cast iron. Hat racks, an indispensable requisite for the halls of genteel residences, have been, until lately, constructed entirely of wood; elegant ones are now made of cast iron. Wood has heretofore been the only material used in the construction of bedsteads; elegant ones, and cheap ones too, are now made of cast iron. Fence posts and the connecting rails are cast almost or quite as cheap as they can be split from the tree; and sheet iron will make the slats for a picket fence! Good cast iron bedsteads are furnished in our eastern cities for $15 to $20 each.

From the Transactions of the Essex Agricultural Society.

DAIRY MANAGEMENT.

[concluded from page 39.]

A neighbor's statement.

The following letter, from a son of Essex, whose dairy products, the present season, have commanded the first premium in a neighboring county, will commend itself to favor — although the diffidence of the author will not suffer his name to be used: —

My dear Sir: I have twelve cows, mostly of the common native stock. There are among them, however, *twins*, said by the late Elias Phinney, Esq., to be of the Swinley, Ayrshire breed, and one of the North Devon breed. Three are old cows, two are heifers, one of which is just three years old, and has raised one calf last year, and one this; the other is two years old, and made, the second week in September, five and a half pounds of butter. These heifers were raised upon my own farm. The first was taken from the cow when five weeks old, and fed immediately upon hay and water, without ever being taught to drink milk, or in any way changing her food, except by the addition of roots occasionally, until the next summer, when she was sent to pasture. Her first calf was dropped when she was twenty-two months old. The other heifer was taken from the cow when five weeks old, and sent immediately to pasture. The calves of both are now in pasture, and promise well under similar treatment.

From the 20th of May to the 10th of August, six cows were pastured at home and milked. One of these calved early in December, and one in January last. Since that time, three more have been added to the number kept at home, and three remain dry, at pasture, away from home. They all have good pasture, and an ample supply of running water.

In June, from the milk of six cows, we made one hundred and ninety-eight pounds of butter. In July, the severe drought had nearly destroyed the feed, and the quantity of butter was diminished. During the autumn, the feed has been very good, and we have had the milk of nine cows, and from the whole we have made, since the 23d of May, one thousand and nineteen pounds of butter. The number of persons in my family has never been less than fourteen, and for many weeks during the summer, it has been eighteen; and we have used milk and cream at all times freely.

Our milk is strained into tin pans, and allowed to stand from thirty-six to forty-eight hours, in a cool, darkened room on the first floor of the house; except in August, when it is kept in a cellar, under a wing of the house. The cream is taken off into tin pails; is salted a little, and stirred every day.

We churn twice each week during the summer. Before churning, the cream stands upon ice for twelve hours or more. After churning, the buttermilk is thoroughly worked out by the hand, and the butter is salted to suit the taste. The day following, the butter is worked over again, and prepared for the market.

In laying down butter for the winter, we use stone jars. After packing it down very closely, we sprinkle salt and loaf sugar between each layer of butter. In this way our butter has kept perfectly sweet through the season.

It should be mentioned, that during parts of July and August, the cows that were milked had, in addition to the pasture, green corn fodder, or, in the place of that, Indian meal and shorts, equally mixed, in proportion of two quarts to each cow daily. And the same quantity of the same grain has been given to them during the last half of September, and of October.

The management of the dairy has, in consequence of the sickness of my wife, been wholly confided to my daughter the present year. Previously, she had had no particular training for this branch of housewifery. She engaged in it with alacrity, and her own health has been benefited by the occupation.

You will, I trust, pardon the suggestion to one holding your *official* position, that it should be made a special object of our agricultural societies to interest and awaken the attention of the female part of the community — perhaps, by associating ladies in the examination of such articles as they are best competent to judge of, and by making the exibition of such articles a distinct department of the annual fair; or, perhaps, by offering a premium for the rearing of fowls, the cultivation of flowers, vegetables, or fruit trees, or the keeping of bees, and such like. The dairy, needlework, knitting, &c., belong of course to them. But I would bring them into more active employment in the open air. One of the best conducted dairy establishments in this town, where five or six cows are kept, is *wholly* taken care of by two females, a widow and her daughter. Mothers have much to do with the training of their sons to a love of, and an intelligent preparation for, a farmer's life. It is from their interest in, and their skilful management of, the labors which belong chiefly to them, upon a farm, that their sons learn to love, and to practise with success, the business of farming.

I have cheerfully complied with your request, in making these suggestions, and hope that you, by embracing the facts in some communication of your own, may lead others *to do better* than I have done.

October 30, 1849.

Remarks. — Having witnessed, in the month of June, the skilful management of the dairy referred to in the foregoing letter, and being impressed with the importance of encouraging *young ladies* to do what their mothers alone have been accustomed to do, that they themselves, when their turn comes, may be qualified to go ahead, I solicited this communication. It adds much to the facts before stated. Particularly it shows, to some extent, at least, what may be expected of the *Ayrshires* and *Devons*. I saw the animals, and have no doubt of the correctness of Mr. Phinney's opinion. I wish he could have lived to have done them justice. I was struck with the appearance of the young stock, on this farm, and have no doubt that the good sense of my friend who manages it, although he came into the field at the *eleventh hour*, will demonstrate that he nobly earns his reward. His suggestions, as to the expediency of encouraging females to come forward and take parts in our exhibitions, are worthy of regard. Universally they are admitted to constitute the *better half* of society; why should they not then have an equal chance to show themselves, and the work of their hands? Is there any one whose delicacy would be offended by such a sight? Let such remain at home. It would be a pity to expose nerves so nicely tuned. Ten chances to one, that the *fastidiousness*, that would object to a female taking part in an Agricultural Exhibition, would often be found appurtenant to that class of *personages* who are said "to strain at a *gnat*, and swallow a *camel*."

The *buffalo*, or *hornless cows*, spoken of in Statement No. 1, by Mr. Stone, are there considered as *natives*. This is not strictly correct. I hope to be able to give a more distinct account of this class of animals on a subsequent page. J. W. P.

BEEHIVES — VENTILATION — A MILLER TRAP.

Friend Bateham — I saw an inquiry in your paper concerning the best mode of the treatment of bees. As I have paid considerable attention to this subject, in order to ascertain the laws and regulations by which bees are governed, I feel somewhat qualified to state several facts connected with the subject.

With my present knowledge upon the subject, I would advise all to make small hives, either of boards or hollow trees, holding about three pecks each, and about sixteen inches high. I prefer a hollow log burned out and trimmed to a feather edge at the bottom, so as to fit close on the bench with two or three notches for the passage of the bees as usual.

Bore a two-inch hole through the top of the hive, and also one in the bench on which the hive is to stand. Take some wire finely woven, that a miller or bee cannot pass through it; bind it round so as to form a tube the whole length of the hive two inches in diameter. Fasten one end of this tube under the bottom of the bench, and the other on the top of the hive. Put a wire covering under the lower end of this ventilation, and over the top of it fasten a small box one inch high and four inches square, with a fine wire bottom. The box should be of wood, one eighth of an inch thick, and on two opposite sides of it should be several holes just large enough to admit bees. Above these holes, on the inside of the box, should be tacked small strips of silk gauze to hang over the holes like curtains. This fixture I call a perfect miller trap — it will catch every miller that attempts to get in the hive.

The above described ventilation serves to give the bees a plentiful supply of fresh air, which they so much need in warm weather. This is manifest by the great exertions used by the bees to supply the hive with air, when they sit on the bench, and buzz about the mouth of the hive, fanning the young bees, to prevent suffocation.

This tube through the middle of the hive, serves to convey the breath of the bees off; this, together

with the smell of honey passing into the miller trap, draws the millers, with a perfect rush, into that bourne whence no traveller returns.

Should this be acceptable to the editor, I am willing to state the cause of bees dying and leaving honey; and the cause of bees killing their drones; and also how wax is made, and of what material, and for what purpose the bee bread is used.

Yours respectfully,

E. B. CREW.

Short Creek, Harrison County, Ohio, 1849.

Remarks. — We shall be pleased to hear further from friend Crew, on the subjects proposed. We must say, however, that his "miller trap" does not strike us favorably, if we rightly understand its construction; for we think the millers will find it a very convenient entrance, through which they, or their progeny, the worms, can find access to the honey. It is of little consequence whether the moths escape or not, after they have deposited their eggs where they can do mischief. Ed. — *Ohio Cultivator.*

THE POTATO ROT.

Dr. Richardson, of Maryland, flatters himself that he has discovered the cause of the potato rot, as appears in the following communication to the agricultural committee of the Maryland State Agricultural Society, which is published in the American Farmer for November:

Baltimore County, *Oct.* 10, 1849.

Gentlemen: After three years' constant attention to the subject, I flatter myself I have discovered the cause of the *potato rot*. The rot is produced by the deposition of the egg, and the destruction of the pith or heart of the vine, (by consequence, the circulating capillaries,) by the larva of an insect. This insect is of the curculio or weevil genus: as there are many species of the curculio in this state, for distinction I have called this the *curculio magna*. The first deposition of the egg is from the 5th to the 10th of June. (This accounts at once for the acknowledged fact, that very early planted potatoes suffer little with rot, if they do not altogether escape it — and why? Simply because they have got their growth before the vine is poisoned by the insect.)

I have seen no eggs deposited later than the 20th August; ten days after the egg is deposited it hatches; the larva is then very small. The egg is generally placed in the vine about 10 or 15 inches from the root. The larva always eats downward, but seldom goes below the surface of the earth: it feeds for four or five weeks; it then ceases to eat, and, if I may use the term, cocoons, and undergoes its metamorphosis. The larva is about a line and a half in length, perfectly white, with a brown head: it completes its change in about three weeks. If this is early in the season, it leaves the vine, mates, and deposits its eggs; if late in the season, it remains quiescent in the stalk; it, as all the other varieties of curculio, hibernates in the ground. I this day had the honor of exhibiting to the agricultural committee the potato in the different stages of the rot, both incipient and perfect — the diseased capillaries in the vine and in the tubes — the destruction in the vine by the course of the larva — its exuvia, as also the curculio, in its perfect state. I regret that from the impossibility of preserving the specimens of the green vine, I was unable to show the commencement of the disease, 24 hours after deposition of the egg, extending in 48 hours from the wounded part, by the capillaries to the corresponding capillaries in tubes — as also the continuance of the disease — although the egg had been destroyed by preparatory insects of the order Neuroptera, within 24 hours after its deposit. There have been in Ireland, independent of the misery and disease, 250,000 deaths from the potato rot: in this country, a loss of many million bushels. The estimated product in the United States is 114,000,000 bushels; the average loss, since this disease has occurred, is about one third: how important, then, to discover the cause of this immense loss, and a remedy for the evil! That there is a remedy attainable, I have no doubt, from many data in my possession — still, as it would require a large outlay of money, and much time spent in examination and experiments, no prudent person would be justifiable, without aid, in making the necessary inquiry. CHARLES RICHARDSON.

The next thing is, to find a preventive. This may be as difficult as to save wheat from the ravages of the weevil. It is hoped Dr. Richardson will be enabled to go on with his experiments, by having the requisite funds supplied.

COMPARATIVE ESTIMATE OF DIFFERENT KINDS OF CATTLE FEED.

Hay is the food for cattle during winter. If they can get good hay enough during the cold season, they do very well. It is not always that the farmer has a sufficiency of this for his stock, and hence it is useful to know the *comparative* value of other articles which may be used as substitutes for it. It is also more agreeable, and we think more profitable, to mingle other articles with hay. We have prepared from various sources the following table:

Taking good hay as the standard, 100 lbs. of hay equal

276	lbs.	Carrots;
300	"	Ruta Baga;
317	"	Mangold Wurtzel;
201	"	Potatoes;
494	"	common Turnips.

By calculating 60 lbs. for a bushel of any of the above roots, it will be seen that one ton of hay equals

91	bushels of	Carrots;
100	"	Ruta Baga;
106	"	Mangold Wurtzel;
67	"	Potatoes;
165	"	Turnips.

From this it will be seen how much fodder you get of each, per acre, compared with good hay.

In regard to straw, experiments have established the following estimate as very near the truth. 100 lbs. of hay equal

272	lbs.	new Wheat Straw;
166	"	Barley Straw;
169	"	Pea Straw;
94	"	Clover Hay.

— *Maine Farmer.*

GOOD TOOLS.

Mr. Editor: I think that the old adage, that "He must indeed be a good workman who can afford to work with poor tools," is one which embodies an important truth. If we farmers employ a mechanic — a mason or a house carpenter, for instance — to execute a "job of work," we of course expect that he will come provided with proper and efficient tools. Should he come with but half the implements requisite for the proper and successful performance of the work confided to his hands, we should not hesitate to demur, and should be perfectly justified in dismissing him and procuring another in his stead. But how is it on our farms? Are we always as jealous and watchful of our interests there? How often, indeed, is it, that our "helps" are required to plough, to mow, to reap and hoe, with implements which are not only "out of fashion," but too clumsy and

ill adapted to the work required to be performed, to be used any where, except in places and under circumstances where those better adapted and constructed cannot be obtained. Many of the old-fashioned implements are still in use on our farms — particularly ploughs, dung-forks, and hoes; and with these unwieldy and almost *uncieldable* abortions, hired men and boys are frequently required to perform as much work, and to finish it off as neatly, as though they were provided with the most proper tools. Farmers generally are too remiss on this point. They are too apt to look at the *cost of the tools*, not at the useless expenditure of strength on the part of the operative in wielding them — *that* is no business of theirs, they think; but this is a fallacy. I have seen men in the hay-field, sweating and blowing, and, like fat John Falstaff,

"Larding the lean earth,"

exerting to the utmost every muscle, to satisfy the expectations and realize the demands, often exorbitant, of a parsimonious employer, who, with good tools, would have performed twice the amount of labor in the same period, without exhaustion and with comparative ease. The work also would have been done *effectually*, which is a matter of prime importance, though, by many, too often neglected and overlooked. The present abundance and cheapness of farming tools, of good quality, render it easy for every one who is so disposed, to obviate this great and long-existing evil.

A PRACTICAL FARMER.

Bold Eagle Farm, *Dec.* 12, 1849.

— *Germantown Telegraph.*

SUGAR MAKING — SHEET IRON EVAPORATORS.

Mr. Bateham: Many of the readers of the Ohio Cultivator depend on making their family supply of sugar from the Sugar Maple Tree, (Acer Saccharinum,) and in the process of manufacture they continue to use the cast iron kettle for boiling down or evaporating the sap, apparently not knowing that there is a better way. I will therefore give a description of the construction and use of the sheet iron evaporator, which is cheaper and better: it is much quicker and easier heated, with less cost of fuel in boiling, and does not crust or burn around the top to the injury of the sugar, as is the case with the cast iron kettle.

Construction. — The size of the evaporators is four or five feet long, two and a half feet wide, and nine inches deep; the bottom and ends of good, heavy sheet iron, and the sides one and a half inch plank. The sheet iron must be as much longer than the vessel as twice its depth, (eighteen inches,) so as to turn up and form the two ends, as high as the plank sides. The iron should be as thick as can be easily pierced with a steel punch. Let the bottom corners of the plank be a little rounded, to suit the bend of the iron. Now turn the planks bottom edge upwards, and place a strip of slippery elm bark on the edge to make a more perfect joint, then nail on the sheet iron firmly, as a shoemaker pegs on the sole of a shoe — punching the holes about one inch apart, within half an inch of each edge of the plank, alternately.

These evaporators should be placed on arches made of brick, and put away in a dry place as soon as done using. With ordinary careful usage, so as to avoid burning and rusting, they will be found very durable. Respectfully, &c.,

WILLIAM WILLIAMS.

Genoa, Delaware Co., Ohio, *Dec.* 1849.

— *Ohio Cultivator.*

BARTLETT'S DOUBLE PLOUGH.

The sound practical judgment and eminent success with which the farming operations of Senator Webster have been carried on, at his place in Marshfield, have become proverbial, and as a consequence thereof, his opinions in relation to practical agricultural matters are entitled to great consideration. It therefore gives us pleasure to find, by the letter we copy below, that his opinion coincides with that which we have heretofore expressed, in relation to an implement, the introduction of which is destined to fix an era in the progress of American Agriculture. — *Mass. Spy.*

Letter from Hon. Daniel Webster, on the Double Plough.

Marshfield, *Dec.* 8, 1849.

William O. Bartlett, Esq.: *Dear Sir* — In June last, an experiment was tried on this farm with one of your Double Ploughs, on a piece of land intended for turnips, somewhat rocky, with a hard sward, not having been ploughed for many years, and many bunches of bushes growing upon it.

The plough appeared to work well, and Mr. Wright, who has been our principal farmer for many years, was greatly pleased with it. The furrows were as well laid, as I thought, as they could have been by any single plough.

Mr. Taylor, who lives on my farm in New Hampshire, wishes me to send him a Double Plough. His land is level, rather a rich loam, and entirely free from stones. He thinks that with a Double Plough and a pair of horses, with a light hand to hold, he could quite easily plough three acres a day, for many days in succession.

It struck me, when seeing the plough in operation, that one part steadied the other, and made the work smooth and even. The saving of labor, in the use of the Double Plough, is too apparent to need remark.

I might add, that my turnips were never more cheaply cultivated, and never yielded so good a crop.

With much respect,

Your ob't servant,

DANIEL WEBSTER.

BONES AND ACID.

To those who dissolve bones in sulphuric acid, I beg to communicate a method I have now, for the second season, adopted with success, whereby I make very short work of an otherwise troublesome job. Under cover, either in a manure barn or cart shed, I make a clay basin, or trough, twenty feet by ten, with edges twenty inches wide and as high, into which, having previously thrown one hundred bushels of half inch bones, and having damped them, I pour from the carboys seventeen hundred pounds of acid, the contents of each carboy being marked by the maker, I have not the trouble of weighing. As soon as the requisite quantity of acid is poured into the trough, two men, with common iron road scrapers, or long iron rakes, commence stirring, continuing so to do until effervescence subsides, two hours completing the work. I leave the mass for ten days, when, by the addition of sufficient water, I bring the whole to the consistence of a thick gruel, cinder dust being then added, as usual. — *Plough, Loom, and Anvil.*

Pithy Hints. — Snuff on the necks and backs of calves and young cattle, will do more good than in the nose of any maiden lady or dandy bachelor; and brimstone, bought for the hogs, will not prove that the itch has got into the house. Cards on the cattle make them look as much better as children with their hair combed. A clean barn is a hint to the woman who takes care of the kitchen. Good milking stools save much washing in the house. A scraper on the door-step saves brooms and dust.

How to Cure a "Wind Sucker." — Wind sucking is a habit (like chewing tobacco) much easier acquired than forgotten. It can only be practised, however, under favorable circumstances; that is, when there is some object on which the horse can rest his teeth, located about as high as his breast — such as a common manger, for instance. The best remedy, therefore, is to place the manger or feeding trough as *low* as the ground or floor of the stable, and the hay-rack as *high* as the horse can reach, and see that there is no object of an intermediate height for him to rest his teeth upon to suck wind. Care must also be taken, that, when out of the stable, he is not allowed to stand near a fence or stump, or any object of convenient height for practising this habit. In the course of a few months, say five or six, he will forget the trick.

Another Remedy. — Tie a cord around the neck of the horse, sufficiently tight to prevent him from enlarging the throat, as is done in wind sucking, but not so tight as to obstruct breathing or swallowing. A tight halter, with throat-strap, will answer this purpose. It will need to be worn for two or three months. This remedy is easy, and I have found it quite effectual. — *Ohio Cultivator.*

Potato Rot in Iowa. — Messrs. Editors: We have had for the last six weeks remarkably pleasant weather, with scarcely any frost. Corn is principally gathered, and had good seed been planted, there would have been an average crop, or more; but as it is, some have not half a crop. Potatoes have all got the rot: there is not one in twenty but what is affected. They commence rotting, this year, at the outside, and the middle continue sound for some time. Last year the affected potatoes rotted away as quick as if they had been frozen; this year, they show no signs of rot until they are cut. — *Prairie Farmer.*

Planting Forest Trees. — Very little has been done in this county about planting forest trees, until recently, and I am happy to know that enterprising gentlemen are now making experiments by planting groves of many kinds of our native as well as foreign varieties. On most of the farms in our county, there are patches of waste land that might be profitably appropriated to the growing of wood, and by planting trees on the sides of our highways, much valuable wood might be raised, our thoroughfares ornamented, and the public benefited. — *Hon. A. T. Newhall's Address.*

Weeds. — The greatest deficiency of good husbandry of our fields of grain and vegetables, is in permitting the weeds to grow and seed the latter part of the season. The great length of time required to harvest and secure fodder for our cattle during our long winters, and which generally employs all hands in the hay-field, permits the weeds to get ahead of the hoe and cultivator, and assert the supremacy, so that many will be discouraged, and give up the contest. — *Ibid.*

Wool in Michigan. — Michigan has gone into the growing of wool at a rapid rate, and is destined to keep increasing. Last year, the surplus that was exported was over 1,200,000 lbs., and the small establishments scattered throughout the state, are estimated to have consumed 600,000 pounds more. This season, the amount exported will not fall short of 1,600,000 lbs; and at the same ratio, another year it will reach 2,000,000 lbs. — *Detroit Tribune.*

NOTICES OF PUBLICATIONS.

The American Poultry Yard; comprising the Origin, History, and Description of the different breeds of Domestic Poultry; with complete directions for their breeding, crossing, rearing, fattening, and preparation for the market; including directions for caponizing, treatment of diseases, &c.; illustrated with numerous engravings. By D. J. Brown, author of the Silva Americana. With an Appendix, embracing the comparative merits of the different breeds of Fowls. By Samuel Allen. 324 pages, large 12mo. Published by C. M. Saxton, 121 Fulton Street, New York.

This is an elaborate work, of great interest and ability. The author has gone into his various subjects ably and thoroughly, showing deep research and wise discrimination. His style is pleasant and happy. We commend this work to all poulterers and farmers who would go into a thorough investigation of the subject.

The Family Visitor; a Literary, Scientific, Agricultural, Horticultural, and Miscellaneous Paper, in quarto form, published weekly, at Cleveland, Ohio. Edited by Professors Kirtland and St. John, and General Knapp, proprietors.

This work, as might be expected from the reputation of the editors, is very ably conducted, and of a character decidedly useful as well as interesting. It is neatly executed, and is illustrated with numerous engravings. A peculiar and valuable feature is the "geological features, minerals, birds, fishes, insects, &c., of Ohio and the surrounding states." This is among the most valuable journals on our exchange list. It would be a welcome and instructive *Visitor* in families in all parts of the country. The judicious editors discard fiction, which constitutes a prominent feature and a corrupting influence in many of the miscellaneous periodicals of the day.

The Philosophy of Special Providences. Andrew J. Davis. Published by Bela Marsh, 25 Cornhill. Pamphlet, 56 pages, 8mo.; 15 cents.

Proceedings of the North American Pomological Convention, held at Syracuse, Sept. 14th, 1849. We shall give a notice of these doings by and by.

Report of the Ohio Nurserymen and Fruit-Growers' Convention, third session, held at Columbus, Dec. 5th, 1849. We shall give a review of this work in a short time.

Address by Prof. Johnston, before the Annual Exhibition of the N. Y. S. A. Society, Sept., 1849. We shall publish some valuable extracts from this address.

Pauper Abstract, containing an abstract of the returns of the Overseers of the Poor in Massachusetts.

Transactions of Plymouth Agricultural Society, from Rev. Morrill Allen.

Address by W. C. Goldthwait, before Hampden Agricultural Society, on the application of science to farming. This will doubtless claim further attention on perusal.

ACKNOWLEDGMENTS.

About two months since, we received eleven kinds of apples of Mr. Zeno C. Taber, East Montpelier, Vt., for the names, if known here, and opinions as to their quality. We have waited for their maturity, and tried them. We do not recognize any of them as identical with kinds generally cultivated, or known to the public, excepting No. 2, which appears to be a kind considerably cultivated in Pomfret and Hartford, Vt., and in some parts of New Hampshire. It is of fair appearance, and tolerably good quality, and noted for productiveness. As we had but a single specimen of a kind, it is impossible to give a correct opinion of this fruit. In such cases it would be better to send only a few kinds, and such as the cultivator regards as the best, and send more of a kind. When we have only one or a very few specimens of a kind, it is difficult to fix on the right period to try them; and as we value our opinion, founded on so narrow observation, very lightly, we would not give it to the public as entitled to importance. No. 5 appeared to be a very good fruit, the best of the lot in quality. Nos. 1, 4, 7, and 9, were of medial quality.

Peaknose Apples. — Herman Vincent, Esq., representative from Chilmark, Martha's Vineyard, has furnished us with some specimens of this apple. It is of good size, handsome appearance, and good quality. He remarks, that it is a good grower and great bearer, and is a popular apple on that island, where it flourishes remarkably well, being well adapted to the sea-coast.

Winter Pippin. — We have some of these apples from Mr. J. M. Ketchum, Brandon, Vt. The fruit is large, rather oblong, tapering considerably to the eye; of a straw color, with an occasional blush in the sun, and dark specks. The quality is only medial; it appears to be tolerably good for cooking, but it lacks character for a table fruit. Mr. K. remarks, that this variety, in that region, produces more fair fruit than any other kind cultivated there, as it is a great grower and an enormous bearer, and the fruit is large and fair. He brought a large lot of this fruit to this market, and sold it at high prices.

A Prolific Sow. — Mr. Thomas Page, Waltham, has a sow that has within the year produced thirty-eight pigs. He has sold $50 worth, and has ten pigs remaining, some of which he has engaged at $2,50 each. He bought this kind at Brighton, and he says that his neighbors call them the *Berkshire* breed.

Cooking Food for Swine. — Dr. Lee, in an article on pork-making, says, "From some experiments of my own, and considerable research into the published results of the experience of others, I am satisfied that ten bushels of boiled potatoes thoroughly mixed with the pudding that can be made from three bushels of corn or peas, will make as much pork as twenty bushels of potatoes, and six bushels of corn or peas fed raw."

A KIND WORD.

A little word in kindness spoken,
A motion or a tear,
Has often healed the heart that's broken,
And made a friend sincere.

A word — a look — has crushed to earth
Full many a budding flower,
Which, had a smile but owned its birth,
Would bless life's darkest hour.

Then deem it not an idle thing,
A pleasant word to speak;
The face you wear, the thoughts you bring,
A heart may heal or break.

THE OLIO.

Two gentlemen, at a public table, got into a vehement dispute upon a subject which it was quite evident that both were profoundly ignorant of. A big bull dog, which had been sleeping on the hearth, became roused by their violence, and began barking furiously. An old gentleman, who had been quietly listening to the disputants, gave the dog a kick, and exclaimed, "Hold your tongue, you brute; you know no more about it than they do."

Sign of Character. — A man who habitually speaks disparagingly of the female character, gives conclusive evidence that there is something wrong in his own. A true man always has a high idea of female excellence, and cherishes it with a respect bordering on worship.

"It is an inexpressible comfort," said the dying Campbell, the poet, "to be able to look back and feel that I have not written one line against religion or virtue." How many would, in his situation, give worlds to see and feel as Campbell did!

A young man, feeling restless in church, leaned forward and addressed an old gentleman thus, "Pray, sir, can you tell me a rule without an exception?" "Yes, sir," he replied; "a *gentleman* always behaves well in church."

Nothing is more impressive than mystery; even "Junius," himself, as an author, would have been forgotten long ago, if people had known whom to forget.

The phrase, "Hold your tongue," is of Bible origin. Wonder how many of our readers can point to the chapter and verse.

A year of pleasure passes like a floating breeze; but a moment of misfortune seems an age of pain.

Why is an infant like a diamond? Because it is a "*dear little thing.*"

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

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DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, FEBRUARY 16, 1850. NO. 4.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

FRUITS AND FRUIT TREES.

At the agricultural meeting, Feb. 5, Mr. Calhoun in the chair, this subject was discussed. The subject was opened by Major Wheeler, of Framingham. He remarked that fruit raising was much neglected by many farmers: some raise only apples, and those of poor quality. Our market is supplied in a great measure by fruit from the west and south; and yet it is sometimes poorly supplied. Our climate is good for fruit. We can raise peaches here in abundance, by planting on high lands. He knew of locations where they had seldom failed for forty years. They are as easily raised as potatoes; and, as we are on the northern region of the peach, we should raise this fruit to supply Maine, New Hampshire, and Vermont. We shall yet send peaches to London. We are born with an appetite for fruit. Old apple-trees may be renovated. There are trees in England three hundred years old. Pears are also a valuable fruit, and we have many excellent kinds.

Mr. Earle, of Worcester, fully agreed with the gentleman as to the advantages for, and the profit in, fruit raising. Some farmers now get more for their fruit, than they formerly got for all the produce of their farms. The demand increases with the supply. As improved fruits are introduced, families use more and more, until the demand increases tenfold. Fruit is healthy. Families that use it freely are less liable to disease. The use of the peach has a tendency to check the ravages of the cholera. He said that the blasting of fruit had been attributed to the want of specific manures; but this was not the case, for the St. Michael pear had, in some cases, blasted for several years, then it was good for a number of seasons, and again it blasted, all on the same trees, under regular treatment. Two trees of this variety, standing near each other, exhibited different results; the fruit of one blasted, that of the other was fair. This fruit is a valuable kind when perfect, and it is always good on the quince, and it grows well in this way. He set pears on the quince so as to cover the quince stock with the soil, in order to protect them from the borer. The quince will always throw out roots up to the surface of the soil, and thus obviate any disadvantage from deep planting. The St. Michael bears moderately, and flourishes well; but the Louise Bon de Jersey bears to excess, and brings on premature old age. The pear is as profitable a fruit as the peach, and it flourishes well. We need only eight or ten kinds for common culture.

Hon. Mr. Daggett said that there was one fact that was very encouraging to the fruit-growers of this state—that our peaches and apples are superior in quality, but not in appearance, to those raised in New York and New Jersey. But the peach here is short-lived, and insects destroy the apples. The peach is forced too rapidly; hence its failure. He thought the blight in the pear was caused by drought.

Major Wheeler said that peach-trees bore themselves to death, and they should be headed in to reduce the crop.

Mr. Daggett remarked that he had lost all his cherries, for a few years past, by rose bugs and birds, and the curculio destroyed his plums.

Dr. Gardner, of Seekonk, said that he was deeply interested in this subject. His grapes and peaches had been destroyed by rose bugs. The best remedy was that recommended by Dr. Harris, which was to jar them off into hot water. According to his observation and inquiries, the peach was injurious in the cholera.

Rev. Morrill Allen, of Pembroke, being called on, said that he had not much acquaintance with the subject. When he commenced farming, he was under the necessity to cultivate for annual crops, as he could not wait for the products of fruit trees. He thought farmers should study to have enduring trees, and to this end they should plant the seeds where they would have the trees stand. He found that forest trees flourished best in the soil where the seeds were sown. Animals do better in the locations where they are born. Peach-trees would be more durable, if they were not transplanted. As fruit trees are not immediately profitable, he thought it was not best for farmers to go largely into their cultivation.

Mr. Nathan Stetson, from Braintree, thought that the washing of apple-trees with lye, or a solution of potash, as recommended in the Ploughman, would

not destroy borers or eggs. The borer only enters the bark the first season, and may be found and destroyed in the fall, or in April or May, by removing the earth an inch or two deep, and rubbing the bark closely, so as to discover and remove them. He puts sheets under trees, and jars down rose bugs and destroys them.

Mr. Buckminster remarked that the gentleman had not used lye, as recommended in the Ploughman. The trees should be washed about the 1st of July. The fly lays her eggs near the ground, and they may be destroyed with lye. He alluded to the practice of Major Wheeler, who remarked that he had washed his trees with lye for forty years, and had not been troubled with the borer.

Rev. Mr. Kimball, of Needham, being called on, remarked that he had destroyed borers by the use of lye. He found that peach-trees that had not been transplanted lived the longest.

Dr. Gardner observed that he had not succeeded well by heading in peaches; those trees that were headed in produced less fruit than others; yet some cultivators in his neighborhood succeeded well by heading in their trees.

Mr. Starkweather, of Pawtucket, said that the peach borer was found an inch or two below the surface of the soil, and by examining and destroying them in the spring, in midsummer, and in the fall, they would do but very little damage. They require constant attention. He had failed to raise plums, on account of the curculio, while his neighbor had been very successful, by dusting his trees with air-slaked lime. After a shower, or when the dew was on, or after syringing the tree, he tied a small basket, filled with lime, to the end of a pole, which he ran up into the tree, and shook the basket, so as to dust the tree with lime. This was done soon after the blossoms had fallen, again when the plums were about the size of peas, and again in about a fortnight. He thought it was best for the branches of peach-trees to come out low — the lowest about two feet from the ground.

Major Wheeler observed that, as it was a great deal of labor to head in peach-trees, he used hedging shears for this purpose.

Mr. Earle said that much depended on the manner of heading in peach-trees. He said that there were main branches that would grow two or three feet in a season; near the centre of these branches were a few fruit buds, but the most of the blossom buds were on lateral branches. By cutting off about one half or two thirds of the leading branches, it would prevent their extending to a great distance from the trunk, and being liable to break down by having all their fruit at the extremity of the branch, as the fruit is on the last year's growth. By heading in, a compact top is formed, and the fruit is reduced in number, and improved in size and quality.

Mr. Calhoun said that he had used air-slaked lime on plum-trees, for the purpose of exterminating the rose bugs.

Mr. Starkweather had failed to raise grapes on account of the rose bugs.

Mr. Allen inquired whether other crops could be raised to advantage among apple-trees.

Major Wheeler said that by manuring well, crops might be raised until the trees became large.

Same subject continued.

PROFESSOR JOHNSTON'S LECTURES.

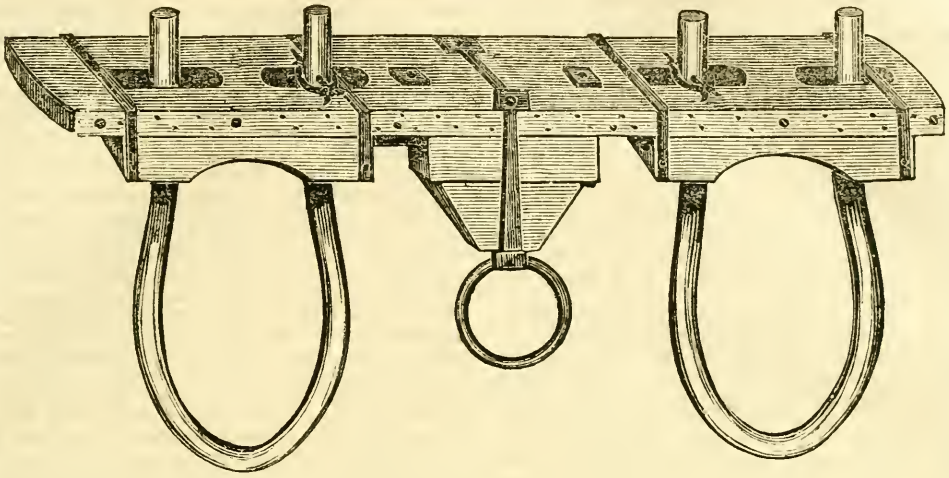
Professor James F. W. Johnston, of England, who came to this country last season, and delivered the address before the New York State Agricultural Society, last September, is now lecturing before the Lowell Institute, in this city. He commenced on Tuesday evening. The evening course is on Tuesday and Friday evenings, and the same is repeated on Wednesday and Saturday afternoons. The course consists of twelve lectures. This gentleman, by his lectures and publications, has done much for the improvement of agriculture by showing the practical application of the sciences to this end. The following is a syllabus of this course of lectures: —

1st. The relations of Physical Geography to Agriculture.
2d. The relations of Geology to Agriculture.
3d. The relations of Botany and Zoölogy to Agriculture.
4th. The relations of Meteorology to Agriculture.
5th. The relations of Chemistry to the Soil.
6th. The improvement of the Soil by Mechanical means.
7th. The relations of Chemistry to the composition and functions of the plant.
8th. The composition of the several products of vegetation, and their relative values as food for animals.
9th. The relations of Chemistry to the feeding of animals.
10th. The relations of Chemistry to the dairy husbandry.
11th. The relations of Chemistry to the doctrine of Manures, vegetable and animal.
12th. The Chemistry of Animal Manures.

AGRICULTURAL MEETINGS.

These meetings at the State House have been changed from Tuesday to Thursday evenings, on account of the lectures of Professor Johnston. At the meeting last week, it was voted, that the first speaker be limited to fifteen minutes, as well as those that follow, and that the president enforce this rule. This motion was opposed by some gentlemen, on the ground that fifteen minutes were not sufficient to do justice to a subject; but in reply it was stated, that the first speaker was not expected to go over the whole ground and say all that could be said on the subject, while many gentlemen were present ready to take a part in the discussion, if there was an opportunity. That meeting, a report of which appears on our first page, was far more interesting than the previous meetings, at which the whole time was taken up by a few gentlemen, generally with long, elaborate speeches.

When Prosperity was well mounted, she let go the bridle, and soon came tumbling out of the saddle.



SELF-ADJUSTING OX-YOKE.

This yoke was invented by Mr. David Chappel, of Vermont, and an improvement has been made in its construction by Mr. Daniel Chase, of the same state. By combining the inventions of both patentees, a great and decided improvement is made in the yoke. It is composed of a straight beam of wood, which is strengthened and protected from wear by iron plates on the edges. Blocks are fitted to the oxen's necks, which play on the under side of this beam, to which they are fastened by bands of iron. The bows pass up through these blocks, which slide back and forward as the oxen *haul off* or *crowd*. By an iron rack, with cogs, fastened to each block, and playing into a cog-wheel in the centre of the yoke, both bows play outward, or inward, according to the motion of the oxen, at the same time and distance.

When cattle are travelling on uneven roads, or in deep snows, or ploughing rough lands, the bows slide outward or inward, accommodating themselves to the motion of the oxen. If they pass, with a rock, or stump, or other impediment between them, the yoke widens to their convenience; and in going through a narrow pass, it contracts by the inward pressure of the cattle. The bows may be adjusted so as to give either ox any desirable advantage, which he will retain in all its changes by self-adjustment. Or any width may be given, and permanently fixed. All these arrangements may be made in a few minutes.

This yoke evidently possesses great advantages, accommodating the cattle to various circumstances, and saving a vast amount of strength often wasted in crowding and hauling off, which frequently amounts to as much as is necessary to perform the usual labor with this improvement. This yoke costs but little more than a nice article of the common construction. It will doubtless be for sale in a short time. One is left at this office for a few days.

CONVENTION OF FOWL-BREEDERS.

A convention of fowl breeders and fanciers will meet at the Representatives' Hall, on Thursday evening, the 28th inst., for the purpose of forming a permanent association for the improvement of this important branch of domestic economy. All interested in the subject, and all who are disposed to encourage this laudable enterprise are requested to attend, if convenient. This meeting will take the place of the agricultural meeting.

DESTRUCTION OF THE WIRE WORM.

Mr. Little, in a recent number of the "Illustrated London News," observes that he had tried the application of the most powerful poisons to the wire worm, such as preparations of corrosive sublimate and arsenic, without destroying its vitality. Even vitriol and aquafortis did not consume the worm till after a considerable time. He next tried liquid ammonia, (*harts-horn,*) and the result is said to have been marvellous. The worms were shrivelled up in an instant, and reduced almost to a state of cinder. He afterwards took a portion of the earth containing the worm, mixing it with a small quantity of lime, adding some powdered sal-ammoniac; the result was the decomposition of the latter by lime, and the liberation of ammoniacal gas, which had precisely the effect of the liquid ammonia. This experiment is worth pursuing on a larger scale. Ammonia, it should be remembered, constitutes a most valuable portion of manure.

Observation on the Miller which annoys Bees. — Last season, I allowed about six sunflowers to grow near my beehives; when in flower, they attracted the miller, which fed on them late in the evening, appearing quite stupid, so much so, that I could pick them off with my hand, and deal with them as I could wish. I am now trying several experiments with my bees, the result of which I will make known through the Farmer. — *Michigan Farmer.*

For the New England Farmer.

NATIVE TREES, SHRUBS, AND PLANTS.

[Continued from p. 12.]

CULTIVATION OF NATIVE SHRUBS.

Mr. Cole: I intend, in this communication, to notice such native shrubs as are found to be easily cultivated in a garden, and the locality from whence some of them may be obtained. I shall first notice the shrubs of the Cornus family. They comprise a number of fine small trees or shrubs, of easy culture, flowering in the early part of summer, and succeeded, in autumn, by fruit of a black, blue, white, or scarlet color.

The Red Stemmed Cornel is distinguished for the beauty of its bark, which is the color of blood, and is very brilliant late in the winter. It then seldom fails to attract the attention of persons passing by it. After the opening of the buds in the spring, it loses the beautiful appearance of its branches, and is no longer conspicuous. This shrub, when placed in the angle of a fence, and viewed from the house or the street, makes a fine appearance in the latter part of winter, with its brilliant red-colored stems and shoots. Found in low grounds.

The Alternate-leaved, and the Panicled Cornel, are handsome shrubs, from six to eight feet high. The cymes, or heads of flowers, are numerous, with white petals; and in the early part of summer, make a fine showy appearance. The fruit of the one is blue black, of the other pale white; ripe in autumn. Found on the borders of woods and fields.

The Cornus Florida, or Flowering Dogwood, is a very handsome shrub, or small tree; but I know of none found in this vicinity, except a few under cultivation, some of which have attained the height of ten feet, and are now covered with many hundred flower buds. The flowers expand in May or June, are large, of a white color, and of a singular form and structure. The Dogwood, in autumn, presents a show of scarlet berries, which, together with the changing hue of its leaves, makes a pleasing appearance. This shrub is not to be confounded with the Poison Sumac, usually called Dogwood, which it in no way resembles. The Cornus Florida is every way a very desirable shrub.

The Viburnums are, many of them, pretty shrubs, with white flowers, and terminal cymes, or heads, followed in autumn by fruit of blue, lead, or crimson color. The first that we shall notice is the Arrowwood; so called from the use once made of its straight shoots, by the Indians, for their arrows. It is found in low, wet grounds, with white flowers, and dark lead-colored fruit. The Sweet Viburnum is a beautiful shrub or small tree, with handsome flowers, fruit, and leaves; and we have found it of easy cultivation. Found in low grounds.

The Cranberry Viburnum resembles somewhat, in its appearance, the Guelder Rose. It has been recommended by some persons for cultivation, on account of its fruit, as it resembles the meadow cranberry, and is thought to possess its good qualities; but after cultivating this shrub for many years, we have found it to possess more beauty than utility. It is a poor substitute for the cranberry, possessing a bitter taste, and a large oblong nut, and never produces fruit in great abundance, under cultivation. Not to be found in a wild state in this vicinity, except it may be seen in Gloucester woods.

The Hobble Bush is found growing in the rocky woodlands adjoining the Magnolia Swamp in Gloucester, and is found from six to ten feet high. It is distinguished for its large leaves, white flowers and crimson fruit. We have found this plant the most difficult of its genus to cultivate.

The Fever Bush, under cultivation, is desirable from its early flowering, the aromatic odor of its leaves and fruit, and its supposed medicinal properties. Found on the borders of swamps, but not common in this vicinity.

The Black Alder, and the Single Berry Black Alder, are handsome shrubs, with small axillary white flowers, succeeded, in autumn, by clusters of rich scarlet berries, which are very conspicuous after the leaves are fallen. Found in swamps.

The Button Bush, found on the margin of ponds, is distinguished by its globular head of flowers, which possesses some fragrance, and appears in July and August. This shrub is easily cultivated in a moist soil. We have noticed that under cultivation it is infested with an irritable hairy caterpillar, who, when disturbed, raises himself on end, and shakes his head and part of his body violently, in a very menacing manner, and gives you to understand by so doing, that he is not to be meddled with.

The Jersey Tea is a small shrub, found in dry soils. It is distinguished for its large red root, small white flowers, and for its leaves being used, in the war of the revolution, as a substitute for tea.

The Bladder Nut is a shrub of easy cultivation, remarkable for its large, inflated capsules. It is not seen in this vicinity, except under cultivation, and is somewhat troublesome, from its habit of throwing up numerous suckers.

S. P. FOWLER.

Danvers New Mills, *Jan.* 17, 1850.

[to be continued.]

PLUMS.

Mr. Andrew Lackey, Marblehead, has furnished the following valuable communication on plums. We gave an account of his fruit garden in our first volume, page 305. Although he has been but little known to the public, he has made extensive and thorough experiments on plums, collecting a large variety from our own and foreign countries. We believe that no cultivator in our country has gone into the trial of this fruit with more zeal, thoroughness, and nice observation. In some cases, he has collected eight or ten trees, from different sources, under different names, that have all proved to be identical. Such experiments are valuable to the public, and we are happy in presenting their results.

Mr. Lackey's soil is cold and heavy — originally too heavy for tillage, until improved by hauling on sand. This may account for some varieties succeeding well with him, which may be condemned by those who grow fruit on light soils. At our request he has added the time of ripening, but with some reluctance, as it varies with the weather and the seasons; also with the soil, the amount of fruit produced, and other circumstances. Yet with all these variations, the time of ripening, as given by an experienced cultivator, will be of great advantage to beginners; for, although it cannot be implicitly relied on, as agreeing with all locations, soils, and seasons, it will not vary much, and it will serve as a valuable directory.

Mr. Lackey has made experiments on about a hundred other varieties of plums, the greater part of which are not worth cultivating; and some that have been recently procured have not been well tested. He is also making experiments on hundreds of seed-

ling plums, from which we trust that he will have some new and valuable kinds.

MR. LACKEY'S DESCRIPTIVE LIST.

1. *Rivers's Early.* — This is a plum of the highest character, a week or ten days earlier than the Morocco, and superior to it in flavor. As I have fruited it but once, I am not prepared to speak decidedly as to its productiveness. Ripens from July 25 to the middle of August.

2. *Precoce de Tours.* — An early plum, of good flavor, but rather an indifferent bearer. Ripens the last of July and former part of August.

3. *Royale de Tours.* — This is a fruit of a beautiful appearance, ripens early, and is of excellent quality. The tree is a good bearer. Many spurious sorts are cultivated under this name, in various parts of the country. The Peach plum received of Saul & Co., also the Peach plum of Cole, seem to me to be identical with this variety. Ripens from the last of July to the middle of August.

[This plum is the same as that cultivated in Worcester, formerly, under the name of Nectarine and Wheeler plum. Those which we have are from trees imported from France, and seem to answer the description of the Peach plum. — Ed.]

4. *Black Imperial.* — A handsome fruit, of large size, and of tolerably good flavor. Trees received for the Early Bradshaw, prove to be identical with this. Ripens from the 1st to the 15th of August.

5. *Morocco.* — I have fruited this for many seasons, and consider it a pretty good early plum. Ripens from August 1st to 20th.

6. *Washington.* — Notwithstanding this variety has received so high encomiums from cultivators in different parts of the country, yet it cannot be recommended for general culture. Fruit sometimes excellent, often insipid. With all its popularity, it cannot be reckoned a first-rate fruit. It is very unproductive as a standard — does better grafted on a Canada stock, and trained low. In fact, it is one of those varieties that will not pay for cultivation. Ripens in August.

7. *Orleans.* — A great and constant bearer. Fruit valuable, and less liable to rot than most varieties. Ripens the middle of August.

8. *Azure Hatif.* — A great bearer, but hardly worth cultivating. Ripens the middle of August.

9. *Royale Hatif.* — A fine fruit, worthy a place in choice collections. I have often seen, at the Horticultural Rooms, Boston, the Precoce de Tours exhibited for this variety. The genuine sort was received under the name of Azure Hatif. Ripens the middle of August.

10. *Duane's Purple.* — This variety can only be recommended for its large size and handsome appearance. I have cultivated it for ten years past, and never knew it to fail to rot. As to quality, it is far inferior to several kinds that ripen at the same time, which is the middle of August.

11. *Italian Damask.* — This variety is justly esteemed a great favorite. It is an early and abundant bearer, and first rate for the market or private garden. It should be extensively cultivated. Ripens from the 12th to the 20th of August.

12. *Monsieur Hatif.* — This is an excellent fruit, the same as the Italian Damask; at least it seems so, as it is like that variety in its wood, leaf, habits of growth, and in the form of its fruit and period of ripening. Ripens from the 12th to the 20th of August.

13. *Couetch.* — This tree, purchased at Cunningham's auction shop, a few years since, so strongly resembles the Italian Damask, that I am inclined to believe that they are identical. This name must be a corruption of Quetsche, but a great mistake was made in classing this plum with the family of prunes. Ripens from the 12th to the 20th of August.

14. *Perdrigon Violet Hatif.* — The variety received under this name very much resembles the Italian Damask, in wood and leaf, but the fruit is a little more oblong. It is nearly first rate. Ripens from the 12th to the 20th of August.

15. *Drap d'Or.* — A small plum, of the highest character — almost equal to the Green Gage. The tree is a shy bearer. Ripens August 15th to 20th.

16. *Red Apricot.* — This tree is a poor bearer, and the fruit, though beautiful in appearance, is hardly worthy of cultivation. Ripens August 20th.

17. *Cheston, or Matchless.* — A purple plum, of pretty good flavor, but not worthy a place in a choice collection. Ripens August 20th.

18. *English Wheat.* — This variety was received some years ago, from Robert Manning, Esq., of Salem, under the name of Jenkins's Imperial. It ripens a few days after the Italian Damask, is a great bearer, and is in every respect worthy of cultivation. A tree received for the Rogers's plum, is the same as this. Ripens August 20th.

19. *Prince's Yellow Gage.* — An excellent plum, a great bearer, and highly worthy of cultivation. Ripens August 20th.

20. *Prince's Imperial Gage.* — This fruit will not flourish here. Its disposition to rot, and its variableness, have induced me to discontinue its cultivation. Ripens from the middle to the last of August.

[This variety succeeds better on a sandy loam. — Ed.]

21. *Pond's Purple.* [Pond's Seedling. — Ed.] — This variety is hardly second rate in flavor; yet its productiveness and handsome appearance entitle it to a place in a large collection. A different fruit from that described by Mr. Thompson in the London Horticultural Society's Catalogue. Ripens the latter part of August.

22. *Dana's Yellow Gage.* — A very productive variety, but it cannot be recommended for general cultivation. The fruit is esteemed by some persons, but to my taste it is quite disagreeable. Ripens the last of August.

23. *Lawrence's Favorite.* — A fruit of American origin. It is of excellent quality, and is worthy to be called a *favorite*. The tree is an abundant bearer. Ripens the last of August.

24. *Cruger's Scarlet.* — A pretty plum, of second quality. A great bearer, and worthy of cultivation. It is, however, rather inclined to rot. Ripens the last of August.

25. *Bleecker's Gage.* — An excellent plum, and should be in every collection. Ripens the last of August and first of September.

26. *Green Gage.* — A plum of the very highest character. An abundant bearer, and less liable to rot than most varieties. Ripens the last of August and into September.

27. *Lombard.* — I have cultivated this variety to considerable extent; and though I find it second rate in quality, yet I prize it highly for its extreme productiveness. This, with Cruger's Scarlet, and Imperial Gage, thrives better than most others on dry soil. A tree of this variety, set out in 1841, bore three bushels the last season. Ripens from the last of August into September.

28. *Kirk.* — A delicious fruit. The tree does not seem to be a great bearer. Ripens from the last of August into September.

29. *Lucomb's Nonsuch.* — This plum thrives admirably with me, and bears large crops every year. The fruit is of a large size, handsome appearance, and worthy of extensive cultivation. Ripens from the last of August into September.

[Some cultivators do not esteem this variety, which

may be owing to their cultivating it on a dry soil, which is not so congenial to its nature. — Ed.]

30. *Prince's Orange Egg.* — This variety was received of Wm. R. Prince, Esq., of Flushing, Long Island. It produced specimens, in shape and color, like Dana's Yellow Gage, but larger. Not worthy of cultivation. Ripens from the last of August into September.

31. *Elfrey.* — This fruit is an especial favorite of mine. The flesh is rather dry, but of excellent flavor. The tree is a prodigious bearer, and, like all other great bearers, liable to the excrescence, or black wart. Ripens from the last of August into September.

32. *Domine Dull.* — This variety was received, a few years since, under the name of German Prune. The tree is a good bearer; the fruit excellent. But I do not consider it equal to Manning's Long Blue Prune. Ripens from the last of August into September.

33. *Red Gage.* — An excellent fruit, a prodigious bearer, and worthy of extensive cultivation. Ripens from the last of August into September.

34. *Red Magnum Bonum.* — The tree is a great bearer. The fruit large and handsome, but fit only for preserves. Ripens from the last of August into September.

35. *Peter's Large Yellow.* — A large fruit, but not worthy of cultivation. Ripens from the last of August into September.

36. *Goliah.* — Of a large size, and handsome appearance, but unworthy of cultivation, excepting for cooking. Ripens from the last of August into September.

37. *Manning's Long Blue Prune.* — This is a rapid grower, and a good bearer, and highly worthy of cultivation. It is among the handsomest of plums. Ripens from the last of August to the 10th of September.

38. *Jefferson.* — Although this variety is hardly equal to the Green Gage, yet it is a fruit of great merit. One tree received in 1841 for the Kirk, but which proved to be the Jefferson, bore one and a half bushels of fruit in 1846. It is a prodigious bearer, and worthy of general cultivation. Ripens from the last of August to the middle of September.

39. *Orange.* — I was hardly able to judge of the character of this fruit last season, though I had a large crop, as most of the plums rotted on the tree. Some of the best specimens were hardly second rate. Ripens from the last of August to the middle of September.

40. *Brevoort's Purple Bolmar.* — As it regards the character of this fruit, I think it has been ranked too high. The last season, however, it was better than I have ever known it before. The tree is healthy, and it produces abundantly. Ripens the first of September.

41. *White Magnum Bonum.* — This is a handsome fruit, but it is fit only for preserving. The tree was received under the name of Dame Aubert. Ripens the first of September.

42. *Sharp's Emperor.* — I have fruited this and Denney's Victoria, for many years, and I do not hesitate to pronounce them identical. It is a handsome fruit, of good quality. The tree is an abundant bearer. Ripens the first of September.

43. *Howland.* — I received a tree of this variety of R. Manning, Esq. He had it of Judge Buel. It is unworthy of cultivation. Ripens the first of September.

44. *Columbia.* — The tree is a vigorous grower. The fruit is large and excellent, but much inclined to rot on the tree. Ripens the first of September.

45. *Huling's Superb.* — The fruit is of a very large size: one specimen, raised the last season, measured six and one half inches in circumference. It is of very good quality, but so liable to rot, that it cannot be recommended for cultivation. Ripens the first of September.

46. *Bingham.* This fruit is excellent. The tree is a good grower and great bearer, and worthy of general cultivation. Ripens early in September.

47. *Reine Claude Violet.* [Purple Gage. — Ed.] — A fine fruit, but hardly equal to the Green Gage. The tree is a prodigious bearer. I have received, from different sources, many trees under this name, which proved to be wrong. I obtained the genuine kind from J. M. Ives, Esq., of Salem, a few years since. Ripens September 1st to 20th.

48. *Diamond.* — A great bearer, but unworthy of cultivation, excepting for cooking. Ripens in the former part of September.

49. *Cooper's Large.* — This variety was received, some years since, from Robert Manning, Esq., under the name of La Delicieuse. The fruit is of good flavor, but so subject to rot, that I have been unable to cultivate it with profit. Ripens in September.

50. *Diapree Rouge.* — Although this plum is of a large size, and of excellent quality, yet it is rather unprofitable, owing to its disposition to rot. Ripens in September.

51. *Smith's Orleans.* — I consider this one of the finest of plums. If I could not cultivate more than half a dozen varieties, this would be one of them. Ripens in September.

52. *Corse's Nota Bene.* — A fruit of high character, and a great bearer. Trees received for Corse's Favorite, have proved to be the same as this. Ripens the middle of September.

53. *Royale Dauphine.* — I have cultivated this plum for many years, and have always found it an indifferent fruit. Ripens the middle of September.

54. *Wilkinson Prune.* — I have fruited this plum many seasons, but as the quality is inferior, I have grafted it to a better variety. Ripens the last of September.

55. *St. Catharine.* — A plum of excellent quality, and a prodigious bearer — worthy of extensive cultivation, as it ripens after most other plums are gone. Ripens from September 20 to October 10.

56. *Coe's Golden Drop.* — This is a late plum, of first-rate quality when well ripened. It requires a warm situation, in order to have it in perfection. No collection is complete without it. Ripens from the middle of September to the last of October.

57. *Blue Imperatrice.* — This fruit is highly worthy of cultivation. It should be in every collection. The Imperatrice Violet of the French, which has been cultivated to some extent in this vicinity, as a synonym of this fruit, strongly resembles the Semiana, cultivated in the neighborhood of Boston; but it bears only a slight resemblance to the Blue Imperatrice. The wood of both is similar. Ripens in October and into November.

58. *Frost Gage.* — This fruit is almost equal to the Damson for preserving, and, if allowed to hang on the tree till fully ripe, it is of most excellent flavor. A great bearer. Ripens in October and into November.

59. *Coe's Late Red.* — I have never been able to raise good specimens of this variety. The fruit will not ripen here. Ripens middle of October and into November.

For the New England Farmer.

DEEP AND SHALLOW DRAINING.

Mr. Cole: Your addendum to my letter on Brush Draining, it strikes me, bears the implication, remotely, that I am in favor of shallow trenches in preference to the deep ones, which modern experience has proved the better for all purposes, — efficiency

and cheapness of construction at their head. I am anxious to disprove the impression, but much more desirous of placing before your readers the advantages which proceed from the latter mode of operation.

I am old enough to remember the advent of the modern principles of draining. When it was first practised, no such idea as subsoil culture had its birth in the agricultural mind. You well know that the general depth of active soils, on indurated bases, seldom averages more than nine inches, when under the much too common system of cultivation, — which amounts to a mere ploughing. This partial stirring, and the action of the atmosphere, rarely combine to pulverize the earth below the above designated depth, when the substratum is of a tenacious or indurated character. Acting on the observations arising from this fact, the original drainers decided on eighteen inches as a sufficient depth to cut their trenches, — their object not being to deepen the soil, but to carry away surface water, and cut off springs, &c. These objects the system could accomplish tolerably well; and it was not until the operations of scientific men proved the benefits of subsoiling, for the purpose of deepening the active soil, that any deviation from the original mode was acknowledged as being proper or necessary.

The progress of science demonstrated that healthy plants of the cereal descriptions would send their roots from sixteen to thirty inches into the soil, in search of sustenance to support their vigor; and this begot, in turn, the idea of applying mechanical means to the pulverization of the soil to such depth as would insure to crops such favoring conditions. Consequently the subsoil plough, and all the varieties of cultivators, were invented, and came into use. These influences revolutionized the rules of draining previously laid down; and the Deanston system arose upon the ruins of the old established eighteen inch deep practice. Mr. Smith, of Deanston, in Scotland, with whom I have had the pleasure of conversing often on this subject, first adopted the theory of two and one half feet deep drains, and proved their superior advantage, along with subsoil ploughing, in an elaborate and most satisfactory series of experiments. His published letters, and public lectures, soon made his system popular; and the combined advantages of subsoil ploughing and deep draining, formed the intermediate age of agricultural improvement; for draining especially had another step farther to go, ere it could earn the title of such perfection as it has at present attained to. In the original system, the rule, was eighteen inches deep and eighteen feet space between the trenches; in the Deanston system, the depth of drain was two and one half feet, and the trenches also eighteen feet apart. Mr. Smith has, within the past ten years, reluctantly added six inches to his theory; but this addition has not recommended an attachment to his system.

In 1840 several gentlemen in the south-west of England, and elsewhere very partially, began to consider the propriety of adding to the depth of the drains, and widening the space between them — acting on the supposition that the greater declivity the water had to run upon, the greater the rapidity of its disappearance from the soil, — and also judging that the more inclined the plane surface of the subsoil, the horizontal distance from which water could be drawn to the trenches would be proportionally increased: these parties, considering the above probabilities, determined to prove them facts, and instituted a series of experiments, which ultimately satisfied them that they were practical truths. Mr. Mechi, of London, stands at the head of the third age of drainers. His system was to dig his trenches four feet deep, when the declivity of the land would tolerate this depth, and in some instances five feet, and have them forty feet apart. The marked efficiency of the system, in deepening the soil, through the furnishing of conditions superior to any other, for the action of external influences of water and atmosphere combined, soon rendered it a favorite one: and now it is the only system which receives the sanction and adoption of the improvers in Great Britain. My next shall contain some remarks on the adjuncts necessary to efficient drainage. Meantime I am truly yours,

A FIRESIDE FARMER.

Boston, *Jan.*, 1850.

For the New England Farmer.

EVERGREEN HEDGES.

Friend Cole: Very few farmers in New England possess well-grown hedges, or, indeed hedges of any growth. Of course they have little knowledge of hedge planting and raising. To this want of knowledge may perhaps be attributed the lack of interest evinced on this subject, by those who might be expected to feel much. Would it not be well occasionally to call their attention to this subject through the columns of the Farmer?

What single feature of improvement is there, that could possibly give to a farm so much additional beauty, as that of surrounding it with an evergreen hedge? There is, even in winter, a pleasing appearance of freshness and vigor in the dark foliage of some of our native evergreens which commands the admiration of every one. A hedge of evergreen is in itself beautiful; but to a landscape otherwise barren, it gives an air of picturesque loveliness that scarcely any thing else can give. In most of our nurseries, evergreens of various kinds (not always the most beautiful) are grown, but in small numbers, and principally for ornamental trees. Occasionally, we see beside some small garden a few yards of arbor vitæ, or other evergreen hedge; but, as yet, no boundaries or subdivisions of farms are marked by walls of living green.

Much pains are taken, by the inhabitants of cities and their suburbs, to render their situations more pleasing and attractive. Here and there, small lawns are interspersed, and gardens of fruits and flowers, vineries and conservatories, and groups of shrubs, or trees; but the scenery of our country farms gives little appearance of rural taste, among the more rural population. The background is not always the least expressive and important part of the picture. It is for the farmer to take the pencil, and trace the more striking and extended outlines over the face of New England landscape.

If he will but try, he may find it not to be so hard a task as at first he might suppose. In this part of the country, a new era in farming has begun. The cropping system, which has been employed here, has in a great measure exhausted the virgin soils which gave our fathers bread. To plough and sow, without feeding the soil, give no returns now. Those who wish to till their farms on the exhausting system, must go to the west. Those who remain here will find it for their interest to till small farms, and *do it well.* When skill, science, and practical experience are combined, a little land is sufficient. If it be exhausted, or naturally unfertile, the less is needed, for it requires more to cultivate and enrich it. No man, who intends to get his living by farming, can afford to let his land lie waste, or to half till it, for the purpose of growing half crops. If, then, a man owns but so much land as he can cultivate, (he has but a doubtful title to more,) and that is his homestead, what reason can he have for leaving it, year

after year, in appearance so comfortless and uninviting as almost to defy its owner to call it his home?

It is easy for farmers to give here and there a touch of beauty to the surrounding landscape. It is directly in their line of business, and nature is always ready to assist them. Every farmer has fences to build. Give the soil a little cultivation, and it will support a living hedge of hemlock, or Norway spruce, as readily as a rail fence; and do something more towards keeping it in repair. The shelter which a good hedge affords, is by no means its least recommendation. For the sake of protection alone, it deserves to be brought into general use by those who till lands in bleak situations along the Atlantic coast.

I know but little of the different kinds of evergreen trees; but from what I have been able to learn of those who do know the habits and peculiarities of each, I have come to the conclusion, that the Norway spruce is the most valuable as a hedge plant for the Eastern States. It is open to the objection that it must be procured in Europe. It does certainly seem that we might find a suitable evergreen in our native forests; but be that as it may, it will be decided by those who are qualified by experience to judge rightly. According to the statements of Robert Nelson in the Horticulturist, (vol. ii.,) the Norway spruce combines all the most necessary qualities for a hedge plant. He speaks from experience, and his remarks are therefore valuable. He speaks of it as being so perfectly hardy, that it may be used in very exposed situations for a protection against high winds. It will flourish on almost any soil, but much the best on that of a poor, gravelly nature. It is well known that evergreens do not usually bear pruning well; but of this, Friend Nelson says, "It may be cut into any shape, and after a few years' trimming, it presents a strong green wall of great power of resistance." He gives also full directions for raising from seed, planting, and trimming, which will be of great value to beginners.

Farmers, as well as others, are beginning to see that beauty and utility may sometimes be united without loss to the nature of either. I am confident that if an effort be made by nurserymen and amateurs, the Norway spruce may be grown so cheaply and extensively as to come into general use for hedges. As Yankees possess such a *penchant* for "going ahead" with any thing that they undertake, it is important that they should start aright. To do this in hedge planting, much information is required which farmers do not yet possess. For the purpose of introducing the subject, and getting some information for myself and others, I will ask two or three questions which I should like to have inserted in the columns of the New England Farmer.

Will the hemlock (*Abies Canadensis*) flourish on poor, gravelly soils? Will it bear pruning sufficiently well to serve as a hedge plant? Can we import the seeds of the Norway spruce from England, as readily as we can the plants? If so, what is the proper season for sending? — Any information in regard to the expense of procuring plants, planting and raising hedges, would no doubt be gladly received by many subscribers to the Farmer.

Thine, with respect, N.

Danvers New Mills, *First Mo.* 11th, 1850.

For the New England Farmer.

GRAFTING THE PEACH TREE.

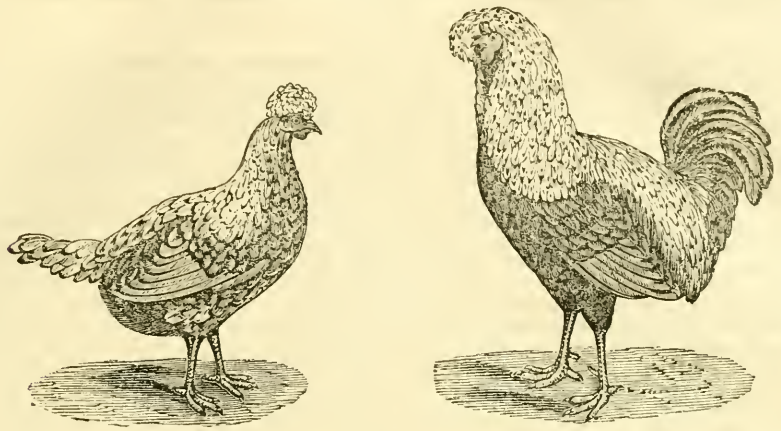
Mr. Cole: I perceive that you, with many others of extensive experience in the cultivation of fruit, recommend the raising of peaches from the pips, or stones, thus securing the natural fruit. I also observe, in your valuable "Fruit Book," that when any desirable variety is required, *budding* is the proper method. But I wish to inquire, What shall we do with a young, healthy tree, that bears *poor* fruit? Shall we graft? And if so, where; on the principal branches, or on the main stock; above, or below the surface? It seems to me, with my limited experience, that the better way would be, to graft about a foot or eighteen inches from the ground, letting two scions grow. I have noticed that writers say that stone fruit should be budded rather than grafted, as with the latter they are more liable to *gum*, or bleed, and that gumming hurts them. I think, however, that Lord Bacon says that gumming does them good. I should be happy of your opinion. L.

Remarks. — The peach is propagated by stones or by budding. In many cases the stones produce the same as the parent tree; but this can only be depended on when a variety is shown by experience to be a fixed variety, yielding fruit after its kind. The peach is propagated with great facility and success by budding. Grafting the peach, or propagating it by layers or cuttings, is so difficult that these modes receive but little attention. Lord Bacon is often quoted in relation to fruit trees; but we think that he had but very little practical knowledge of the subject, judging from his absurd remarks. He says, that the scion overruleth the stock quite; but practice shows that the stock has some influence on the scion. — Ed.

LONGEVITY OF THE HORSE.

It has long been an impression that the ordinary duration of a horse's life is much shorter than it ought to be, and that the excess of mortality is the result of carelessness or ignorant management. The great error consists in regard to the temperament and general constitution of a horse as altogether different from those of a human being; whereas they are precisely the same in all important respects. Disease arising from excessive fatigue, overheating, and exposure to air, want of exercise, improper diet, both as respects quality and quantity, and from many other causes, affects the horse and his master alike, and neglect in either case must terminate fatally. Indeed, when a man or a horse has acquired, by a course of training, a high degree of health and vigor, the skin of each is an infallible index of the fact. It has been often remarked in England, that the skin of the pugilist, who has undergone a severe course of training, when he prepares himself for the fight, exhibits a degree of beauty and exceeding fairness, that excites the admiration as well as the wonder of the spectator. So with the horse: his skin is the clearest evidence of the general state of his health. Even the common disease of foundering is not peculiar to the horse, but is merely a muscular affection, to which many men, who have overstrained themselves at any period, are subject. In fact, the medical treatment of the horse and his rider ought to be the same; and we confidently believe that if this principle were acted upon with a moderate share of attention and resolution, the average age of this useful animal would be much longer, and the profit derived from his labors proportionably greater. — *Norfolk Beacon.*

Horses poisoned. — Will castor beans kill horses? So it would seem from the Des Moines Courier, which says that eight horses were killed at Agency, in Iowa, a little time since, from eating a few castor beans, accidentally mixed with their food. The castor bean is a common production in parts of Southern Illinois; and there can be no doubt about the truth of it. — *Prairie Farmer.*



SPANGLED HAMBURG FOWLS.

There are two varieties of this breed: the Golden, which is of a bright yellow color; and the Silver, which is of a silvery white. The marks of distinction are only in color. By a cross of these varieties, many other sub-varieties may be produced, with various colors, according to the choice of the breeder.

The Spangled Hamburg is a very beautiful fowl, having a plump body, tender skin, and but little offal. It has no comb, but it generally has two or more conical eminences or horns just above the beak, and behind this, in place of comb, is a large tuft of pendant feathers. Under the insertion of the lower mandible, or that part of the neck corresponding with the chin in man, is a full tuft resembling a beard. The wattles of the cock are small. The hens lay freely, and the eggs are of good size.

The cock of the Golden Spangled is of a golden or orange yellow, each feather having a glossy black tip. The hen is of an orange brown, with the feathers margined with black, like those of the cock.

In the Silver Spangled variety, the ground color is silvery, with a tinge of yellow, and each feather is margined with a semi-lunar mark of glossy black. When the fowls are at rest, the feathers present a spangled appearance; hence their name; and the peculiar color gives an additional name, showing that mark of distinction.

These fowls won the prize at a late show of the Royal Agricultural Improvement Society of Ireland.

THE MULE.

Having noticed in the Dollar Newspaper quite an interesting essay on the horse, the thought suggested itself to present the claims of the mule through the same medium, with your consent.

Perhaps there is no animal of such value as the mule, that has been so much neglected and maltreated; but this has in a great measure ceased to be the case, and the mule now finds more favor in the estimation of the farmer. The mule is coming into more general use among farmers, — his true value is being found out, also his great superiority above the horse for agricultural purposes. In proportion to a knowledge of this fact has the price paid for mules advanced, until it now nearly doubles that of some few years past. There is also a great increase among the number of farmers who have turned their attention to raising mules instead of horses, and I think in this they have manifested considerable wisdom. Let the reader consider the following facts and be his own judge in the matter: — The mule will answer to work fully a year sooner than the horse; he will do as much work as the horse, treatment being equal, upon nearly half the feed; he will last twice as long as the horse; it is said that the mule deteriorates about as fast after he is twenty, as the horse does after he is ten; the mule is a great deal less subject to disease than the horse; they live to be a great deal older. I was once asked, by way of calling my attention to the longevity of mules, if I ever saw a dead mule? I never did. I do not pretend to say they never die; but they certainly live to be very old. Pliny gives an account of one, taken from Grecian history, that was eighty years old; and though past labor, followed others that were carrying material to the temple of Minerva at Athens.

Much of the slowness and stubbornness attributed to mules, has been the result of cruel treatment. *Who*, that can remember, has not often heard the remark, that mules were the very things for servants? — and why? Because they, as a general thing, possess very little humanity and care, in regard to the brutes entrusted to their management. Kind treatment and attention are as essential in order to have good mules, as they are to have good horses.

A few suggestions in regard to breaking mules, before I finish. When a mule gets to be three years old he is then at the proper age to be broke; but he should not be worked hard until four years old. When you take him in hand to break him, do not be rough with him; be sure to fasten him so that he does not get away, for if he once breaks loose he does not forget it, and it renders him more difficult to manage. Mules should always be broke to a wagon with a horse or mule that has a swift walk; they may be broke to walk swift or slow at pleasure by accustoming them to either gait at first, hence I recommend them to be broke with one that has a swift gait. The female mule I think preferable to the male, as the former is generally more tractable, and some say, will last longer. G. R.

Sussex County, Va., 1849.

— *Philadelphia Dollar Newspaper.*

Domestic Department.

A Correct Taste in Children. — In many ways the mother can contribute to the formation of a correct taste. The first hymns she teaches to the lisper, and even the earliest notes which she sings for its lullaby, should be chosen with care. The pictures with which the walls of the nursery are adorned, should be selected with a studious and cultivated regard for real beauty. Likenesses of excellent men and women, whose names you would choose to have your children love, and whose virtues you would rejoice to see them imitate, are a very desirable ornament. A few elegant historical pictures, which might be used as introductions to general history, or which are calculated to inspire noble sentiments, would be found of great utility in every family able to have them. A few well finished landscape pieces would also tend to foster a love of nature in its cheerful and its sublime aspects.

There is a refining and effectual influence arising from a daily familiarity with the scenery of nature, whether it glow before us in its original loveliness, or in the representations of the genuine artist.

At proper times, as the mind becomes able to receive them, clear and definite instructions should be given as to the reason of their selection, the nature of their influence, and the general rules which should govern the exercise of the imagination. As the youth educated by such a process enters upon scenes and studies away from home, these early instructions, examples, and associations will operate to elevate, restrain, and purify the mind, influencing his course of reading, his companionship, and his present character. — *Farmer and Mechanic.*

Winter Saccatash. — This is made of dried shelled beans, and hard corn. Take equal quantities of shelled beans and corn: put them over night into separate pans, and pour boiling water over them. Let them soak till morning. Then pour off that water, and scald them again. First boil the beans by themselves. When they are soft, add the corn, and let them boil together till the corn is quite soft, which will require at least an hour. Take them up, drain them in a sieve; then put them into a deep dish, and mix them in a large piece of fresh butter, and a little pepper and salt.

This is an excellent accompaniment to pickled pork, bacon, or corned beef. The meat must be boiled by itself in a separate pot. — *Miss Leslie.*

Hominy. — Hominy is Indian corn shelled from the cob, divested of the yellow or outward skin by scalding in hot ley, and then winnowed and dried. It is perfectly white. Having washed it through two or three waters, pour boiling water on it, cover it, and let it soak all night, or for several hours. Then put it into a pot or saucepan, allow two quarts of water to each quart of hominy, and boil till perfectly soft. Then drain it, and put it into a deep dish, add some butter to it, and send it to the table hot (and uncovered) to eat with any sort of meat, but particularly with corned beef or pork. What is left may be made next day into thick cakes, and fried in butter. To be *very* good, hominy should boil four or five hours.

Deliberate with caution, but act with decision; and yield with graciousness, or oppose with firmness

Youth's Department.

Early Rising. — A talented physician remarks that "Early rising is the stepping stone to all that is great and good. Both the mind and the body are invigorated by the practice, and much valuable time is gained that is lost to the sluggard. It is the basis upon which health and wealth are founded. The early morning is the best period for reflection and study; for it is then, after refreshing sleep, that the mind is most vigorous and calm. The statesman, as well as the merchant, arranges his plans for the coming day, and all passes smoothly; while he who wastes his morning in bed loses much of the most valuable commodity in life — time — *which is never regained.* Early rising will often make the poor man rich; the contrary will too often beggar the wealthiest. It will do much towards making the weak strong; and the reverse will enfeeble the strongest. Second sleep often produces headache and languor. There is nothing more true than that — 'He that loses an hour in the morning is seeking it the remainder of the day.' All our greatest men have been early risers; for instance — Newton, Franklin, Wellington, Shakspeare, Milton, Reynolds, Hunter, Eldon, Erskine."

Health Department.

How to Dislodge a Fish-Bone from the Throat. — It sometimes happens that a fish-bone, accidentally swallowed, will remain in the œsophagus, and occasion serious inconvenience; in fact, instances have been known where so much irritation had arisen that death has followed. In such cases, it is advisable, as soon as possible, to take four grains of tartar emetic, dissolved in one half-pint of warm water, and immediately afterwards the white of six eggs. The coagulated mass will not remain in the stomach more than two or three minutes, and the probability is that the bone will be ejected with the contents of the stomach. If tartar emetic is not to be found conveniently, a teaspoonful of mustard dissolved in milk-warm water and swallowed will answer the same purpose. — *Scientific American.*

Cure for Quinsy. — Simmer hops in vinegar a few minutes, until their strength is extracted; strain the liquid, sweeten it with sugar, and give it frequently to the child or patient, in small quantities, until relieved. This is said to be an excellent medicine. — *Davenport Gazette.*

English Ladies. — The healthy appearance of English ladies is noticed by all American travellers. And for this they are in a great measure indebted to their passion for gardening. All English ladies work in their flower gardens, from the proudest princess to the poorest cottager.

Insanity from Novel-Reading. — A physician in this state says, "I have seen a young lady, with her table loaded with volumes of fictitious trash, poring, day after day, and night after night, over highly wrought scenes and skilfully portrayed pictures of romance, until her cheeks grew pale, her eyes became wild and restless, and her mind wandered and was lost — the light of intelligence passed behind a cloud, her soul was for ever benighted. She was insane, incurably insane, from reading novels."

Mechanics' Department, Arts, &c.

Extract of a Prize Essay, by Edmond Maher, published in the Scientific American.

Inventive Genius of the Age. — The nineteenth century stands out in *basso relievo* upon the rock of Time, as the epoch of discovery and fruition — as the inceptive period of mighty truths, such as the world knew not before, and which, in their culminating progress, are destined to embrace the universal family of humanity in the circle of their immense results. The key with which our immortal Franklin unlocked the mysteries of the storm, was also the talisman which may in after times reveal the secret machinery of life itself. Already have the "sightless couriers of the air" woven their web of lightning over the face of creation, realizing, ay, and surpassing the ambition of him who would have "put a girdle round the earth in forty minutes." Already have the mountains bowed, and the "little hills skipped like lambs" before the track of the iron horse, whose limbs are tireless, and whose breath fails not in the race.

The popular mind of our country is essentially inventive. Almost as soon as the American child can think, he inquires, demands illustrations, and suggests changes. The Anglo-Saxon superiority of intellect requires independent and individual development — which, under a republican form of government, is almost certainly obtained; for each man born into the community feels, that in himself lies his destiny, and that equally with another he may aspire to all the rewards of enterprise. The North American mind seldom dreams — seldom indulges in vague or chimerical speculations; it must have a tangible foothold, a solid standing point, and thence it will uphold the loftiest structures that intellect can conceive or action execute. It never stagnates, and seldom is at rest; for in viewing a mountain torrent, the American plans a waterpower that shall perform the work of a thousand men, and in examining a pebble he may divine the locality of untold treasures hid in the bowels of the earth.

It is this national trait of observation and application, that gives our countrymen a peculiar proclivity, if I may use the term, towards invention and improvement. Nothing is passed by them without inquiry and examination; and errors are detected, mistakes rectified, and crude hints reduced to practice with a facility that is truly wonderful. Throughout all classes this trait is noticeable, its development, perhaps but partial and incomplete, yet still marked and recognizable, as a feature of our national physiognomy.

It is this which sweeps away every vestige of the ruined past, and replaces it with solid monuments of the present. It is this which diverts our rivers hundreds of miles from their natural courses, to top the resources of inland commerce. It is this which crosses and recrosses our fertile plains with a woof of perpetual traffic, over which fly continually those mighty shuttles, the steam engines, weaving yet closer and denser, the fabric of our prosperity. It is this which builds ships in the backwoods, launches them upon canals and inland lakes, or transports them piecemeal to the mighty ocean, to assume their place among the navies of the world. It is this which paints our glowing scenery on miles of canvas, revealing our natural and national life to millions beyond the Atlantic, who thus behold, as it were, face to face, a people who exist four thousand miles away. Our flails thresh the corn which grows around the tomb of Pharaoh; our saws sever the cedars of Lebanon; our steam whistle startles the echoes of the Black Forest and the Baltic; our cotton forms the Moslem's turban; our palmleaf shelters the Sumatra planter. We cool the nabob's sherbet with our ices — and we heat the creole's sugar-boiler with our coals!

No nation in the history of the world has illustrated the spirit of improvement to the extent of ours; and this because every man has been a self-acting motive power in the grand machinery of progression. We exhibit the ideality of materialism in every thing — grounding in the smallest foundation a superstructure of practicable theory. A churn, a lock, a door-knob, a plough — these are not objects *merely*, to a Yankee's mind, but are problems, which he endeavors at once to resolve into an "*improved*" churn, or lock, or door-knob, or plough. And the problem presents itself, and must be solved throughout all the handiwork of man.

With this universal *genius*, then, for invention, the American mind requires but two things to make this influence effective, and constant in its great results; and these are education, and governmental protection in its offspring. Our rambling, luxuriant, eccentric inventive talent, must be controlled and directed by a wise system of scientific instruction, as well as protected by law in its results.

A Bureau of Arts, supervised by practical men, should be as distinct a department of our national government as that of the Treasury or of State. It should ever be the policy of a far-seeing statesman to encourage these manifestations of popular intellect which result in practical fruits, which exhibit new modes and means of producing tangible good, whether it be in the perfection of mechanics, agriculture, or the fine arts; for all these things directly advance a nation, and of course create wealth, prosperity, and social honor for all the integrals of that nation.

The institution of a National Academy under the patronage of government, where mechanics, manufactures, and agriculture, should have their appropriate professorships; where the children of the people might be instructed in all the great truths which form the educated workingman; where the cumbrous details of patenteeism should be reduced to a simple codification; where premiums and honorable prizes should be awarded to successful inventors, discoverers, or improvers; where lectures upon all the branches of art should be given by the great scientific men of our country; where a gallery of models and catalogues of all the inventions and discoveries of ancient and modern times should be accessible to all; such an institute as this would do more to elevate our national character, and ennoble our countrymen, than all the victories of a thousand wars, or the acquisition of all the mines of the universe.

With such a fostering institution, the American mechanic could lead the world, in all that adorns and benefits mankind. He could hold up to the gaze of nations a model and a standard of scientific development, that would fire all men with emulation. Then could he grasp and guide the awful elements of nature, curb the ocean and the sky, and overcome the forces of evil throughout creation. Then could he banish miasma from the face of the earth, disarm pestilence, avert famine, regulate climates, and make deserts "blossom as the rose." This power exerted for the good of mankind, and encouraged to its utmost capacity, would be equal to all labors, and superior to all obstacles. Then indeed could we address to him the apostrophe of the Poet —

> "Lift then thy hand to heaven!
> Spread the Toil-spectre o'er the sea and land!
> Thou hast the world entrusted to thy hand —
> Earth to thy charge is given."

Experience and Wisdom are the best fortune tellers.

POTATO ROT.

At the agricultural meeting, Jan. 29, Mr. Calhoun read the following communication: —

Hon. Wm. B. Calhoun. Sir: As president of the agricultural meetings, I do not hesitate in taking the liberty of placing in your hands the enclosed paper. It has been for some weeks my wish to have the subject under the attention of the agriculturists of our state, and I know of no association, or body of them, to which it could be communicated with so much propriety as the one over which you preside.

With high respect,

(Signed) A. A. HAYES.

On a Method for protecting Potatoes, after they have been harvested, from the further Spreading of the Potato Disease.

We are indebted to J. E. Teschmacher, Esq., for the first demonstration of the causes of the present destructive disease in the potato, being a fungus growth. The subsequent inquiries, up to the latest observations, have only slightly modified the conclusions arrived at in this country, by substituting for the changes produced by a vegetating fungus, those induced by the decay of that growth.

The rapid decay which continues after the roots have been removed from the soil, is often of the most remarkable character, and aside from its economical bearing, is a subject of scientific importance. During the last season, I made trial of some chemical agents, which specifically arrest all vegetation, hoping to discover an application which would enable us to preserve the diseased potatoes from further changes. Early in the course of the experiments, it was noticed, that a reduction of temperature, by exposure to cold air, greatly diminished the rapidity of decay, while a slight increase of temperature hastened it — moisture being present or not.

Heat in a moist atmosphere increased the destruction; and samples which had been cooled, and thereby partly protected, readily passed through all the changes when again exposed to warm and humid air. After using several substances by direct contact with diseased parts of potatoes, I soon found that the mixture of sulphurous acid, nitrogen, and common air, such as exists when sulphur is burnt in closed vessels, would prevent the further progress of the disease in tubers already affected; and when exposed in contact with tubers passing through all stages of the disease, no further change in the prepared ones was induced.

The trials were varied, and the uniformity of the results has led me to conclude that the fumes of burning sulphur, flowing in contact with potatoes partly diseased, will arrest the further progress of the disease, and prevent decay. It is proper that this conclusion should be received as an expression of fact, under the circumstances of experiments on a small scale, and with no more than two varieties of potatoes; but I confidently expect that the importance of the application will be seen in the largest exhibition of its effects.

The practical use of the sulphurous acid gas is very simple, and not expensive. Crude sulphur inflamed in a shallow cast-iron vessel, or an earthen pot, furnishes the fumes, which may be led, by wooden pipes, to the lower part of bins filled with the roots, until the unoccupied space is filled with them. As the fumes cool, they become heavier than air, and will then enter every interstice. By placing the pot of burning sulphur in an empty barrel, and inverting over it a barrel filled with potatoes, having a light rack in place of a head, the fumes will slowly rise within and impregnate the mass; the barrel and contents being then removed, and the head replaced, the exposure may be considered as ample. Where the quantity is large, it would be more economical to leave a space vacant, below the loose floor on which they repose, and introduce these fumes until every part of the heap of potatoes has received a share.

It should be remembered, that this application will injure, if not destroy, the vegetating power of the tubers, and that although this result may be highly desirable, for all that are preserved for food, those intended for seed should not be so treated.

Respectfully,

(Signed) A. A. HAYES, M. D.,
State Assayer.

No. 1 Pine St., Boston, *Jan.* 18, 1850.

INVERTING FENCE POSTS.

Articles have been published occasionally, showing the advantage of inverting fence posts, in order to prevent their decaying so readily as they do in their natural position. Many plain and strong facts have been brought forward in favor of this improvement, and yet most farmers go on in the old way, unmindful of these facts, and still complaining of the scarcity of timber, the great expense and transient nature of fences. Verily, we need line upon line. With this view of the subject, we copy the following article from the Germantown Telegraph, a paper, by the way, that has a most excellent agricultural department, and from which we frequently copy very instructive articles: —

Mr. Freas: I have frequently seen it asserted in the agricultural journals and other papers, that fence posts, by being inverted, last much longer, and are more durable in every description of soil, than when set in the ordinary way. The experiments and *facts* adduced in support of this position, have accumulated so fast of late, that it appears to me the most sceptical must waver under so vast a weight of unimpeachable testimony. In my own experience, nothing calculated either to confirm or confute this theory has yet occurred; but I have the written testimony of several enlightened friends to corroborate its correctness. A neighbor of mine, who, some years since, resided in one of the New England States, informed me recently that he had occasion, while there, to build a line of fence, on a cross road, dividing his estate, and that, having heard of the superior durability of posts when inserted in this way, he undertook to test the theory, and for this purpose set every other post (they were of white oak) with top down. This he thinks was in 1830 or 1831. In visiting his old homestead last autumn, he had the curiosity to inspect this fence, and to his surprise found that those posts which had been set in an inverted order, were, to all appearance, sound and good, while those which had been set with the butts down were, in almost every instance, decayed. In some few instances it had been necessary to replace the latter, and those which had not been replaced were so rotten that a slight concussion would have been sufficient to break them at the surface. Another friend, twenty-one years since, in the same state, set two chestnut posts for the purpose of hanging a gate. Three years since, one of these posts, which had been placed in the soil with the butt end down, was examined, and found to be too much decayed to subserve any longer the end for which it was designed; while the other, set with the top end in the soil, scarcely exhibited any appearance of rot. On the same farm he also built a line of stake and board fence, one half of which he built with the stakes inverted. This half of the line remained perfectly erect and the stakes sound for a

period of four years; the other part, where the stakes were inserted in the ordinary way, required resharpening the second spring. Such testimony, coming as it does from valuable sources, ought at least to have some weight in our minds; and even though it should fail to produce actual conviction, it ought to induce us to make experiments, by which, ultimately, we could not fail of arriving at the truth. By charring slightly the surface of wood intended to be inhumed in the soil, either for fencing or other purposes, its durability is greatly increased. Posts, so prepared, last a long time; so also do stakes.

A MONTGOMERY COUNTY FARMER.

Dec. 1, 1849.

AGRICULTURAL EDUCATION.

[Concluded from p. 42.]

Jan. 29, at the agricultural meeting, Hon. Mr. Daggett in the chair, the discussion of this subject was continued.

Hon. M. P. Wilder commenced the discussion with an ably written and elaborate discourse. He spoke of the importance of agricultural education, he alluded to various agricultural schools in Europe, and he thought that some of them might serve as models by modifying them so that they would be *American*, adapted to our climate and wants. He suggested, that if a school with a model farm was established at an expense of $100,000, or $150,000, it would then support itself with various professorships and good practical cultivators. He said that periodicals had done much, and were destined to do more, by awakening inquiry and communicating information, and the same effect is also produced by agricultural exhibitions; and much may be done by agricultural books and libraries. Arrangements may be made in our Normal schools to fit teachers to give instruction in this important branch in our common schools.

Mr. Buckminister, of the Ploughman, said that we must not begin on too large a scale. If the farm is too extensive, it will grow up to weeds, the fences will be neglected, and the cattle will all run together. In establishing an agricultural institution, it should not be built so high that only a few can stand on it. It must be within the reach of those in common circumstances. We need more information in botany and other sciences. An agricultural institution should be on the plan of a manual labor school. Those who attend our colleges learn but little that fits them for the practical purposes of life, and for want of exercise their health is destroyed.

John W. Proctor, Esq., president of the Essex Agricultural Society, sent the following communication on this subject, which was read before the meeting: —

I hoped to be present at the discussion of the question, How can the state best subserve the interests of the farmer? Discussions of this kind cannot fail to be productive of benefit. The people need only to be informed of what is proper to be done, and the means will readily be at command, to insure its being accomplished. What praiseworthy object was ever commenced by Massachusetts, that she failed to complete?

When the executives of New York and Massachusetts, as well as the executive of the nation, all join with one accord to advance the education of the farmer, who can doubt there will be a cordial response from the people? Will the farmers hesitate in providing for themselves, when all others are anxious it should be done? The proposition admits of but one reply.

I hoped to see some definite plan of action submitted for consideration. I am aware it is much easier to speak in general terms, than to propose any thing definite, that shall be free from exception. But until this is done, very little progress will be made.

I know it is sometimes said, that the state has been munificent in her appropriations to *other professions* and *other employments*, but has done nothing, or comparatively nothing, for the farmer. I do not so understand the facts. I think Massachusetts has done much for the promotion of agricultural science, in the liberal encouragement she has given to agricultural societies; and through the medium of these, much for the instruction of the farmer. I think that kind of knowledge which is elicited by our own efforts, and matured by our own experience, is always the most valuable and abiding. Has not the state, within the last thirty years, appropriated at least, $200,000 for this purpose? Is it right to disregard what has been done? Should we not be grateful for favors received, and thereby show ourselves worthy of others to be bestowed?

How can we do better than to follow the lead of the intelligent state of New York, in investigating this matter? The first movement there was the appointment of an intelligent commission, selected from different sections of the state, to frame a plan of action, and report to the legislature. Such a plan has already been reported, and is now before them for consideration. With such modifications as our climate and condition may demand, may it not be worthy of our consideration also? I do not mean to say that Massachusetts should adopt the same, or a similar one to that of New York; but I do say, that the course there taken seems to be wise and judicious, and the most eligible way of devising a successful mode of operation.

First and *foremost*, in any movement of the kind, it is necessary to satisfy the people of its *feasibility* and *utility*. An agricultural enterprise should be strictly *practical*, not *speculative*. If overloaded with fanciful theories, it will not be sustained. It must be within the *comprehension*, to command the *approbation*, of the farmers.

For instance, if an attempt should be made to carry on an experimental farm, by the application of some chemical compounds, or new-modelled manure, exclusive entirely of the ordinary materials and modes of manuring, — such an attempt would fail to find favor with most of our farmers. A school thus managed would not be approved. Preëxisting notions and prejudices must to some extent be regarded. The practical farmer has many valuable rules of action in his operations; though not always ready to give an intelligible explanation of these rules. By force of habit he uses them, and acquires confidence in their use. It is therefore of the first importance to secure his favorable opinion, that he may be induced to permit his son to submit to the proposed system of education. The sons of good farmers will be found the best materials from which good farmers can be made. City notions and genteel accomplishments are of little value on the farm. They had better not be learned.

How can the state most satisfactorily make appropriations for the benefit of the farmer? *Three modes* have occurred to my mind.

1. By the establishment of a Central School, with an extensive experimental farm attached; on which, one half of the term of attendance of pupils, at least, shall be applied to labor.

The first cost of the land, buildings and fixtures, on such a farm, should be met by the state. The compensation and support of the teachers should be met in the same manner. May we not suppose, that an establishment thus provided, skilfully and economically conducted, will sustain itself? That kind of farming which will not stand alone, when thus supported, will scarcely be worthy of being learned.

The greatest objection to this plan is the limitation of its use, and its inadequacy to the purpose. With three hundred towns in the commonwealth, it would be hardly possible to qualify more than one farmer for each town in a year, after the system is fairly in operation. As many as this would be wanted to teach others, to say nothing of practical operations needed.

2. The establishment of such schools in every agricultural county of the state — possibly the ingrafting of them on one or more of the existing institutions. In the county of Essex, in more than one instance, has this already been attempted. We remember, a few years since, an attempt was made to connect an agricultural department with Phillips Academy at Andover. A professor of high reputation and thorough science was appointed. The Seminary is surrounded with good culturists, and is munificently endowed. But no beneficial influence on farming has yet been made apparent. Dummer Academy, at Newbury, possesses an extensive farm of three hundred acres, specially devoted to this purpose, and has been in operation for sixty years, or more; but we have yet to learn that her sons have manifested any superiority of agricultural acquirements. The fact is, there is something in the atmosphere of a literary institution, that casts *a mildew* upon every thing agricultural about it. Where literary and scientific attainments are the first object in view, the practical arts will rarely flourish. The literary scholar is always inclined to look down upon the laboring scholar; and while this is so, the laborer should never be doomed to be exposed to such humiliating influences.

3. The introduction of the elements of agricultural and horticultural science into our public schools. This has, for a long time, been deemed a desideratum in the requirements at these schools. Every session of our legislature, propositions are made for the introduction into our public schools of some new study, valuable without doubt, in some points of view; but who has ever presumed to offer a resolution that the elements of agricultural science shall be attended to in these schools? What committee, when examining their teachers, has ever inquired of them as to the constituents of soils, and the improvements that will result from their proper combination? Are these inquiries unbecoming their attention? If they are, then is the science of agriculture unworthy to be learned.

The difficulty mainly lies in the combination of *thought* with *action*, *theory* with *practice*. Both are valuable in themselves; but when properly compounded, the virtues of the mixture are wonderfully increased. This is the chemical treasure to which his Excellency so happily alludes. This is the Yankee gold that surpasses that of California; saving all impediments in its acquisition.

Mr. Teschmacher, of Boston, who is distinguished for his knowledge in botany and chemistry, and the application of these sciences to practical purposes, made some remarks on the wonderful effects of science in the improvement of agriculture. He alluded to the discovery of Dr. Hayes, (see p. 68,) not being aware that Mr. Calhoun had a communication from that gentleman. From this discovery he showed that Science was shedding her light upon agriculture, and those who were well educated and skilled in the sciences, would apply their intelligence advantageously to the cultivation of the soil, and management of rural affairs.

Mr. Calhoun remarked that the extensive plan contemplated by some gentlemen for an agricultural school seemed adapted to those who had long pockets well filled, rather than for those who had empty pockets. He would have a school on a moderate scale, for the accommodation of those who have heads and hearts susceptible of improvement if means of education are within their reach. The fact is well established that the sciences conduce to agricultural improvement, and that an education for the purposes of farming is essential to success. Let this be urged upon the consideration of the legislature, and a reasonable sum will doubtless be granted, and some plan devised to accomplish the desirable object of establishing means of education.

Captain Otis Bingham, of Westborough, thought that if a school was established, it should be on a moderate scale, so as to allow all classes to share in its advantages. He thought the design seemed to be, to have a school on a plan to make "gentlemen farmers." He then made some remarks on some gentlemen who at cattle shows, and on other occasions, spoke highly of farmers, and extolled them as a fine class, but, on meeting these same farmers in a plain garb, they would hardly notice them; and while recommending farming as the best and most profitable business, they were educating their sons for other professions. He hoped, if an agricultural institution was established, it would be placed under good practical men, and not under the supervision of those who could not manage their own farms to advantage. It should be within the means of those in common circumstances.

ORIGIN OF VARIOUS PLANTS.

FROM THE GERMAN.

Wheat was brought from the central table land of Thibet, where its representative yet exists as a grass, with small mealy seeds.

Rye exists wild in Siberia.

Oats wild in North Africa.

Barley exists in the mountains of Himalaya.

Millet, one species is a native of India, another of Egypt and Abyssinia.

Maize was brought from America.

Canary seed from the Canary Islands.

Rice from South Africa, whence it was taken to India, and thence to Europe and America.

Peas are of an unknown origin.

Lentil grows wild on the shore of the Mediterranean.

Vetches are natives of Germany.

Chick Pea was brought from the South of Europe.

The Garden Bean from the East Indies.

The Horse Bean from the Caspian Sea.

Buckwheat came originally from Siberia and Tartary.

Rape seed and Cabbage grow wild in Sicily and Naples.

The Poppy was brought from the East.

The Sunflower from Peru.

The Lupine from the Levant.

Flax, or Linseed, is in Southern Europe a weed in the ordinary grain crops.

Hemp is a native of Persia and the East Indies.

The Garden Cress out of Egypt and the east.

The Zealand Flax and Syrian Swallow show their origin by their names.

The Nettle, which sometimes furnishes fibres of spinning, is a native of Europe.

Woad is a native of Europe.

Madder came from the east.

Dyer's Weed grows in southern Germany.

Safflower came from Egypt.

Dill is an eastern plant.

Hops came to perfection as a wild plant in Germany.

Mustard and Carraway seed the same.

Anise was brought from Egypt and the Grecian Archipelago.

Coriander grows wild near the Mediterranean.

Saffron came from the Levant.

The Onion out of Egypt.

Horse Radish from the south of Europe.

Chickory grows wild in Germany.

Tobacco is a native of Virginia, and Tobago, another species, has also been found wild in Asia.

Fuller's Teasel grows wild in southern Europe.

Lucerne is a native of Sicily.

Spurry is a European plant.

The Gourd is probably an eastern plant.

The Potato is a well known native of Peru and Mexico.

The Jerusalem Artichoke is a Brazilian product.

Turnips and Mangold Wurzel came from the shores of the Mediterranean.

Kohlrabi and White Turnip are natives of Germany.

The Carrot is by some supposed to have been brought from Asia, but others maintain it to be a native of the same country as the Turnip.

The Parsnip is supposed also to be a native of the same place.

Spinnach is attributed to Arabia.

White Millet to Greece.

The Radish to China and Japan.

The Cucumber to the East Indies.

Parsley grows in Sardinia.

Tarragon in Central Asia.

Celery in Germany.

OF TREES AND SHRUBS.

The Currant and Gooseberry came from southern Europe.

The Pear and Apple are likewise European plants.

The Cherry, Plum, Olive, and Almond, came from Asia Minor.

The Mulberry Tree from Persia.

The Walnut and Peach from the same country.

The Quince from the Island of Crete.

The Citron from Media.

The Chestnut from Italy.

The Pine is a native of America.

Horse Chestnut from Thibet.

The Whortleberry is a native of both Asia and Europe.

The Cranberry of Europe and America.

DRAINING AND SUBSOILING.

ESTEEMED FRIEND: I drained, last April, about four acres of hard clay bottom, an account of which I sent to the Working Farmer. This land was well manured, part of it subsoiled, and all planted in corn. The early part of the season was wet and cold, and there was some difficulty in getting the seed in in time. After it came up, it lingered until the warm weather arrived, and then took a vigorous start, and continued to improve rapidly until the crop came to maturity, which proved to be in quantity far beyond my expectations.

An acre that was drained, surface ploughed, and subsoiled, produced eighty-six and one half double bushels of ears of sound corn. An acre that was drained and worked in the usual way, produced eighty bushels. An acre adjoining the drained part, of about the same quality of land but not so flat, and of course better calculated to raise a crop, produced with the same manure and tillage, forty-one and one half bushels.

The result of this experiment surprised me very much. I was not prepared to find such a difference in the bushel from draining and subsoiling alone, and the draining but half finished. The drains were made thirty-three feet apart, as I intended at some future time to double their number.

It now appears that when the draining is finished, which will be at a cost of about $30 per acre, and the ground completely subsoiled, it will not be an extravagant calculation to expect one hundred bushels of corn per acre, and other crops in proportion, if the land is well manured and cultivated.

The cost of draining can be considerably reduced by using pipes of burnt clay, and an instrument for digging the drains described in the Working Farmer, one of which I have had made, and intend to use next spring. The result of my efforts I may communicate to the public, for fertilizing this heretofore neglected kind of land seems to be so important an operation that all cultivators of it should be made acquainted with these facts.

These four acres one of my neighbors considered as "a cold, dishy kind of land, so flat the water would not run off"; and even if it would, the soil was so poor that nothing could grow upon it but swamp grass;" and when he saw the number of hands employed in draining it, he enquired whether I thought the produce would pay the expense.

The outlay of money commenced in April, and now, in December the capital is all returned, with seven per cent. interest, and the land in a highly improved condition.

This one experiment is, of course, insufficient to establish a rate of profits for draining and subsoiling, but it certainly offers strong inducements to persevere in this mode of treating all such comparatively worthless parts of our land.

There are some reasons for believing that the result of this experiment is not greater than may be expected from other land similarly situated.

This cold, wet kind of soil, upon which none of the small grains have ever grown to any extent, has in it a large stock of food for plants, ready to be taken up whenever the soil is divided so as to admit their roots to run easily through it, and nothing can so completely do this as a thorough draining and subsoiling.

The rains, passing through the subsoil into the drains, perhaps, leave all the ammonia they contain in the land, and thus a fertilizer is introduced to the roots of the plants. Again, by draining and ploughing, the roots of plants have doubled the chance to extend their fibres and increase their strength.

These facts strengthen the opinion that draining and subsoiling have been the principle agents in producing those extraordinary crops, and that similar results may be expected from land of a like quality, treated in a like manner. B. WEBB.

WILMINGTON, 10*th* 12 *Mo.*, 1849.

— *The Working Farmer.*

A preacher, who advised a drowsy hearer to take a pinch of snuff occasionally at service, to keep him awake, was advised in return, to put the snuff in his sermon.

NOTICES OF PUBLICATIONS.

Pittsburg (Pa.) Saturday Visitor. — This is a literary and miscellaneous family newspaper, conducted by Mrs. Jane G. Swisshelm, and her brother-in-law, Wm. Swisshelm, a young gentleman of talent, who has lately assumed this station. The presiding genius of this journal is Mrs. S., who is not only one of the most gifted women of the age, but among the ablest editors in the country. Her versatility of powers is remarkable. She wields her pen with a master hand on every subject that comes under her cognizance, whether it be the most minute operation or trifling concern in domestic affairs, the training of children, the rights of women, the grave topics of theology and metaphysics, or the momentous subjects on which hang a nation's destiny. Without fear or favor, she enters upon the investigation of her subject with all her might, clearing away the rubbish of folly, error, and prejudice, though it be the accumulation of ages; fashion's whims and "controlling will" she disobeys, and even the sanction of great names is dashed away with a single stroke of the pen; while with a keen eye and nice discrimination, she aims to present the naked truth, and supports her position with the most powerful logic and convincing argument. Her independence in frankly expressing her views, though in opposition to time-honored opinions, the popular will, the greatest dignitaries, or even all the world beside, is a leading characteristic; and originality is also a distinguishing trait of her mind. Her independence is worthy the attention of many editors, whose means of usefulness, in their prominent stations, are greatly circumscribed by their servility. She goes for reforms and human progress; and those who cannot agree with her in every movement, must admire the cogent reasoning of an original and master genius. Her style is natural, easy, spirited, and strong, occasionally spiced with wit and humor. We shall give, under our Domestic Department, articles from Mrs. S., on domestic economy, training of children, the education and accomplishments of daughters, &c.; and we take this mode to introduce this distinguished lady, and champion of her sex, to the particular notice of our readers. The Visitor is published weekly at $1,50 a year.

Transactions of the Essex Agricultural Society. — We received this work several weeks since, by the politeness of Mr. Proctor, the president of the society, and we have published from it a very instructive article on the management of the dairy. Besides the usual reports and the annual address, these transactions annually contain elaborate essays and reports on various subjects, which render it one of the most valuable works on agriculture.

Abstracts of Returns of the Keepers of Jails, and Overseers of the Houses of Correction, for 1849.

ACKNOWLEDGMENTS.

We have received from Messrs. Gwyneth & Tolman, Portland, Me., specimens of apples raised by Mr. Ballard, Westbrook, said to be from a tree that was never budded or grafted. We think there must be a mistake as to the condition of the tree, for this is a Baldwin apple, having that modification that brings it under the synonymn of this fruit called Late Baldwin, which is quite common in Maine. This modification of the Baldwin is of a yellow and red color in the cavity and around it, like the Esopus Spitzenberg. The stem also resembles the Spitzenberg. The common Baldwin is usually russety in the cavity.

A month or two ago, we received specimens of apples of Mr. J. Davenport, Brookline, called in that town the Washington Pearmain. It is identical with the Old Nonsuch, a fine fruit when in perfection, but it is very liable to be imperfect, and not worthy of cultivation in this region, excepting with the amateur who would have many varieties. It succeeds better in new regions. It is rather popular in some sections of New York, where it is cultivated under the name of Red Canada, and where some fruit-growers think it is as good as the Northern Spy; but we think that, from the peculiar freshness of the Spy, it is far superior to the Nonsuch in quality.

THE PILGRIM FATHERS.

BY REV. JOHN PIERPONT.

The Pilgrim Fathers, where are they?
The waves that brought them o'er
Still roll in the bay, and throw their spray
As they break along the shore;
Still roll in the bay, as they rolled that day,
When the Mayflower moored below,
When the sea around was black with storms,
And white the shore with snow.

* * * * * *

The Pilgrim *spirit* has not fled;
It walks in noon's broad light;
And it watches the bed of the glorious dead,
With their holy stars, by night;
It watches the bed of the brave who have bled,
And shall guard this ice-bound shore,
Till the waves of the bay, where the Mayflower lay,
Shall foam and freeze no more.

On Sterne's entering a coffee room at York, a Mr. A., staring him full in the face, said, "I hate a parson." Upon which Sterne rejoined, "And so, sir, does my dog, for, as soon as I put on my gown and cassock, he falls a barking."

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own. — JOHNSON.

VOL. II. SATURDAY, MARCH 2, 1850. NO. 5.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

NORTH AMERICAN POMOLOGICAL CONVENTION.

THE report of the proceedings of this convention is very interesting and instructive, as it contains the discussions and different opinions on various kinds of fruit. But the mere decisions of such bodies of cultivators, from various sections of an extensive country, embracing different climates and locations, are of but very little practical utility to the cultivator. For instance, a variety of fruit may be thoroughly tested and found to be worthless in New England, and in a convention the delegation from this section might condemn it, and yet, as the majority of the convention may be from the Middle and Western States, where that fruit flourishes well, it may be recommended as first rate. This illustration shows that the decisions of such bodies of men, however skilful, are not to be relied on.

At this convention, a committee was appointed to recommend fruits for discussion. In some cases, their recommendation passed without opposition or comment. In other cases, members of the convention opposed the views of the committee, or made confirmatory remarks.

APPLES.

We present our readers with the list of fruits offered by the committee, and their opinion of them, and briefly some of the remarks on them. Sometimes we make comments of our own — for some very important considerations have been entirely neglected in the discussions. The committee report —

Roxbury Russet — first rate. — No objection was offered to their opinion. In this section, where this fruit is cultivated more extensively than in any other region, many are discarding it as very uncertain.

Hawthornden — first rate for cooking — second quality — productive and handsome. — A number of members supported the views of the committee. Most of the apples called Hawthornden in this section, are the Maiden's Blush, and we have no doubt that the same mistake prevails in other sections.

Maiden's Blush — second rate — very beautiful. — It was remarked that it bore well that season, while most kinds had failed, and that it resembled the Hawthornden.

Autumn Swaar. — A member remarked that it was a handsome second rate fruit.

Rambo. — The president, Mr. Kennicott, said that it was the fall and early winter apple of Illinois. Mr. Batcham said that in Ohio it was esteemed higher than any other variety.

Rawle's Janette. — The president said it was much esteemed in his region. An excellent keeper. Mr. Batcham said that it was admirably adapted to the valleys of Southern Ohio, where other fruits were liable to decay from early ripening. Mr. Byram said that it was one of their standard fruits in Kentucky. He had kept specimens till the 4th of August.

PEARS.

Fondante d'Automne — first rate.

Duchesse d'Angouleme — second rate. — Mr. Hovey said that it could not have been seen in its best condition, to have been presented as second rate. Mr. Barry, one of the committee, said that it was not first rate in quality. A rather long discussion followed on this variety, some speakers regarding it as first rate, others as second rate, which shows the absurdity of arranging fruits under a gradation, with the grades so wide apart as first, second, and third rate. There is so wide a space between first and second rate, that many fruits are intermediate between them; and this pear is one of that class; and pomologists might discuss the subject a whole year, and not agree to call it first or second rate, when it is intermediate between these wide grades. As well might they fix on a mode of counting 1, 5, 10, 15, 20, &c., and thus dispute about arranging 2 or 3 with 1 or 5. Fruits should be arranged from 1 to 10. Then what is called second rate would be about 5 or 6, and third rate, as now reckoned, would be 9 or 10.

Gansell's Bergamot — first rate. — Several members said that it was a bad grower and poor bearer; the fruit, when in perfection, was first rate, but it was uncertain in some locations.

Napoleon — good second rate.

St. Ghislain. — Two of the committee called it first rate, and one regarded it as second rate. Mr. Barry

thought it was unsurpassable. Mr. Hovey thought it was first rate. Mr. Downing, one of the committee, had never seen it first rate. Different members expressed various views of this fruit, but generally they were favorable.

Buffum. — First rate by one of the committee, second rate by the other two. Different views were expressed concerning this fruit. As the Buffum is a native of New England, and generally good and salable, it is one of the best pears for orchard culture in this section; and it will doubtless do much better farther north than foreign varieties.

Long Green — second rate. — Mr. Hovey said that he considered it first rate, but not among the very best. Mr. Allen, of Oswego, said that it was good, but not always first rate.

Julienne — second rate. — Some speakers remarked that sometimes, but rarely, it was nearly first rate.

Frederick of Wertemburg — second rate. — Several speakers made remarks on this, showing that it varied from second rate, and sometimes almost first rate, to worthless.

Fulton. — First rate by two of the committee, second rate by one. Mr. Barry considered it first rate and it did well in the eastern and northern regions of the country. Mr. Hovey considered it nearly first rate. We have no doubt that for the north this pear is one of the most valuable varieties, as it originated in Maine.

Passe Colmar — second rate. — Several members of the convention spoke highly of this pear, and ranked it as first rate, when carefully ripened. Others regarded it as variable.

Beurre Diel — nearly always first rate. — In New England, this pear is very uncertain. In warm seasons it succeeds well in favorable locations, and is very fine.

Beurre d'Amalis — second rate.

Dix — first rate. — We are astonished in finding this pear highly commended by the convention, and yet nothing said of its great liability to crack, which it does in most cases.

Easter Beurre — second rate. — Mr. Hovey remarked that if it was well grown and properly ripened, it was the best winter pear. Others spoke unfavorably of it. Mr. Barry said that it was one of the best of pears on the quince, but not first rate on the pear stock.

Bleecker's Meadow — second rate. — Some speakers thought it was only second or third rate. As this pear is one of the greatest of growers, an early and abundant bearer, and one of the very finest pears for cooking, this valuable quality should have been considered.

Beurre Bosc. — Dr. Wendell said that it was first rate in every respect. We regard this as one of the very best pears in quality; but as it is a moderate grower, and a poor or moderate bearer, it is not profitable for the market.

This report is embellished with a frontispiece of the Kirtland pear, a seedling from Prof. J. V. Kirtland, Cleveland, Ohio. It is of a medial or rather small size; form roundish-ovate; of a rich crimson russet, varying to dull green; flesh of a fine texture, melting, rich, juicy; flavor sweet, aromatic, and delicious. Ripe in September. This seedling was raised by H. T. Kirtland, from seeds of the Seckel, presented by his brother, Prof. J. P. K. It is said to excel the Seckel in hardiness and productiveness, and some consider it superior in quality.

PLUMS.

Smith's Orleans — first rate.

Duane's Purple — second rate.

Lawrence's Favorite — first rate.

Long Scarlet — second rate, but fine for cooking.

Lucomb's Nonsuch — nearly first rate. — Mr. David Thomas counted it second rate. Mr. Hovey considered it as good in flavor for eating as Smith's Orleans. It was said not to be a good bearer, and rotted on the tree. Mr. Saul, of Newburg, said that the specimens presented were not fair ones; the plum was first rate as to its eating qualities. It was a large fruit, and a good though not profuse bearer, and good grower.

The convention did not discuss the merits of other fruits.

FRUITS AND FRUIT TREES.

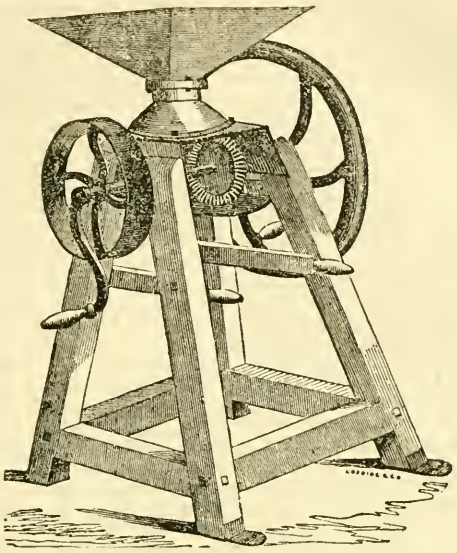
[Continued from p. 58.]

Feb. 13th, at the agricultural meeting, the discussion of this subject was continued; but as a large part of the time was taken up with a controversy in regard to a report, there was but little said on the subject.

Major Wheeler, of Framingham, spoke in favor of raising more apples, as this was an excellent fruit, and we had the finest climate in the world for it. He preferred setting large trees.

Captain George Pierce, of West Cambridge, said that the peach-tree borer would stand scalding-hot water, and he thought that they would stand lye also; but by making a basin around the tree, and pouring in six quarts of hot water, he generally destroyed them. He advocated the high culture of fruit trees, and raising no crops among them after they were large. From four apples-trees set in 1839, he gathered last season twenty-nine barrels of choice fruit, twenty barrels of which he sold for $100. He had sold $997 worth of fruit, the past season, from eight acres of land. He depended on good culture, rather than washes, to keep his trees in good condition. He said that it was a disadvantage to have the limbs of fruit trees come out high, and leave naked trunks exposed to the hot sun. As to trimming high to have the limbs above the reach of cattle, animals should never be allowed to go among trees.

Mr. French, of Braintree, said that, although he had succeeded tolerably well with trees in grass in some cases, where the land was in high condition, yet he thought that the land among the trees should be well cultivated. Many set trees too low in the soil. He advised setting near the surface, and the roots will run as low as is necessary.



HAND AND HORSE GRAIN MILL.

This mill is very efficient and durable, and may be operated by hand or horse power, or by steam, water, or wind. It may be regulated so as to produce fine meal, or only for cracking grain, or making coarse meal for stock. It is simple in its operation, not liable to derangement, and when the grinding plates become worn, they can be replaced by new ones at a very small expense.

In many parts of the country, farmers are not well accommodated with grist mills in their vicinity, and these mills would be very advantageous. There is a great profit in cracking corn and oats before feeding them to stock; and with this machine it may be done at leisure, so that the cost will frequently be but a trifle. The cost of these mills is from twenty to thirty dollars.

PEARS ON THE SHAD BUSH.

Mr. George Fitch, of South Bridgton, Me., informs us that he set some pear scions, last spring, in the Shad Bush, or June Berry, (generally called Sugar Plum, or Sugar Pear, in Maine,) which flourished tolerably well. He also set pear scions in the White Thorn. They all did well, and one, in its native locality, made an exceedingly large growth. Two scions were set in this stock; the main branch of one grew five feet and ten inches in length. The growth of both scions, with their branches, was twenty-three feet.

REVIEW OF WOOL MARKET FOR JANUARY.

A short run among the manufacturers and dealers has convinced us that all our previous estimates of the amount of wool on hand is perfectly correct. A few manufacturers have a tolerable supply on hand, but as a general thing, not more than enough to stand them in hand until the next clip, even if it comes into market early. The large majority have not enough to keep them fully supplied for only a short time. The dealers have but light stocks on hand, and we are still of the opinion that all the wool in the country might be worked up by March, if it were an object.

The present high price of coarse and medium wools is bringing in a large amount of foreign, and we should not be surprised if the importations this year reached at least twenty millions. Fine wool continues depressed, and will not bring its relative value, though it is doing better than during the last month. One drawback upon the fine wool market, has been in the large quantity brought upon the market from the Springfield depôt. This once disposed of, and we hope the market will be more firm and steady.

Sales are making here of prime Saxony, at 50 @ 56 cents; full-blood, 45 @ 48 cents; grade Saxony and Merino, 38 @ 42 cents; common and medium grades, 33 @ 38 cents. These prices vary with the necessity of the manufacturers.

Astor House, New York, *Jan.* 24, 1850.
— *Editorial Correspondence of the Wool-Grower.*

Foreign Wool Market. — We also copy from the Wool-Grower the following remarks on the wool market in foreign countries: —

There is a considerable rise and a brisk business in the wool markets of the old country. And indeed it cannot be otherwise. The market has been greatly depressed by the political disturbances Western Europe has been laboring under for the last two years, and trade and confidence have been shaken to the utmost. Now peace and quiet have been restored, at least for a while, and buyers, reassured by these more favorable signs of the times, appear again in the market, and business brightens up. Another cause of the renewed activity of the purchasers of wool, and their eagerness for clearing the market, is the almost entire destruction of most of the improved sheep-folds in Hungary, which used to supply the markets of the east, as Breslau and Berlin, with the choicest lots. Every thing that could be made use of, even if inferior to the last-mentioned wools, has therefore been sought for; and hence the comparative higher prices and much activity in the wool market.

For the New England Farmer.

FOREST TREES.

Mr. Cole: When this country was new, but little regard was paid to the preservation of timber; as the chief object of the settlers was to clear the land, and hasten it as fast as possible into a state of cultivation. The market prices also of Montreal, and New York, have made heavy drafts upon us, so much so that timber, both for building and fuel, is becoming scarce and dear among us, and now the railroads are calling for a share of what is left along on their lines. I have felt aware of this state of things for many years, with the exception of the railroads, the rapid advances of which have surprised us all. More than twenty years ago my attention was directed to this point by Fessenden's N. E. Farmer, the reading of which was worth more to me than ten times its cost, not only on this subject, but a thousand others. Thus, in "foreseeing the evil I hid myself." It has been my practice for many years, to allow the second growth of timber to come along after the axe, where we get our yearly supply of firewood, and as soon as the young timber is of sufficient size to prune, I cut out such as I please to destroy, and trim up the best and most thrifty trees about six feet from the ground, leaving perhaps from eight hundred to a thousand trees to the acre. I now have seven or eight acres of land in one parcel, producing a dense growth of second crop timber and wood, from one to seventeen years' growth; as this timber is all in one piece, it looks most beautifully as far as it has been trimmed up, and thinned out.

One part of it, about two acres, was cleared in 1814; a crop of wheat taken in 1815, then pastured until about 1833, when I discovered little white pine bushes coming up very thick all over the land. These were allowed to stand unmolested by the axe until 1839, at which time we thinned out the thickest of the bushes, and trimmed up the rest about six feet from the ground, leaving about eight hundred trees to the acre. Now, on going into this forest, it seems hardly possible that so great a quantity of timber could have grown there in so short a time. It is believed that there is more timber now already grown on this land, than was originally on it, setting aside a few large pines. My intention is to thin out this piece so as to leave about four hundred trees to the acre, and trim up at least twenty feet this season. This is what we call *upland;* timber formerly was chiefly hard wood. Our lowlands or swamps we manage in the same way, except we omit trimming, and let it take care of itself; we cut all clean as we go.

I have observed where timber in the swamp was originally Cedar and Pine, the second growth is chiefly Tamarack, [the American Larch, Hackmatack. — Ed.,] some Cedar, but no Pine; and on upland, where hard wood formerly grew, now some other varieties occupy their places. For instance, one piece, where the hard wood, Beech, Maple, &c., covered the land, now, after the land was burned over in a dry time, and fire destroyed the whole, a crop of Pigeon Cherries come up very thick all over the land where a Cherry tree was never before discovered.

In another instance, I observed where the land was originally covered by hard wood, White Pine is its second growth, and another, in the place of Pine and Hemlock, Maple has come up in great abundance; I have a lot of these, about three hundred trees, on some less than half an acre, growing most luxuriantly. It is proper to remark, however, that new varieties of timber do not always occupy the land where the original is cut off. An instance of this kind may be seen in Cornwall, a few rods distant from my own land, where the timber was all Cedar, and all taken off twenty-five or thirty years ago; this is all Cedar now, and is so thick that a man cannot pass between the trees in some places on account of their nearness to each other.

It is believed that fifteen acres of good wood land properly managed will be amply sufficient for timber, boards, &c., to keep buildings in repair, and firewood for a farm for ages to come. But I may not have adopted the best plan to accomplish the object, and if you or any of your readers can suggest any improvement on the above plan, you will greatly oblige a constant reader and lover of improvement.

Respectfully yours,

JOHN M. WEEKS.

West Farms, near Middlebury, Vt., *Feb.* 7, 1850.

For the New England Farmer.

POULTRY.

Mr. Cole: We well recollect the time when carrying eggs to market was called rather a small business, and called forth sneers from the merchant's wife, the lawyer's spouse, and indeed many others, who by the by were frequently willing, if they could not get them without, to ride round, call at the farmer's an hour, "purchase a few eggs just for present use," and carry them home themselves. Why such an idea should prevail we never could divine, for it always looked as big to us as selling fishhooks three for two cents, candy for a cent a stick, or measuring tape by the pennyworth. But it is a fact, which in our opinion is now settled beyond all controversy, that there is no stock that the farmer keeps, which pays so well in proportion to the investment and care bestowed as poultry. In order, however, to realize a full profit, care must be taken in this as in all kinds of business. Hence, in order to have hens lay well in winter, the season when eggs sell at the highest prices, it is necessary to furnish them with a warm, dry room, where the vicissitudes of the weather and storms will not reach them. Some have been so careful in this matter as to dig into the sides of steep banks and form rooms for them there, where they can have proper heat and always a supply of earth for wallowing, &c. These places are secured by doors in front, in which glass may be placed to give sufficient light and heat from the sun. In mild weather they may be let out, but in storms and cold the closer they are kept the better.

Next to bodily protection, food demands attention. It is profitable, and no mistake about it, to feed hens with animal food in winter. In the vicinity of cities and large towns, this can always be furnished in abundant quantities, and at cheap rates; warm food, such as puddings or boiled meal, baked or boiled potatoes, is also beneficial. As a substitute for lime, which should always be placed within their reach in liberal quantities, plaster of Paris answers a very good purpose; we have tried it, and seen its effects. Some few weeks since, from some twenty hens we did not get an egg a week; it occurred to us that there was a lack of lime in the henery, and we took a peck of corn and wet it thoroughly, (if it had been soaked it would probably have been better,) and stirred in plaster (ground) as long as it would adhere, and placed this mess before them. Before the corn was consumed we began to have a plenty of eggs, and the laying season is now going on in earnest. Eggs are now worth, here, eighteen cents a dozen, corn sixty-five cents a bushel, and ground plaster seven dollars and fifty cents a ton; so economists can judge whether the hens will pay for their food. Their manure, for any one who has a garden, will nearly or quite pay for the labor, if carefully saved.

Yours truly,

W. BACON.

Richmond, *Feb.* 7, 1850.

For the New England Farmer.

POTATOES.

Mr. Cole: Much has been written, and many theories advanced, upon the cultivation of the potato; and yet, after all that has been done, I think the mass of farmers are in an unsettled state as to the best and most profitable mode to be pursued under all circumstances. There are doubts as to the kind of seed, whether large, middling, or small, should be used, cut or whole; whether to put one, two, or more pieces, or whole potatoes, in a hill; to plant in hills or drills close together, or far apart, in some cases even to four feet; whether to earth up, or leave the ground level, &c., &c., to the end of the chapter. It is not my intention to express an opinion on all the points in this communication, but to mention what appears to me to be *the most important* of all, and state some facts in my own experience, with the hope of calling out others on this subject.

We have probably all noticed that where small potatoes, or seed from the ball, were planted, in a good, favorable soil, which was well adapted to the growth of the potato, the tendency has been to an increase of size, so that from the seed, in two or three years, *large* potatoes have been produced. Potatoes not weighing more than one or two ounces, on such soils, have produced not only *large* potatoes, but *large* crops in a single year. These facts lead me to the conclusion that *the most important point* is to fit the soil in such a manner as that the potato shall find all the elements necessary to its growth, in abundance, within its reach, from the time the first sprout starts until it is ripe. This being the case, and a sufficient amount of moisture being supplied, I apprehend it would make but little difference, providing the planting was early enough, whether a sprout, or *small* or *large* potatoes, or cut potatoes, were used. At any rate, I am fully satisfied there would not be such a diversity in results, in experiments, as we now have. If the foregoing conclusion is correct, then farmers have something to do, in order to go intelligently to work even in the cultivation of the potato. They must know what food it requires, in what proportion their soils are destitute of the necessary food, and supply it. This will bring into active exercise science, experience, and close observation. Certainly, Mr. Editor, farmers have something to do, if they do not mean to be behindhand in their employment.

To those who cannot avail themselves of the aid of science, experience and observation, if attended to, will be of great help.

Several years ago a neighbor of mine gave me a potato of the Carter variety, which is not considered the most prolific, weighing, I think, something less than three quarters of a pound, which I cut into nine pieces, and planted in the garden, in a drill, the pieces ten or twelve inches apart. The yield was thirty-six pounds. After trying a few to test their quality, the remainder, amounting to about thirty pounds, were saved till the next spring, and planted (after having been cut into single eyes) on an old pasture, about three feet apart, one eye in a hill, about one half manured with a small quantity of long manure ploughed under the sward, and the other half without manure, all asked with perhaps a tablespoonful in the hill. The yield from the thirty pounds was full thirty bushels, four eyes selected producing one half bushel of potatoes. That was certainly a great yield, for the amount of seed, for Attleborough. (I do not know but your neighbor of the Ploughman will dispute my measure, but I can assure him it was fair.)

Experience and observation here will lead us to conclude that old pastures are good for potatoes if the location is right. The pasture referred to had not probably been ploughed for forty years, and although it did not produce much feed, yet it was well prepared for the potato crop.

The question may be asked, Why are old pastures so well adapted to the growth of the potato? The answer may be, mainly, Because the ground is well filled with urine, and otherwise well manured by the solid manure from the cattle. There may be other reasons, but these, no doubt, are the principal.

This view of the subject will bring us to the barn, for the application of manure well saturated with urine for our great dependence, to bring about the desired object of fitting the land not only for the potato, but for all our other crops. We have many other helps, but they should not be wholly substituted for this. I find I have hardly touched upon this subject as I intended when I commenced this communication; but if it will bring out the views of others, I shall be satisfied, and I may resume it at some other time. Yours respectfully,

S. M. STANLEY.

West Attleborough, *Feb.* 7, 1850.

Remarks.—We hope that our correspondent will pursue this subject, and give us his views on the effects of hilling potatoes on dry as well as wet land; also on deep and shallow planting, in regard to its effects on the potato rot, and on the amount of the crop. His success in farming gives importance to his views founded on experience.—Ed.

For the New England Farmer.

CLOSE FEEDING.

Mr. Editor: There is no better way of ascertaining and arriving at the fact of a particular case, than by proving it by experience. In this way I have found out that it is an easy matter for a farmer to keep too much stock on his farm for profit. Many farmers labor under a great mistake in thus overstocking their land. A farm that is amply sufficient to keep six cows, and no more, is too often burdened with nearly double that amount; and by so doing, the farmer is not only the loser in a pecuniary point of view, but his farm, the while, is decreasing in value, by too close feeding. A farm that will only keep six cows in good order is not capable of keeping eight in the same condition, without extra feed from the meal chest, and (in my opinion) this will not pay, for the common run of farmers. Nine years ago the coming spring, I commenced farming, and thought I knew something about the business, (although I soon found that I was but a raw hand.)

The first season the farm was managed in partnership; a horse, yoke of oxen, and three cows were kept on the farm, although the horse and oxen were not suffered to graze in the pastures. The three cows paid a fair profit, and kept in good condition. The second year things were managed in pretty much the same way; and the third year I purchased my partner's stock in trade, with the exception of the oxen, and took charge of the whole. I added two cows to my present stock, thinking the more cows, the greater profit. At the end of the year, however, I did not feel satisfied with the profits resulting from my five cows. I accordingly disposed of one of my cows, and on summing up the profits at the end of the next year, I found that the four had yielded a greater profit than the five had done. Concluding in my mind, that if four cows were of more profit than five, on the same principle, three might yield a profit in proportion, (although I find no rule in "Adams" or "Smith" that supports this doctrine,) I accordingly

disposed of another, and by taking a little extra pains with the *three* left, I churned more butter from the three than I had in any preceding year from the four or five, thus proving that it is not the greatest amount of capital invested, that brings in the largest profits.

It is too often the case that farms are overstocked. It is generally thought to be good economy among experienced farmers not to be obliged to turn cattle into mowing lands, although most farmers resort to this practice. Some one says, the more stock the more manure. True; but it is better to buy a load of manure, than a load of hay. An empty barn the first of April has a very bad look with it, and this is oftentimes the result of close feeding. Few farmers prosper who keep more stock than can be kept in good condition on their own premises.

A. TODD.

Smithfield, R. I., *Feb*, 1850.

For the New England Farmer.

THE WEIGHT OF LIVE BEEF CATTLE

May be ascertained by the following rule. Take the girth of the animal just behind the shoulder-blade, and the length from a point on the tail-bone, whence a perpendicular line will just clear the thigh, thence along the back-bone to the foreside of the top of the shoulder-blade. Reduce the girth and length to inches. Multiply the square of the girth by the length, and that product by the decimal .002, which will give the weight, in pounds and decimal parts.

Suppose an ox to measure 7 feet or 84 inches in girth, and 5½ feet or 66 inches in length; then,

The girth 84, multiplied by itself or squared,	7056
Multiplied by the length, 66	66
Product, and solid contents of the ox,	465,696
Multiplied by the decimal,	.002
Gives 931 pounds, the weight of the ox,	931.392

The above rule gives the weight of the meat, hide, and tallow, of oxen having from forty to eighty pounds of rough tallow, cows from thirty to sixty pounds, and two year olds having from fifteen to thirty pounds.

JUVENIS.

For the New England Farmer.

SIZE OF FOWLS.

Mr. Cole: In the "American Union" of the 16th inst., there is a statement of the comparative weight of fowls, in which pullets or hens which weigh seven and eight pounds, and cocks that weighed ten pounds, are spoken of as something remarkable. I have caused some to be weighed, of the kind my son will furnish eggs from, and find Shanghae pullets and hens from stock originally imported by R. B. Forbes, Esq., to weigh six and a half, seven, eight, and nine pounds each. I have also this day weighed my Cochin China cock, a splendid bird, and find the weight to be eleven and one half pounds. He has been shut up in the barn chamber from the first day of December last with five handsome pullets, from which I expect to raise a good stock of chickens, if possible to reserve eggs enough from many pressing demands.

About the middle of March I shall have my poultry in shape to be seen by any who wish to satisfy themselves as to the above statements.

Yours, HOWARD B. COFFIN.

Newton Corner, *Feb.* 20.

For the New England Farmer.

BEARING YEARS OF APPLE-TREES.

Mr. Cole: I have seen a good deal in agricultural papers about apple-trees bearing in odd years. I have been on the farm on which I now live eighteen years. I have one tree of the Baldwin apple, a part of which bears full every year, one part one year, the other the next. I do not now recollect that it has failed of bearing full, one part or the other, for eighteen years. I have a number of trees of the Baldwin apple that bear in odd years, so that I have for a number of years had about two thirds as many apples in odd years as in even years, which, owing to the greater price they bring, makes my orchard about as much profit in odd as in even years.

GEO. FITCH.

South Bridgton, *Jan.* 24, 1850.

Remarks. — There are numerous cases in which part of an apple-tree bears in alternate years, and the other part in the intermediate years. The bearing year of a part of a tree may be fixed on certain years, while the other part bears in different years, on the same principle that any tree bears in certain years and not in others. A blast may come upon the windward side of a tree, owing to heavy storms at the season of blossoming, and change its bearing year on that side; or a hot sun may kill the blossoms, or the organs of the flowers, on the side most exposed to the heat. This prevention of fruit may change the bearing year, as well as picking off the blossoms, or the defoliation of the tree by canker worms or other causes. — Ed.

For the New England Farmer.

MANURES.

Mr. Editor: Having read frequent accounts in your excellent journal the past year, concerning the different modes of preparing and applying different kinds of manures to the soil, I propose to furnish your readers with a small experiment of my own, some four years since. Possessing a field on my farm containing a dozen acres or so, of an alluvial and loamy soil, I had planted of it, the year alluded to, about two acres in Indian corn, and being desirous to lay it down to grass the same fall, I was advised by a young man who worked for me that season, to cut it up and shock it. I did so as early as it would do, and sowed it down to grass and with winter rye, I think about the first of October.

Being made acquainted by *ocular demonstration* with the good results of salt lye upon a piece of land belonging to one of my neighbors, I was induced to try the experiment on a part of my two acres of rye. Accordingly I laid it off into three equal lots. Upon the first I put two loads of salt lye, upon the second I put two loads of night soil, and upon the third lot I spread a moderate amount of meadow muck, which had lain in the barn-yard, in which were kept five cows over night, from the first of June to the time of laying down, at which time it was all lightly ploughed in. Now for the result. That part which received the salt lye was very heavy, and produced much the largest crop of rye. The part that received the meadow muck was next best, being a very fair yield. The part that was dressed with night soil was the poorest, being nothing more than middling. And so have continued the crops of grass every year since, varying in the same proportion.

Now, Mr. Editor, I am not very fond of trying too

many experiments, or theories, or recommending their adoption by others, for the very good reason of my limited knowledge of the cost. I am inclined to think that they who have the least experience in the art, are the most forward, sometimes, in giving instructions to others. Having never farmed it on a very extensive scale, or had that experience which is necessary to constitute a good farmer, I have ever been *cautious* in adopting those experiments, sometimes recommended by that *class* of farmers who are afraid of taking hold of a plough, or shovel, or hoe-handle, without *gloves* on. CAUTION.

Newton Centre, *Feb.*, 1850.

THE USE AND VALUE OF NIGHT SOIL.

That man gets his bones from the rocks and his muscles from the atmosphere, is beyond all doubt. The iron in his blood, and the lime in his teeth, were originally in the soil. But these could not be in his body unless they had previously formed part of his food. And yet we can neither live on air nor on stones. We cannot grow fat upon lime, and iron is positively indigestible in our stomachs. It is by means of the vegetable creation alone that we are enabled to convert the mineral into flesh and blood. The only apparent use of herbs and plants is to change the inorganic earth, air, and water into organic substances fitted for the nutrition of animals. The little lichen, which, by means of the oxalic acid that it secretes, decomposes the rocks to which it clings, and fits their lime for "assimilation" with higher organisms, is, as it were, but the primitive bone-maker of the world. By what subtile transmutation inorganic nature is changed into organic, and dead, inert matter quickened with life, is far beyond us even to conjecture. Suffice it that an express apparatus is required for the process — a special mechanism to convert the "*crust* of the earth," as it is called, into food for man and beast.

Now, in nature every thing moves in a circle — perpetually changing, and yet ever returning to the point whence it started. Our bodies are continually decomposing and recomposing — indeed, the very process of breathing is but one of decomposition. As animals live on vegetables, even so is the refuse of the animal the vegetable's food. The carbonic acid which comes from our lungs, and which is poison for us to inhale, is not only the vital air of plants, but positively their nutriment. With the same wondrous economy that marks all creation, it has been ordained that what is unfitted for the support of the superior organism is of all substances the best adapted to give strength and vigor to the inferior. That which we excrete as pollution to our system, they secrete as nourishment to theirs. Plants are not only Nature's scavengers, but Nature's purifiers. They remove the filth from the earth, as well as disinfect the atmosphere, and fit it to be breathed by a higher order of beings. Without the vegetable creation the animal could neither have been nor be. Plants not only fitted the earth originally for the residence of man and the brute, but to this day they continue to render it habitable to us. For this end their nature has been made the very antithesis of ours. The process by which we live is the process by which they are destroyed. That which supports respiration in us produces putrefaction in them.— What our lungs throw off, their lungs absorb — what our bodies reject, their roots imbibe.

Hence, in order that the balance of waste and supply should be maintained — that the principle of universal compensation should be kept up, and that what is rejected by us should go to the sustenance of plants — nature has given us several instinctive motives to remove our refuse from us. She has not only constituted that which we egest the most loathsome of all things to our senses and imagination, but she has rendered its effluvium highly pernicious to our health — sulphuretted hydrogen being at once the most deleterious and the most offensive of all gases. Consequently, as in other cases where the great law of self-preservation needs to be enforced by special sanctions, nature has made it not only advantageous to us to remove our night-soil to the fields, but positively detrimental to our health, and disgusting to our senses, to keep it in the neighborhood of our houses. — *Eng. Paper.*

THE PARSNIP.

Mr. Editor: Most farmers grow this root as a table luxury, but I have rarely seen it cultivated as a field crop. It is one of the finest and most valuable of vegetables, and in its neglect I behold illustrated the tyranny of custom. There are numberless and cogent arguments capable of being urged in favor of the parsnip. It is not only very easily cultivated, but one of the most nutritive roots that can be cultivated as a winter food for calves, cows, sheep, swine, and indeed, almost every description of domestic animal usually found upon the farm. The soil required for the cultivation of this root, does not vary greatly, in its essential characteristics, from that demanded for the cultivation of the carrot; it should be light, warm, and rather moist, but without liability to parch, and sufficiently rich in decomposing organic matters to insure a healthy development and maturity to the crop. The seed should be sown early, and the surface of the soil closely rolled, or consolidated by some artificial means in order to insure the germination of the seed — a result which may be greatly facilitated by soaking before sowing, in some prepared steep; say rain water in which a small quantity of nitre or saltpetre has been dissolved, or the stale from the barn-yard. As soon as the plants make their appearance, the weeds should be carefully extirpated, and kept down during the season, or until the parsnips have acquired sufficient size to render their presence of little or no injury to the crop. Gypsum, applied in small quantities, at frequent intervals during the vegetable season, acts with highly advantageous effects upon the parsnip, as it does also upon the beet and carrot. If the soil be rich and deep, with a well-graduated supply of moisture, I know of few vegetables which more abundantly repay the labor of the cultivator; and as the plants are seldom attacked by insects, after the first two weeks, the serious losses and perplexing labors involved in the cultivation of other root crops, are, in the management of parsnips, as a general thing, unknown. The use of *guano* is highly recommended by some gardeners, in the cultivation of this root, as it is also in the cultivation of the beet, carrot, turnip and cabbage. In the few instances which have fallen under my own direct observation, its application to the parsnip has been uniformly productive of the best results.

Being a cheap fertilizer, of singular energy and efficiency, and involving but trivial cost in the application, I think it cannot be too highly recommended. Most persons who cultivate the parsnip as a table edible, do not take it up in autumn, but permit it to remain in the soil till spring. By adopting a different course, however, and taking it up in the fall, say just before the closing of the ground by frost, we secure to ourselves a much longer use of the plant, besides having it in greater perfection. When permitted to remain in the soil during winter, it will frequently send out sprouts, and the textures of the fibrous parts become ligneous, and acquire a pitchy or resinous flavor, which renders them unpleasant to

most palates, and consequently depreciates their value for table use. If dug in the fall and carefully packed in boxes, with a sufficient quantity of mould from the beds in which they were grown, (in order to secure to the roots the same degree of moisture they were supplied with in their growing state,) they may be preserved until summer in the full power of all their more valuable and desirable qualities.

It has been asserted by some cultivators who have introduced this crop into their *routine*, that it was preferable to the carrot; and that when boiled, mixed with meal or steamed grain, it makes one of the richest, cheapest, and most healthful feeds for swine that can be obtained. In one of our leading agricultural publications, it is asserted that from *eight to fourteen hundred bushels* of parsnips may be reasonably relied on per acre, and that experience has already demonstrated the important fact, that taking one season with another, where only ordinary attention and expense in manuring and cultivation are bestowed, it costs one third less than the carrot, and considerably less than the potato. Horses eat the roots with avidity, fatten rapidly on them, and are capable, when confined to them as their only food, of performing as great an amount of labor, with less fatigue, than when fed on hay and grain. No insect appears to injure the parsnip; the odor of its foliage is probably its protection; and as to the roots, we are not aware that they are ever scarified or perforated by worms. From these evils, so commonly experienced in the cultivation of almost all other root crops, and which so greatly increase the expense of producing them, the parsnip enjoys a most singular and happy exemption.

A NEW CORRESPONDENT.

Philadelphia County, *Dec.* 19, 1849.

— *Germantown Telegraph.*

CHARCOAL FOR PLANTS.

With respect to charcoal, whether it be wood, peat, or animal, I think that its value, either in agricultural or floricultural application, is not nearly so well known, nor so much appreciated, as it ought to be: that from wood I have long used with the greatest advantage, both in the drainage of pots and as an absorbent in the preparation of manure. For the former it is well suited, when placed over the hole in pieces large enough to prevent their falling through, and to the height of about a fourth of the pot, in the same manner as potsherds are employed. Owing to its highly antiseptic qualities, it will continue for several years in an undecayed state, and consequently afford an efficient drainage for a much longer period than moss, while it is calculated not only to act in like manner as a conveyer of moisture to the plant, but will also tend greatly, from its powers of imbibing and gradually giving out any ammonia with which it comes in contact, and other fertilizing alkalies or gases that may exist in the soil, to produce a more healthy growth in the plant. "The peculiar property of charcoal," says Mr. Squarey, in his Treatise on Agricultural Chemistry, "and the only one that makes it useful in connection with the subject of manures, is its powers of absorbing various gases in the pores of its structure, and subsequently yielding them to moisture. It is proved beyond all doubt, that pure, fresh-burnt charcoal possesses the power of absorbing ninety times its volume of carbonic acid gas." And he further states, "If any manure has been applied, containing ammonia in its free state, that is liable to pass off in a gaseous form, the charcoal will absorb it as it rises, and retain it until the first rain, when the gas will be dissolved by the water and carried into the soil, there to be applied for the assimilation of plants; and the removal of the gas by the rain from the charcoal, restores its original powers of absorbing gas; so that this substance, when applied to the soil, acts as a constant reservoir for these valuable gaseous substances, a property which neither time nor any circumstances can alter. Even when, in the course of cultivation, the charcoal originally applied on the surface of the land, is ploughed under the surface — even there it does not lose its power of absorbing the gases, but carries on its operations with undiminished energy." Professor Johnston, in his valuable work on the Elements of Agricultural Chemistry, strongly recommends the mixing of charcoal, particularly animal charcoal, with liquid manure and other rich applications to the soil, but apprehends that the cost and scarcity of this substance may preclude its being brought into general use. — *Gard. Chron.*, 1849, p. 485.

SMUT—ITS PREVENTION.

It is one of the happy advantages of the farmer's business, that he is less dependent on man and more upon his Creator, than those engaged in other occupations. Whether sowing, or reaping, or gathering, he must trust to Providence for most of his success. But there is one source from which the farmer often meets with heavy loss, in regard to which, Providence has left it to each man either to avoid it certainly, or run the risk of leaving his crop to take its chance; I mean, that every farmer may secure his wheat against smut, or he can let it alone. Soak, steep, or wash your wheat in brine, and roll it in fresh slaked lime, and there will be little or no smut, according to the care you take in preparing it.

"1845, June 23, four positions (in my Egyptian wheat, unprepared) from which I gather all the smut heads within reach of my arm, give as follows: 9, 35, 15, 12. Four do. in that soaked, 0, 0, 4, 0 — being 68 to 4.

"Five positions in white wheat unprepared, give 34 smut heads, whilst ten positions in that prepared only give 7."

And to show the necessity of using lime to roll it in,— and mine was slaked just before using it, "in a walk through my blue-blade, I find thirty-three smut heads in the part *brined* only; whilst a walk across that brined and limed gives only three. The smut this year is general, and in some fields forms *one third* of the crop. The land sown with wheat which had lain in brine all night, looks thin, and has looked so all the time."

I must call particular attention to the last sentence from my journal, as subsequent experience has satisfied me that if the wheat is allowed to remain too long in brine, it will not come up well. Another extract will both illustrate and explain my views :—

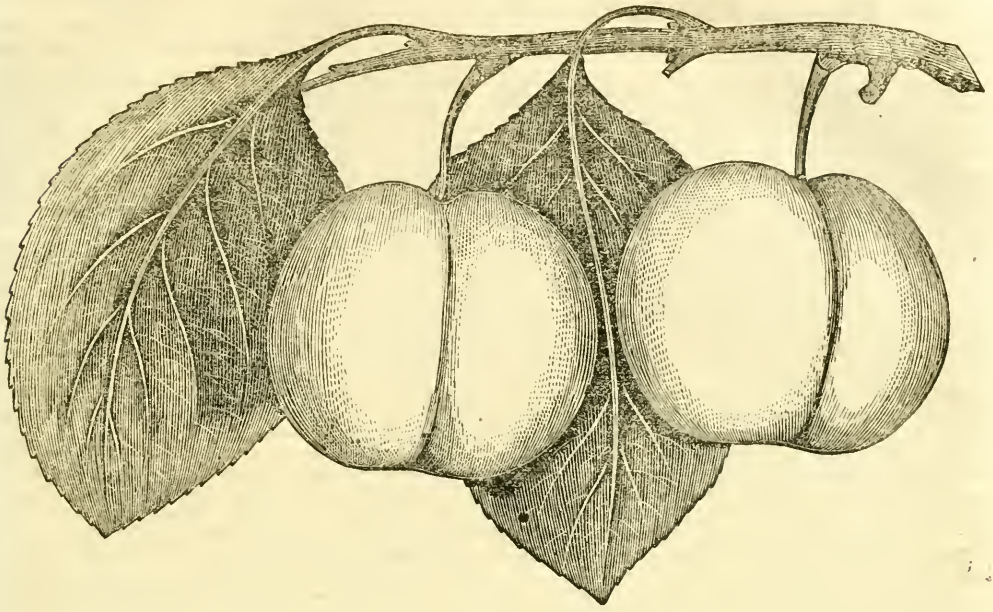
"Oct. 7. The Mediterranean is up fine, *except* that brined and limed, which is slow coming up, the difference being *marked* on both sides. This was soaked for ten or twelve hours. I suppose it to be owing to the extreme dryness of the ground and atmosphere which abstracted the moisture from the grain soaked." Since then I have merely put the wheat in, stir it round, skim it, draw off the brine, roll it, and sow.

W. H. G.

Frederick County, Va., 1849.

— *Dollar Newspaper.*

Youth and Old Age. — As I approve of a youth that has something of the old man in him, so I am no less pleased with an old man that has something of the youth. He that follows this rule may be old in body, but can never be so in mind. — *Cicero.*



LUCOMB'S NONSUCH PLUM.

This plum has not been cultivated to much extent in New England; of course it has not been well tested. Mr. Lackey, of Marblehead, whose favorable opinion of this fruit may be found in our last number, p. 60, remarked to us that he considered it almost equal to the Jefferson. We saw it last fall at Mr. L.'s, and it was very flourishing both in tree and fruit. Our engraving is from specimens which he kindly furnished, the quality of which was excellent.

It will be seen, on p. 74, in our notice of the N. A. P. Society, that Mr. Thomas had an unfavorable opinion of this fruit, while others had a very favorable opinion of it. It appears to be one of the most promising varieties, and worthy of experiments, if not of general culture.

The fruit is rather large; roundish, slightly flattened at the base, and considerably flattened at the top; dark green, variegated with shades of yellow, and covered with white bloom; the stem nearly straight, and two thirds or three fourths of an inch long, in a rather narrow, deep cavity; suture broad and shallow; flesh greenish, rather fine, rich, sweet, with an agreeable mixture of acid. Ripens the last of August and the former part of September. The tree is hardy, vigorous, and a constant and pretty good bearer. English origin.

FINE MUTTON.

We lately saw, in the stall of Mr. Hiscock, No. 9 Faneuil Hall Market, some of the finest mutton and largest carcasses ever brought to this market. Mr. H. bought of Mr. George Goodhue, Coberskill, Schoharie Co., N. Y., thirty-four fat sheep, supposed to be a cross of the Cotswold and Leicestershire breeds, both of which breeds are distinguished for their large size and fine mutton. The carcasses of the three largest weighed one hundred and eighty, one hundred and eighty-two, and one hundred and eighty-four pounds, which far exceeds the largest ever brought to this market from England or from any section of this country. Mr. H. paid, for the largest five, thirty dollars each; for the others, fifteen dollars each, delivered here. We have tried this mutton, and find it remarkably sweet and tender.

We have often urged upon our farmers the importance of raising fat mutton, for our markets are scantily supplied with it. It would doubtless be profitable business. The great advantages for transportation at a rapid and cheap rate, afford peculiar facilities for getting mutton to market, even from those sections where land is cheap. Many who grow fine wool would find it more profitable to produce fat mutton and wool of common quality; and this will continue to be good business, until our markets are better supplied with fat mutton.

SOOT.

The effects of this manure on growing crops, as a top-dressing, are immediate, owing to the large quantity of sulphate of ammonia which it contains. It promotes in a high degree the growth of grass, and the second cut of clover is also greatly increased thereby. Soot promotes the growth of cabbages and other herbaceous plants in a remarkable manner, and is much esteemed for garden purposes. It has been found advantageous as a top-dressing for wheat, but care should be taken not to apply it in large quantities, or it may be injurious by burning the plants. — *Transactions of the Highland Society.*

Domestic Department.

The Influence of Women. — It was an auspicious era in the world's history, when female intellect was delivered from the bonds of ignorance, and declared susceptible of cultivation, and upon an equality in natural endowments with the mind of man. Many illustrious men have been of the opinion that, as the "weaker vessel," woman was designed to be inferior in intellectual powers, — to be the servant, rather than the equal. However honest these may have been in their belief, and however strenuously they may have advocated, and endeavored to prove, the truth of the assertion, the history of modern times, the experience of our own age, most clearly furnish undeniable evidence to the contrary. Although it has been, comparatively, but a few years since a female education was considered essential, there are a host of witnesses, who have distinguished themselves in every department of literature, and in every exercise of the mental abilities, to offer their testimony in behalf of woman's right to a thorough and practical education. In the list of American women, we could point to many, whose depth of thought, beautiful imagination, and refinement of expression, at least compete with, if they do not excel, the most extraordinary efforts of masculine writers.

Nor is the proof of this equality alone dependent upon experiment. The Holy Scriptures, in recording the creation of man, give the strongest argument, and in the most explicit terms. As remarked by a learned writer, woman was not taken from the head of man, that she might become his superior, — but from his side, thus indicating her perfect equality; not the ruler, nor the subject, but the participant in the joys or the sorrows of our race.

The social state has placed her to preside over affairs around the domestic hearth — distasteful to the natural capacities of man; where the harmony and peace of the family are especial objects of her guardianship. But this is not all; the earliest impressions upon the human mind, the first tutoring of the world, is confided to her. She is to plant the seeds of virtue or vice — of industry or idleness — in the soul of the infant. The new-born mind, fresh from the hand of its Creator, spotless and pure, is to dawn beneath the genial rays of a mother's piety, or to be seared and blighted by her negligence and vicious example. She is to stereotype upon the yielding surface lessons of reverence and godliness: to write upon its first pages, with the pen of holiness, a record of its obligations to its Creator, and its future blessed immortality — or feed the sinful evidences of its fallen nature, for a fuller and more distant development, its proneness to evil.

How important, then, if these responsible situations are to be filled by woman, that she should be educated, fitted and prepared for them! By education we do not mean every thing that is generally classed under that head; by no means. The spirit of imposition, by which no profession or vocation is uninjured, has devised systems and branches, which it were far better if they remain unlearned. Nor do we allude to the most popular method of education, combining, as it does, much that is useless, with a very small portion of available knowledge. It is the education of the heart, and the corresponding enlightenment of the mind with pure, practical, and necessary information. It is that education which is calculated to instruct them in the objects of their creation; in the duties and obligations of the station which the foresight of Infinite Justice has assigned them; and the means by which they may act in unison with the designs of the Eternal; promote the enjoyment of their own privileges and comforts, and contribute to the happiness of others.

These are things not to be learned in a day. Nor are they to be found in the resorts of fashionable seekers of amusement, nor among the gay and the trifling; nor yet in the institutions of outward accomplishments, and superficial instruction. All these are most eminent means of disqualifying woman for the duties naturally imposed upon her, and change her destiny from being the most potent power to impart good, to an evil destroyer, scattering abroad with a reckless hand the germs of vice, whose fruit can alone be fully recognized in eternity.

Woman is not only the equal of man — his companion and helpmate — and the being to whom the first impressions of infancy are confided — but also the preserver of the union and the harmony of society. She it is whose approbation can nerve to fire the spirit of the coldest temperament; whose frown will dispirit the most ardent ambition; whose pleading tear will melt the ice-clad heart, and draw from the close embrace of a frigid nature, the warmest and most sympathetic sentiments.

She is the ruler of mankind — if not by holding the reins of political government, nor by preëminence in evangelical and sectarian power — still, she governs, by the most potent of all sceptres — moral suasion. Her power in controlling man is almost unlimited; and while, as a general rule, she is inclined to be mild and generous, she can be worse than tyrannical — for her dominion is such, that none will fail to acknowledge it, and few will venture to disregard it.

In view of these facts, they who are to occupy this all-important position have no time to spend upon whimsical and temporary accomplishments, and shallow, imperfect, and unnecessary systems of instruction. So great an end must be difficult of attainment — and yet, unless it be arrived at, the design of the Almighty has not been carried out, and woman is perverted from the most perfect creation of Deity, and the most powerful means of instilling virtue, into a vain, foolish, and degraded creature.

In short, the only study of woman should be — herself! A theme sufficiently complicated to admit of the most profound research, and continued investigation, and important enough to demand the whole of her leisure time and attention. It is not necessary, nay, it is utterly superfluous, to crowd her mind with the literature of obsolete ages, and with theoretical fantasies of speculative brains. She is not to fulfil her duties by theory, but by every day practice; why, then, withhold from her a tangible, useful education? She is never to roam over the fields and converse with the inhabitants of the planets or stars — why, then, consume her time with the relation of pure speculations, and imaginary truths, when she has to acquire so much, which she must either use in her daily life, or feel her unpardonable deficiency? Why instruct her in the polish of an education, while she is ignorant of its elements? Why teach her to execute the most beautiful pieces of elegant embroidery, and at the same time leave her unknown to the most simple lesson of domestic duty? Why teach her to mimic the tawdry colors and motions of the butterfly, and suffer her to remain untaught in the objects and end of her creation?

These are solemn inquiries — we feel them to be such — and we address them to those who have charge of the female mind; and most earnestly recommend a more universal attention to the practical education of young women. They are to be wives, practically — mothers, practically — guardians of young intellects, practically; and should they not be aware of these facts, and, by a practical, tangible, and available education, prepared for the discharge of these responsible duties?

Youth's Department.

How do you spend your Evenings? — Young man, how do you spend your evenings? Answer this question, and we can tell you, almost to a certainty, what will be your future character. In our view, more depends upon the manner in which young men pass this season, as it regards their course and conduct in years to come, than upon any thing else. We have been an observer of men and things, for the last twenty years, and can point to many a youth, who has caused weeping and sorrow in his family, disgraced his name, and is now an outcast in the world, or has sunk to a dishonored grave, who commenced his career of vice, when he broke away from wholesome restraint and spent his evenings in the company of the abandoned. On the contrary, we know many estimable young men — the pride and hope of their friends — who are working their way to favor and wealth, who spend their leisure evenings in some useful pursuit.

Young man, listen to us, and take heed to our words — not that we wish to deprive you of a single pleasure, or debar you from any innocent amusement. We entreat you to be particular *where* and *how* you pass your evening hours. If you lounge about the bar-room, partaking of the vulgar conversation that is introduced, and join the ribald song, or stand at the corner of the streets, using profane and indecent language, you will soon so habituate yourself to low blackguardism and vile conversation, that no young man who respects himself will be found in your company.

Health Department.

Medical Uses of Salt. — In many cases of disordered stomach, a teaspoonful of salt is a certain cure. In the violent internal aching, termed cholic, add a teaspoonful of salt to a pint of cold water — drink it, and go to bed; it is one of the speediest remedies known. The same will revive a person who seems almost dead from receiving a very heavy fall, &c.

In an apoplectic fit, no time should be lost in pouring down salt and water, if sufficient sensibility remain to allow of swallowing; if not, the head must be sponged with cold water until the senses return, when salt will completely restore the patient from the lethargy.

In a fit, the feet should be placed in warm water, with mustard added; and the legs briskly rubbed, all bandages removed from the neck, and a cool apartment procured if possible. In many cases of severe bleeding at the lungs, and when other remedies fail, Dr. Rush found two teaspoonfuls of salt completely stayed the blood.

In cases of bite from a mad dog, wash the part with strong brine for an hour, then bind on some salt with a rag.

In toothache, warm salt and water held to the part, and renewed two or three times, will relieve in most cases. If the gums be affected, wash the mouth with brine; if the teeth be covered with tartar, wash them twice a day with salt and water.

In swelled neck, wash the part with brine, and drink it also twice a day until cured.

Salt will expel worms, if used in the food in a moderate degree, and aids digestion; but salt meat is injurious if used much.

Mechanics' Department, Arts, &c

Manufacture of Parchment. — Vellum is made of the skins of calves, kids, and dead born lambs; and parchment is made of thin sheep and she goat skins. The wool or hair must be removed from them first, and then they are steeped in a pit of lime water. After they are taken out of the lime pit, they are shaved and well washed, and then stretched on a frame made of upright and cross pieces strongly fastened together, and the bars are perforated with a series of holes to receive hard wood or iron tapered pins. Each pin has a hole in it like a violin pin, to hold the string tied to the skin, to stretch it, and prevent it from puckering while drying. Skewers are also employed to stretch more or less of the skin on this frame, (*herse,*) according as a greater or less piece is required to get hold of. Some employ hoops in place of the herse, and this answers tolerably well. The great point is to stretch the skins as much as possible, keeping out all the wrinkles. While the skin is on the stretching frame, the workmen, with a currying double edged knife, remove the fleshy excrescences by drawing the knife downwards. The skin is then sprinkled upon the fleshy side with chalk, and well rubbed with a piece of flat pumice stone. The pumice stone is then rubbed over the other surface of the skin without chalk. The skin is then allowed to dry, but must be protected from sunshine and frost. It must not be dried too suddenly. When it is perfectly dry, the chalk is removed by rubbing it with the woolly side of a lamb's skin; but great care must be taken, in this process, not to injure the surface. All grease must of necessity be removed from it; this is the object of steeping it in lime.

After the skin is dried, it is transferred to a frame called the *scroper*, where it is extended with cords, generally upon a piece of calf skin well stretched. The skin is placed with the tail downwards, when the rough edges are pared off with a sharp knife, and then the outside surface is scraped obliquely downwards till it becomes perfectly smooth, and whatever irregularities may remain, are removed by a flat, smooth piece of pumice stone. To do this, the skin is placed upon a stool stuffed with wool and covered with soft parchment. It is called the cushion. The pumice stone should be very fine, the finer they are the better. Sometimes there are small holes made in the parchment skin; these are neatly patched by cutting the edges thin and pasting on small pieces with gum water. Parchment is often colored green, which is done by a mixture of cream of tartar, verdigris, and nitric acid, (only a small quantity of the latter.) It is made into a solution of water and laid on evenly with a sponge — the skin having been first wet. Parchment receives its necessary lustre from the white of eggs, or weak gum water. — *Sci. American.*

Ventilating Bricks. — The London Builder says that there has been registered in the Patent Office a brick so shaped, that when two are placed end to end, a circular space is left at the junction. This circular space connecting from course to course, a wall formed with them is, to a certain extent, hollow, and admits of currents of air through it, either heated or otherwise. Each brick is nine inches square and three inches thick, the size of two common bricks, so that only half the usual number is required to do a rod of brick work; and as they pay but one duty, and are laid with a very little more labor than a common brick, the work may be executed at considerable saving. A common brick is used at the angle of each course. — *Ibid.*

EQUINOCTIAL STORMS.

From many years' observation, we have formed an opinion that the common notion about the equinoctial storm, or line gale, is erroneous. We have often said to our friends, of the contrary belief, about the time the sun crosses the equator, that we had no storm, but they have said that it would come soon; and after waiting so long for the line gale that a storm could not be considered as coming under that head, they have observed that it must have been such a storm that happened some days, or a week or two, before the equinox. This is a subject of considerable practical importance to farmers, as they are intimately interested in the condition of the weather; therefore we copy the following very interesting article, on this subject, from the Ohio Cultivator, which we are happy to meet with, as they confirm our opinions, which we think are founded on truth. We invite a close investigation of this subject in future.

"THE EQUINOCTIAL STORM" EXPLODED.

"Prove all things — hold fast to that which is good."

Among the many errors that have been allowed almost undisturbed possession of the public mind, perhaps for centuries past, few are more common than the belief in *equinoctial storms:* and, as we shall presently show, few notions are more destitute of support either from science or actual observation. Our attention has been called to this subject for eight or ten years past, owing to the occurrence of the agricultural fairs in the month of September, and the objection which would invariably be made against holding a fair during the week when the *equinox* would occur, on account of the supposed probability of bad weather. But on observation, we have noticed that from the 20th to the last of September was, if any thing, more commonly fine weather than any other period; hence we discarded the popular doctrine of equinoctial storms.

At the meeting of the Board of Agriculture in Cincinnati last spring — the time for the State Fair being under discussion — this "equinoctial storm" theory was strongly defended; and knowing that Dr. Ray, of Woodward College, had for many years kept an exact daily record of the weather, we have requested him to favor us with the result of his observations upon this point. The following communication is his answer, and we think it is conclusive; but if any important facts or arguments are adduced on the other side, the Doctor has the daily records, and will give them. — Ed.

Equinoctial Storms. — Is the weather, at that period of the year denominated the Autumnal Equinox, (Sept. 23,) generally stormy, or of a more unfavorable character than at other periods?

This question is proposed in reference to the Northern and Middle States; though what is true in regard to them, cannot vary materially in the Southern States.

In reply to this question, it may be observed, that *popular opinion* has long since decided in the affirmative. The time when the "sun crosses the line" is, in the estimation of numerous individuals, a very important astronomical event, and quite worthy of being celebrated with storms of wind and rain, and a general disturbance of the atmosphere.

The "line" (*equator*) is also regarded as some great physical development, like the mountain ridge, encircling the earth. In regard to popular opinion, it is only necessary to observe that it is a very *unsafe guide*, both with regard to the existence of facts, and the causes of phenomena, but especially the latter. There are, however, two methods of answering the question, both of which we shall briefly notice.

First. Is there any thing at the period of the equinox, in the particular relation of the great operating causes, that has a tendency to produce an unusual state of the weather? In reply to this it may be said, we have the *equinox.* And pray, what constitutes the equinox? Simply the fact that the sun has no declination, or for a moment of time (and only a moment) is vertical *at some point of the* IMAGINARY LINE *on the earth's surface called the* EQUATOR. But the sun is *always* vertical to some point on the earth's surface; can it then be supposed that the mere fact of its being vertical at a certain point equally distant from the poles, shall have such a due influence as to conjure up vapors, storms, winds and rain, as if nature designed, by raising a great commotion in the atmosphere, to celebrate one astronomical period, while others, equally important so far as the earth is concerned, are permitted to pass by unheeded and unsignalized? Thus the periods when the earth passes through the aphelion and perihelion points have an important relation to the climate of the earth, and to the seasons of the year; but as they are not generally so well known as the period of the equinox, they have not been furnished with storms to celebrate their advents.

Second. What is the testimony of recorded observations? To this I reply, no writer on meteorology that I have consulted, makes any mention of such a phenomenon as in common parlance is denominated an equinoctial storm. I refer particularly to Kaemtz, Daniel, Howard, and Ferry, all of whom in their respective works treat of the subjects of rain, winds, and storms. One of these (Kaemtz) furnishes tables of the number of storms occurring at different places during each month of the year; but at no place did the greatest number of storms occur either in September or October. Now it can hardly be supposed, if such a phenomenon as an equinoctial storm existed, that it would have entirely escaped the observation of men whose lives were devoted to the collection of facts pertaining to the science of meteorology, and reasoning from them.

My own observations extend through a period of fifteen years, but the records of 1835, except the abstract, are not now to be found, so that I can only refer to them since that period. During this period of *fourteen* years, *ten* of these equinoctial days were either clear, or fair and pleasant days; while *two*, though partly clear, were more than one half cloudy; and *two* only were entirely cloudy and *partly* rainy.

But those who maintain that there is usually a "*bad spell of weather*" at or near the equinox, may wish to know how many such spells happen within some given period, of which the equinox was the middle. For the satisfaction of such, I would state, that by taking a period of *one month*, that is, about two weeks before and two weeks after the equinox, we have had *five* bad spells of weather, while on *nine* of the years there was no weather that could be called unpleasant.

From these data it would seem, that if a great public meeting were to be held in the month of September, it would be advisable to fix it for the 23d — *the very day of the equinox!* — as the probabilities are very strong (6–7) that it would be a dry day, and pretty strong (5–7) that it would be fair, that is, more than half clear; while the probability that it would be wet is very small (1–7.) JOSEPH RAY.

Woodward Col., Cin., *Nov.* 1849.

Fat Cattle. — Hezekiah Taylor, of Westfield, Mass., has five pairs of steers, whose aggregate weight is 22,220. The several pairs weighed as follows: 4,620, 4,020, 3,990, 3,860, 3,760.

PROFITS OF A DAIRY.

Mr. Editor: We have many times noticed in your paper, statements made by different writers on the profits of a dairy.

Below we give you an account of the proceeds of our dairy in the year 1849, from forty-one cows, six of which were heifers, having their first calves the same season: —

41 calves, at four weeks old, $4 each....	$164 00
3747 lbs. cheese, at 9 cents per pound.....	337 32
6569 lbs. butter, best quality, for table use, at 20 cents per pound.....	1,313 80
6670 gallons, or 18 gallons per day, new milk used on table, never skimmed, at 3 cents per quart.....	788 40
For manure.....	200 00
Total amount.....	$2803 52

Expenses, &c.

10 tons wheat bran, or ship stuff, at $10 per ton.....	$100 00
900 bushels beets, at 12½ cents per bushel..	75 00
62 tons of hay, at $8 per ton.....	496 00
26 weeks' pasturing for 41 cows, at 12½ cents per week each.....	333 25
Slops from kitchen, during the year.....	15 00
Net expense.....	$1019 25

Total amount.....	$2803 52
Deduct expenses.....	1019 25
Balance.....	$1784 27

Making an average for each cow, of

Butter.....	150 lbs. 3½ oz.
Cheese.....	96 lbs. 6½ oz.
Milk.....	160 gallons.

The milk, it will be understood, is that which is used on table by boarders, never skimmed.

Add manure and calves and the total amount for each cow.....	$68 37
Deduct expenses.....	24 86
Net profit to each cow.....	$43 51

Made of butter in the month of October, 1849:

1st week.....	180 lbs.
2d "	201 " *
3d "	191 "
4th "	187 "
5th (½ week).....	173 "
Total in October.....	932 lbs.

We prefer putting our cows in the stable while milking, at all seasons of the year. This affords an opportunity of messing twice a day, and is done regularly at time of milking, believing it the best time. Wheat bran, (or shorts,) mixed with slops from the kitchen of dairy, makes a good feed for milch cows.

Some think it quite objectionable and very unnatural *for cows to eat or drink whey and milk*, but we see no good reason for such objections.

We have practised, for some years, feeding our cows with the whey and skimmed milk from our dairy, mixed with wheat, buckwheat, or rye bran, and have never seen any injurious effects whatever; but, on the contrary, believe it to be very beneficial, and productive of good sweet milk and butter.

It is very necessary for milch cows to be well supplied with good pure water, especially in the winter season, when fed on dry fodder. We make a practice of watering our cows twice a day, morning and night; this is given them in the stable, where they can drink at leisure, sheltered from cold and storm.

New Lebanon Shaker Village, (numbering one hundred and thirty persons.) — *Pittsfield Culturist.*

* Largest amount of any week during the year.

IMPROVEMENT OF STOCK.

We copy the following article from the report of the Committee on Bulls, T. E. Payson, Esq., Chairman, published in the Essex Agricultural Society's Transactions: —

Naturally and intimately associated with our report, is the subject of "Improving the Breed of Cattle." A remark or two upon that subject may be neither uninteresting nor out of place. The importance of a more thorough knowledge, of clearer ideas upon it, than we now have, is apparent to every body. In fact, no such thing as breeding stock, as an art, is known among us; and the man who has the credit of being a stock-raiser, generally gets it because he has a greater number of half-starved calves than his neighbors, and in whose stock there are as many varieties of shape and color, as there were in the stock of Jacob, when he separated from his father-in-law. Every imported bull that happens to come in his neighborhood, no matter what his blood, nor what the blood of his cow, is crossed with his stock. Now although crossing in any way is preferable to breeding in and in, yet this indiscriminate crossing will never, to any extent, improve our stock. If we get a good cow, it is the result of accident — mere chance. Experience, so far, has shown that importations from abroad, and the crossing with them, have in no way benefited our milch cows. They may have furnished us better oxen in some respects; but they have not yet helped us to any more butter and cheese.

Your committee are of opinion, that the only successful mode of improving our stock, is by a judicious, systematic, enlightened attempt, which has for its basis the native stock of the country. And it is only by an enlarged view of this, or any other matter connected with nature, that we can arrive at the truth. The advantage of crossing has been spoken of; but let it be remembered, that if you expect good from it, you must bring together animals, *not nearly related*, but of the same breed. Nature is uniform in her operations. Wild animals of a particular breed are generally of the same shape and color. Flowers resemble each other. But by man's intervention, the beast, the bird, the flower, are made to assume new colors and forms. If these changes are of value, they must be the result of sound judgment, enlarged views, enlightened experience, and a complete knowledge of the principles upon which nature operates.

Until these are attained, you may spend money, you may import stock, you may offer premiums, and no more benefit be derived from it, than has been from what has been done by this and other societies for the last thirty years. We have no better cows now than we had then; we have no larger proportion of them; and in our breeding, whether or not the calf which we raise will make a good cow, or be good for nothing, is all mere chance.

The State Society have, with a zeal worthy of imitation, in most respects, made efforts to improve the stock of the country. But has that zeal been entirely according to knowledge? Can they put their finger on any point, and say, In this respect at least we have made some progress? It may be that your committee have not full knowledge on this subject; but we are satisfied that if the stock "which boasts of a long line of ancestry of the purest and most approved breeds," and is not tainted with a

drop of "ignoble blood," is not more productive, so far as the dairy is concerned, than it is generally reported to be, it is better adapted to a royal than a republican territory. In conclusion, we hesitate not to say, that we have the elements of as good milch cows, as there are any where, and that if men who have the means, will apply science and enlightened judgment to their developement, instead of going abroad for cows, we can furnish better of our own, than can be found elsewhere in the wide world.

ONIONS FROM TIME IMMEMORIAL.

To give some idea to those who have not thought on the subject of the effects of age upon a cultivated soil, I shall here mention a fact that struck me as being not a little singular at the time it occurred. At Dunstaffnage, near Oban, in Argyleshire, Scotland, which is a mountainous country, and naturally a barren soil, a small garden was pointed out to me, on which was growing at the time one of the finest crops of onions I had ever seen. I took notice of it with some degree of surprise, because I had seen no other crop of onions in that district that was tolerable; but my surprise was a good deal augmented on being told, that the present crop in that garden was by no means remarkable; that it had been cropped with onions, year after year, from time immemorial; that the present owner of it, who was a man above eighty years of age, had never seen any other crop than onions upon that ground; and that the oldest person alive, when he was a boy, had told him the same thing, and the crop was always an excellent one. Dunstaffnage was a royal palace, belonging to the kings of Scotland at an early period of their history, almost beyond record; and there can be little reason to doubt that this garden was brought under cultivation at that time, so that it cannot now be less than five hundred years old, and probably several hundred years more. I question much if the soil could have been rendered capable of producing successive crops of such fine onions, for a great many years after it was first turned up from the waste, by any device that the ingenuity of man could have suggested. To judge, then, of the most profitable mode of cropping such old soils, by the same rules that would apply to those which had not had time to be fully matured, would be very absurd. Many cases of this sort would no doubt occur on our survey of the Netherlands, could it be properly effected. — *Dr. Anderson.*

MANURES.

I apprehend that all are fully aware, that the principal source of vegetation is that of putrescent matter; hence the importance of attention to the collection of as much vegetable and animal substances, as can possibly be accumulated during the less busy part of the season. The bottom of the barn-yard should be so enclosed, as that the extracts from the manures, produced by rains, could be retained, and absorbed by a layer of earth previously put in, say from four to ten inches in depth; this under stratum is designed as an absorbent to retain all the extractive matter produced; and it will be found to contain a large quantity of fertilizing material thus secured, in *addition* to the amount of manure produced in the usual way barn-yards are generally managed. This additional compost may be used with decided benefit for the corn crop; or it may be removed in common with the vegetable manure of the yard for the winter crops. If intended for the latter crops, the whole mass should be well mixed together, and a most valuable manure will be the result.

The great object in the application of manures should be to make it afford as much soluble matter as possible to the roots of the plants, and that in a slow and gradual manner, so that it may be entirely consumed in forming its organized parts. Manures from animal substances, in general, do not require a chemical preparation to fit them for a judicious application for the soil. They need only to be blended with earthly constituents, in a proper state of proportions, thereby preventing their too rapid decomposition. Agricultural chemistry teaches that all manures from organized substances contain the elements of vegetable matter, which, during putrefaction, are rendered either soluble in water, or aëriform; and in this condition they are capable of being assimilated to the vegetable organs. Plants can grow only in places where they are supplied with nourishment, and the soil is equally necessary to their existence, both as affording them support to a certain extent, and enabling them to obey those mechanical laws by which nature develops their perfection. A. S.

Montgomery Co., Pa., 1850.

—*Dollar Newspaper.*

ELECTRICITY.

The earth is the great reservoir of electricity, from which the atmosphere and clouds receive their portion of the fluid. It is during the process of evaporation that it is principally excited, and silently conveyed to the regions above; and also during the condensation of this same vapor, the grand and terrific phenomena of thunder and lightning are made manifest to our senses.

In order to form a correct estimate of the immense power of this agent in the production of electricity, we must bring to our view the quantity of water evaporated from the surface of the earth, and also the amount of electricity that may be developed from a grain of this liquid. According to the calculation of Carvallo, about five thousand two hundred and eighty million tons of water are probably evaporated from the Mediterranean Sea in a single summer's day. To obtain some idea of the vast volume of water thus daily taken up by the thirsty heavens, let us compare it with something rendered more apparent than this invisible process. President Dwight and Professor Darby have both estimated the quantity of water precipitated over the Falls of Niagara at more than eleven million tons per hour. Yet all the water passing over the cataract in twenty days would amount only to that ascending from the Mediterranean in one day. More recent estimates make the mean evaporation from the whole earth as equal to a column of thirty-five inches from every inch of its surface in a year, which gives ninety-four thousand and fifty cubic miles as the quantity annually circulating through the atmosphere. Thus we see the magnificent scale on which the great machine works.

Dr. Farraday has shown that a single drop of water contains as much electricity as an ordinary flash of lightning — enough at least to destroy the life of an elephant. Thus the little dewdrop, from which the poet has derived such sweet images, may suggest to us ideas of a more sublime nature.

HARROWING WHEAT IN SPRING.

In none of the improvements in agriculture do I find farmers so *slow to believe* as in harrowing wheat after the ground has settled in the spring. Some ten or fifteen years ago much was said on this subject in the Genesee Farmer, showing the results of experiments, and explaining the reasons why it should operate beneficially upon the crop.

Farmers know that a hard crust forms upon ground exposed to the frosts and drying winds of March and April, and that this crust greatly retards vegetation. But the great objection is, it will pull up all the wheat to harrow it. Having practised harrowing my wheat every spring for the last eight or ten years, and uniformly with good effect, I feel disposed to recommend the practice to my brother farmers. Of late years I have been in the habit of ploughing in my wheat at the time of seeding with a gang plough, leaving it in the furrow. In the spring after the ground has become dry, the last of April or early in May, I harrow lengthwise of the furrows, then crosswise, loosening up the ground thoroughly. I should like to do this just before a rain. If the land is to be seeded with clover, I sow on the seed and harrow it in. This I think far more safe than sowing early and trusting to the heavings of the frosts and the wash of rains to cover it. Early sown clover is often killed by the droughts so common in April.

I have been amused at the earnestness with which some of my neighbors would remonstrate with me for harrowing my wheat. "Such a fine piece of wheat," say they, "to be spoiled in that manner! He ought to be sent to the mad-house."

And afterwards, when the crop showed for itself it was not ruined, "O, it was such a good piece of land, it will produce a good crop in spite of your experiments." A field of wheat looks bad while under the process of harrowing, as it is prostrated and partly covered with earth; but after a shower, it starts up fresh and vigorous, like a field of corn refreshed by a shower after being hoed. I have often examined as to the amount pulled up, and do not believe it will average a bushel upon ten acres. Farmers, try it; and be not frightened by the appearance. I never yet heard of a field injured by it. MYRON ADAMS.

East Bloomfield, N. Y., *April*, 1849.

— *Genesee Farmer.*

SAVING MANURE.

A Southern Example worthy of Northern Imitation. — My friend Mr. Keeling, who keeps that excellent house at Norfolk, the National Hotel, has lately bought a farm near town, which he is determined to enrich; and this is one of the methods he has taken. He has all the ashes from the hotel, which are made from his bituminous coal, put into a pit, and upon this all the urine, soap-suds, and dish water is thrown as long as it will absorb it, and the mass is then hauled out and spread upon the land.

In the privy vault, he has a layer of soil spread every week, to which is added a sprinkling of plaster and dissolved copperas, sufficient to absorb all the ammonia. After a time, that is all taken out and spread upon the land, without its being at all offensive to handle. Every dead animal that comes within his reach is buried in a pile of weeds, straw, trash, earth, or swamp muck, to fertilize the mass, and in its turn fertilize the soil. He has lately planted three thousand bushels of oysters for the use of the hotel, the shells of which, by and by, will be burnt, and spread upon the land. He is also preparing to grind plaster, which is brought here as ballast, and can be had for seventy-five cents to one dollar a ton. And with these appliances he is determined to raise grass, notwithstanding the unfashionableness of that crop in all the south.

Now, this gentleman is not a practical farmer, but derives his ideas from reading, reflection, and common sense; and I leave it to any one possessed of a small share of this latter commodity, to say if his ideas are not of a more common-sense character than many farmers have, who call themselves wholly practical. — *Am. Agriculturist.*

QUICK WORK.

A friend, who doubted a statement as to rapid work in knitting, was presented with the following certificate by the son of the lady who certifies. It is dated West Charlton, Saratoga Co., N. Y. We have not permission to use her name. And we would inquire whether this rapidity of work has ever been equalled by another.

"This certifies that I have repeatedly spun and knit one pair of men's socks, of common size, in a day; and that I have for weeks together spun and knit six pairs a week."

THE FARMER IS NOT PROPERLY ESTIMATED—WHOSE FAULT IS IT?

It is a lamentable fact, that the farmer does not occupy that elevated position in society that his occupation justly entitles him to. He is looked upon as a being below the lawyer, physician, divine, artist, merchant, or even a merchant's clerk. To be a *farmer*, is to be a nobody, a mere clodhopper, a digger of bogs and ditches, and dung heaps, and free to wallow in the "free soil" he cultivates, provided he never seeks to elevate himself above that position, to what the world is pleased to term "good society." Hence comes the desire of "the boys" to escape, not so much from the drudgery of their employment, as from the idea that they are looked upon and estimated as mere drudges.

What blindness, folly, and false philosophy is this! The result of these false premises is, that the "professions" are crowded to the starvation point; clerks not only go begging, but become beggars, or worse; merchants are multiplied, and good, old-fashioned labor is gone out of fashion.

While we would give all due honor to the professions, the farmer, who is the *producer* of all, both in food and raiment, that adds to the comfort and sustenance of the human family, need not feel that he is *below* occupations that gain their support from the folly, pride, misery, or wickedness of their fellow-creatures.

If the aspiration of farmers were half so strong to elevate their sons to farmers, as it is to make them merchants or professional men, and, perchance, loafers, we should soon be taught to look to the agricultural class for the best bred, as well as best fed, men in America. — *Barnum's Address.*

Agriculture. — It is an innocent pursuit, that can do injury to no one. It invades no man's just rights, and prejudices no man's safety, health, peace, or reasonable enjoyment. It is a beneficial employment, for whoever cultivates the earth, and covers it with rich and golden crops, renders it more beautiful; and whoever causes the earth to yield its fruits, increases the means of human comfort and subsistence.

Irresolution. — In matters of great importance, and which must be done, there is no surer argument of a weak mind than irresolution; to be undetermined where the case is so plain, and the necessity so urgent; to be always intending to lead a new life, but never to find time to set about it; this is as if a man should put off eating and drinking, and sleeping, from one day and night to another, till he is starved and destroyed. — *Tillotson.*

NOTICES OF PUBLICATIONS.

New England Poultry Breeder, Containing a History of Domestic Fowls, with Directions for Rearing and Management, illustrated with Engravings. By a Practical Poulterer. Boston: R. B. Fitts & Co.

This work embraces a variety of interesting matter to the poultry breeder, particularly in regard to the descriptions of fowls. It contains an engraving of the Cochin China fowls, taken from the only lot, as it is said, that have been imported into this country. This breed has generally been confounded with the Shanghae.

The Horticulturist. — This work is devoted to the various subjects of horticulture, rural taste, and rural architecture. The editor, A. J. Downing, Esq., sustains a high reputation from his works, which have done much to diffuse useful information and correct taste throughout the country. An important feature in this work is the embellishment of rural residences, a subject almost wholly neglected in many sections. Published monthly, by L. Tucker, Esq., Albany, N. Y., at $3 per year; Messrs. J. Breck & Co., agents in this city.

Hovey's Magazine of Horticulture. — Our readers have occasionally read our favorable notices of this work. Each number contains outlines and minute descriptions of various important fruits, their origin, history, &c., with a great variety of other highly valuable matter. We are pleased that the price of this valuable magazine has been reduced, (as may be seen by advertisement in our advertising department,) as it will greatly extend the circulation of the work.

American Flora, in monthly parts, each part illustrated with beautiful likenesses of plants, taken from nature. The botanical descriptions, history, propagation, culture, and uses of each plant are fully given. By Dr. A. B. Strong. Green & Spencer, New York. This is a splendid, beautiful, and interesting work. A new edition has just been commenced, which affords subscribers an opportunity to begin with the commencement of the work.

Illustrated Natural History, by the same editor and publishers, is embellished with numerous engravings, which are remarkable for their lifelike appearance; and so interesting is the matter, that if this work is put into a family, they will take great pleasure in gaining a knowledge of this important branch of natural science. It is monthly, at the low price of $1 per year.

Transactions of the Norfolk Agricultural Society. — Although this is the first number of this work, as the society has been in operation only one year, it is of large size, and well filled with interesting matter.

Insurance Abstract for 1849.

A locomotive is the only good *motive* that can be given for *riding* a man on a rail.

For the New England Farmer.

HYMN TO FARMERS.

Plough on! ye vigorous sons of toil —
God's noblemen, who feed mankind;
Your calling is to till the soil —
The noblest work of hands and mind.

Commissioned by the seal of God,
Turn ye the stubborn glebe with pride;
For at your will shall forests nod,
And earth to you its fruits confide.

Heaven's chosen almoners on earth,
Your moistened brows shall bless mankind;
And as ye send your bounties forth,
So each shall his own blessing find.

Toil on, and raise your standard higher,
And let the cry be, "Higher still!"
'Tis emulation fans the fire,
And keeps alive the sturdy will.

The mace of power let others wield;
Your talents spread upon the soil;
And God shall give a bounteous yield,
And well reward your faithful toil.

D.

Boston, *Jan.* 26, 1850.

THE OLIO.

A sharp Retort. — The following, from an exchange paper, is the best hit that we have lately seen: "Two old gentlemen of our acquaintance were complimenting each other on their habits of temperance. 'Did you ever, neighbor,' said one, 'see me with more than I could carry?' 'No, indeed,' was the reply, 'not I, but I *have* seen you when I thought you had better have gone twice after it.'"

A man who had become rich by his own exertions, was asked by a friend the secret of his success. "I have accumulated," replied he, "about one half my property by attending strictly to my own business, and the other half by letting other people's alone."

If the spring put forth no blossoms, in summer there will be no beauty, and in autumn no fruit. So, if youth be trifled away without improvement, riper years will be contemptible, and old age miserable.

It should be an indispensable rule in life, to limit our expenses to our present condition; and whatever may be our expectations, to live within the compass of what we actually possess.

"Digby, will you have some of the butter?" "Thank you, marm, I can't take any thing *strong*; I belong to the Temperance Society."

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own. — JOHNSON.

VOL. II. SATURDAY, MARCH 16, 1850. NO. 6.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

NEW ENGLAND SOCIETY FOR THE IMPROVEMENT OF DOMESTIC FOWLS.

FEB. 28, the agricultural meeting was held at the State House, Mr. Calhoun, the president, in the chair. The subject was the formation of a poultry association. A few remarks were made in regard to the important subject of domestic fowls, and the advantages that would result from an association for the purposes of improvement in this branch of rural economy. Parts of the report of the committee of supervision of the late Fowl Breeders' Convention were read, having a tendency to encourage the object of the meeting.

A committee was appointed to prepare and report a constitution for the consideration of the meeting. In due time they reported a constitution, which was accepted. A committee was then appointed to nominate officers, who reported the following list: —

President. — Samuel Jaques, Ten Hills Farm.

Vice-Presidents. — Massachusetts: Paoli Lothrop, South Hadley; J. C. Bennett, Plymouth. Rhode Island: John Giles, Providence; W. S. King, Woodland Farm. Maine: Russell Eaton, Augusta; Rufus McIntire, Parsonsfield. New Hampshire: Col. Stevens, Concord; H. C. Parker, Manchester. Vermont: Frederick Holbrook, Brattleboro'; N. T. Sheaf, Westminster. Connecticut: C. H. Pendleton, Pendleton Hill; Ethan Allen, Pomfret.

Treasurer. — George E. White, Boston.

Recording Secretary. — John C. Moore, do.

Corresponding Secretary. — Henry L. Devereux, do.

Trustees. — Timothy House, W. J. Buckminster, Eben Wight, Boston; E. S. Kelley, Newburyport; B. W. Balch, Dedham; Alfred A. Andrews, Roxbury; John Brooks, Princeton; John Merrill, Wm. Stickney, Cambridge.

The report was accepted, and the gentlemen nominated declared elected.

The above list indicates the character of the constitution in regard to officers. The constitution provides that all the above officers constitute a board of trustees for the general management of the affairs of the society. Any person may become a member *for life*, by paying two dollars. Two exhibitions are to be held annually, one in the summer, and the other late in autumn.

During the time the committees were out, several gentlemen made interesting remarks on the subject before the meeting. Col. Jaques, Col. Thayer, of Braintree, and Mr. Giles, of Rhode Island, took a conspicuous part in the discussion. Gov. Briggs and other distinguished gentlemen were present, and the hall was well filled. After the permanent organization of the society, a large number crowded around the table, and put their names on the list of members, which was headed by the governor of the commonwealth.

Thus has this association for one of the most useful purposes commenced its existence under the most favorable auspices, and we trust, that with the judicious management of the officers, and a favorable response from the people, it will flourish, and spread its genial influence, not only over New England, but over the whole country.

REV. MORRILL ALLEN.

This gentleman has long been distinguished as an excellent practical farmer, for he was among the most prominent pioneers in improvement, and the valuable instructions from his pen have been sown broadcast over the country, often falling on a congenial soil, and producing an abundant harvest. Our friend has been so efficient in this cause, that he is justly styled the "Model Farmer," the "Veteran Farmer of Pembroke," &c. He has earned an enviable reputation, that will endure, while the fame of the aspiring demagogue, who owes his notoriety to transient causes, will be buried in rubbish by the whirlwind of party strife.

We are happy in paying this tribute to genuine worth, and recording it in a work, which from its permanent form, and adaption to the library, will, we trust, survive for ages. Mr. Allen gives the worthy example of accumulating a handsome property by farming, for he received only a few hundred dollars a year for his clerical services. We regret that he finds it necessary to decline acting any

longer in an official capacity in the agricultural society of his county, as appears from the following resolve of the trustees: —

Whereas the Hon. Morrill Allen, of Pembroke, who, for thirty years last past, has emphatically identified himself with the agricultural interests of Plymouth county, and by his science and practical skill in farming, has won the distinguished appellation of the "Model Farmer," has communicated his determination, by reason of his advanced age, to retire from further official service in the Plymouth County Agricultural Society,—

Therefore, Resolved, That this Board respectfully tender to Mr. Allen an acknowledgment of the obligations of this society to him for devoting so much of his time and talents to its objects, and for the eminent success and ability with which he has for many years filled the offices of its President and Supervisor.

Attest, JESSE PERKINS, *Sec.*

LECTURES ON THE VETERINARY ART.

February 28, and March 7, Dr. Brooks delivered lectures before the agricultural meetings, giving a history of the absurd practices in past ages, and the progress in veterinary science in modern times, in Europe. At the beginning of the former meeting, Dr. Warren, one of the trustees of the Massachusetts Agricultural Society, remarked that while Dr. Brooks was a student in Europe, the board of trustees of said society requested him to continue some years longer, for the purpose of attending the veterinary school at Altfort, near Paris, and studying the anatomy and physiology of the horse, and the mode of treating diseases, for the purpose of giving instruction in these branches on his return to this country.

Dr. Brooks's lectures were wholly historical in relation to this important art or science. He showed particularly the thorough studies and practice required at the school we have named, before a student could receive his diploma. The time of attendance is four years, and those who do not make good progress are put back, in order to become thorough before leaving the institution; so that some have to study five, six, or eight years. Such were the regulations, that a more thorough knowledge of the veterinary science was required of graduates than was required of the students of medicine. He spoke of the French schools of this character being far superior to the English, both in thoroughness and in the time required to graduate.

Dr. Brooks contemplates delivering a course of lectures on the diseases of the horse, another season. His historical account of the veterinary surgery showed research and close investigation; but the audience were generally disappointed, as they expected something of practical utility — some account of the anatomy and physiology of the horse, and the mode of treating diseases. We regret that Dr. B. did not condense his two historical lectures into a small space, and give the information so much desired and needed, and earnestly expected by those who felt the want of that information, which he had gained by embracing the superior advantages afforded him in the veterinary colleges of Europe.

EGGS IN WINTER.

We have often recommended special attention to fowls in winter, in order that hens might lay at a season when eggs are scarce and dear; and we have no doubt that the great interest taken in poultry, on account of the recent excitement on the subject, consequent on the splendid exhibition of fowls last fall, has led to unusual care in the winter management of fowls. The article which we gave our readers on this subject, in our first number, has been copied into almost every paper that we have seen; and we often hear of the favorable effects of extra attention to this interesting branch of rural economy.

This attention, we have no doubt, is one of the principal causes of the large number of eggs in our market this season. A few weeks ago, a dealer in this city bought eggs at fourteen cents per dozen — only half what he paid for them just one year previous.

In the article in our first number, to which we have alluded, we stated that one hundred and fifty hens produced nineteen hundred eggs in the month of January, even in the northern part of New England; and that from a lot of hens, we had eggs enough in January to pay three times the cost of keeping them. We were lately informed by an amateur in this business, that from eighteen hens, he had seventeen dozen of eggs in the short month of February. Another remarked that he had seventeen dozen from twelve fowls, in the same month. In the Ohio Cultivator, a correspondent states that twenty-six hens, in two and a half months, beginning the first of December, produced forty dozen of eggs, besides enough for a liberal use in the family. These, with hundreds of other favorable cases, should lead to that attention which will produce a good supply of eggs in the winter season, instead of their being almost as scarce as lumps of California gold. Let every one consider that every animal that is worth keeping, is worthy of care and good management.

PRODUCE OF A SOUTHBOROUGH DAIRY.

Mr. Editor: I send you the produce of twelve cows the present season, (with the addition of one farrow cow and one new milch cow, the months of April and May.) Butter sold from the 1st of March to the 1st of December, 2287 lbs.

Cash received for the same,	$524 79
Butter consumed in the family, 126 lbs., at the same price of that sold,	29 94
To milk sold from the same the present season,	77 76
Calves sold from the same,	70 71
	$703 20

GEO. W. GOODNOW.

Southborough, *Jan.* 1, 1850.

Mr. Goodnow has had a very fine yield from his cows. We have no better pasture land hereabouts than is found in Southborough. It will be seen that Mr. G.'s cows yielded considerably more than fifty dollars each. — *Mass. Ploughman.*

BLACK SPANISH FOWLS.

For the New England Farmer.

Mr. Cole: The fowls from which the engraving was delineated, belong to Francis Blake, Esq., of Newton Lower Falls, Mass. These fowls are, in the opinion of the writer, the only thorough-bred pair in this section of the country, and were exhibited on the 16th day of November, 1849, at the Public Garden, in Boston. In the foreground of the engraving is introduced a pair of Black Bantams belonging to Mr. Blake, for the purpose of showing the comparative size of these two distinct breeds of fowls, and how nearly in form and plumage they resemble each other: the wattles, combs, and cheek pieces in both varieties are alike in color and form, the only difference being in the comb of the Spanish hen, which is drooping; the comb of the Bantam hen stands erect.

The Spanish breed of fowls is highly prized in England for its size, and the beauty of its form and plumage. The color is a most brilliant jet black, the legs and bill corresponding with the color of the plumage; and the eggs produced by this breed command a greater price in the markets of London, than those produced by any other breed.

The hens of this breed are great layers, producing large and white eggs of great weight and of superior flavor, and rarely show the least disposition to sit, and when they do sit, are represented as negligent nurses. The chicks are hardy and easily raised, of a shining black color except the breast, which is white, as is a ring around the eyes and bill, with some white spots under the chin; but as they do not become fully feathered until nearly full grown, they should be hatched early in the spring.

The following letter the writer received from Mr. Blake, the owner of the two breeds of fowls shown in the engraving. S. B. MORSE, JR.

S. B. Morse, Jr. Esq. Sir: In the drawing recently taken of my imported Spanish fowls and Black Bantams, the artist has grouped them together, for the purpose of showing their comparative sizes. Their jet black plumage, at present in fine order, has a very beautiful purple and greenish metallic lustre. They are of fine form, with immensely large combs, and wattles of brilliant scarlet, beautifully contrasted with very large white *cheek pieces*, or *ear lobes*, delicately shaded with purple; the comb of the hen drooping, while that of the cock is erect, rendering his appearance quite dignified and regal. They are considerably above the medium size, but not remarkably large. In this drawing you will notice the showy serrated comb, drawn from a cock reared by me during the last season, the comb of my imported cock having suffered from the effects of the voyage and cold.

As layers, I believe all writers are agreed, that their character is unsurpassed, whether the number, size, or richness of their eggs is considered.

"As table birds," says Richardson, "they hold a place in the very first rank, their flesh being particularly white, tender, and juicy, and the skin possessing that beautifully clear white hue, so essential a requisite for birds designed for the consumption of the gormand." "They are, besides, prolific, extremely easily fed, and in short, I know of no fowl I would rather recommend to the notice of the breeder."

During the three years I have had this breed, the hen has manifested no inclination to sit, laying almost constantly. In breeding, it will be necessary to employ some other variety as mothers, for which purpose I would recommend the Dorking.

The little Black Bantam, sometimes styled the African Bantam, but which I attribute as the Dwarf Spanish, are almost perfect miniature counterparts of the Spanish, and may, I think, be regarded as the fowl fancier's "*beau ideal*," so far, at least, as beauty is concerned; and if the accounts of the superior

delicacy of their flesh, and their laying qualities, are to be relied upon, they may prove of much utility.

Cobbett's remarks in regard to pigeons may, I think, be appropriately applied to these birds.

It is not supposed that there could be much *profit* attached to them, but they are of this use: they are very pretty creatures, very interesting in their manners; they are an object to delight *children*, and to give them the *early habit* of fondness for animals, and of *setting a value* on them, which, as I have often had to observe before, is a very great thing. A considerable part of all the property of a nation consists of animals; and if you consult your experience, you will find that a laborer is, generally speaking, of value in proportion as he is worthy of being intrusted with the care of animals; and nothing is so likely to give him that excellent habit as his seeing, from his very birth, animals taken great care of, and treated with great kindness by his parents, and now and then having a little thing to "*call his own.*"

This breed, as I am informed, has very recently been introduced into this country from Antwerp, where it is still very rare, and highly esteemed. I understand that the person having the original stock has taken measures to obtain their history from abroad, which I hope may be introduced in a future edition of your work. A gentleman of much experience (Dr. Wight) informs me that the eggs of this breed are larger in proportion to the size of the fowl, than any other known.

This is an important consideration, and if I am not digressing too much, allow me to say a word or two in this connection. There seems to exist at present a *mania* for fowls of the largest size, which in many instances are sought for with sole reference to weight, without regard to expense of keeping, qualities for the table, for laying, or breeding. I would suggest that contributors to future exhibitions furnish *faithful* accounts of their mode and expense of feeding, weight of their fowls, number and weight of eggs laid during the *year*, summer and *winter*, and the general result of their experience in breeding. Such data, while it would remove all doubts from the minds of the most sceptical, as to the profit of this description of stock, would enable us to decide with accuracy, as to the comparative merits of the different breeds.

I predict that such a comparison would lead to a preference for fowls of medium size, maturing at an early age, laying the largest number and weight of eggs, with flesh of fine quality, and feeding at the smallest expense, in place of the uncouth, gaunt, raw-boned, long-legged breeds, with coarse, flabby, dark-colored flesh, enormous eaters, and miserable layers, at present so popular with some of our *fanciers*. I am, very respectfully,

Your obedient servant,

FRANCIS BLAKE.

P. S. Since writing the above, I have very carefully weighed the eggs of the Bantam, which I find to be twelve and two fifths ounces per dozen, the fowls weighing two pounds ten ounces; while the eggs from a pair of the China breed, weighing fifteen pounds and three quarters, weighed but twenty-five ounces. I regret that I cannot at present communicate the result of an experiment, showing accurately the expense of feeding the two breeds.

For the New England Farmer.

DEEP AND SHALLOW DRAINING.

Mr. Cole: I left off my last with a promise to specify the various practices used in draining, so far as my knowledge of such extends, and now proceed to the performance of that duty in such manner as I may.

I have heretofore spoken of *bush* draining. It is one of the most primitive systems, and, as I described it, one which has permanency of effect, so far as the instance quoted demonstrated. The use of *stones*, small in size, or broken to the stipulated weight of from three to four pounds, commenced with the introduction of the general system of thorough drainage. These were put into the trench to a height of from eight to ten inches from the bottom, over which straw was placed in order to prevent the mould from *sifting* through the stones and choking the drains. Many thousands of miles have been laid, in this fashion in Scotland and the north of Ireland, and in every instance success has followed the system. Farmers in these countries were in the habit of gathering the stones from their soil for the purpose of thus using them; but it was demonstrated by scientific men that their removal was prejudicial, through the detachment of one of the natural organic conditions the healthy growth of crops demanded. In those instances where the stones were thus removed from the land, the geological structure of the locality forbade the supply from any other source — thus setting the inventive skill of agriculturists to work to find a proper substitute.

In Scotland a large proportion of the arable soil is of alluvial origin, or won by cultivation from the heaths — the "moors and mosses mony," with which that country and Ireland abound. Peat is plenty in both countries; and I think it was the Laird of Cleland (an estate in the eastern part of Lanarkshire, Scotland) whose inventive skill was first directed to the use of *dried peat* (or turf) in place of stones. Vast quantities of it are cut every year for fuel; and it is well known that, when dried, it possesses the most enduring properties against every element except fire. He condescended upon a shape which every mechanic versant with the science of his trade, will admit to be most scientifically considered. A sectional description is given below. He next had a spade made, the blade of which cut one of the longitudinal sides of the section, while a cutter, crossing the face of the blade, moulded the opposite side and both edges of the turf. This cutter was about an inch and a half in breadth, and, as well as the edge of the spade, made sharp. It was twelve inches long, with a plate proceeding horizontally from the *tramp*, (or the place where the foot is put when the spade is used,) which stopped the insertion of the spade into the peat bank when full. The following cuts will show the end or section of one of these turfs, and the combination of two to make the water-course of the drain: —

Fig. 1.

Fig. 2.

The above cuts are in exact proportion of one quarter of an inch to an inch, and the sectional shape of the spade will agree with an extension of *Fig.* 1, according to this rule.

When the two turfs are placed in juxtaposition in the bottom of the drain or trench, the perpendicular sides (the outsides on the under parts) should touch the respective sides of the drain — at least, they demand no more room than is required for their insertion into the bottom of the trench. It will be observed by applying a straight edge to the perpendicular side, and along the side of the drain, upwards, that there is an inverted, wedge-shaped space left between each turf and its corresponding side of the drain. This is necessary in two different and equally important respects: First, because it favors the uniform shape of the turfs, which, turn them as you

may, upside down, and *vice versa*, are still found in proper articulation; and secondly, this shape furnishes the *key* to the strengthening, on the most undeniably mechanical principle, of the fabric. Some supply wedges to suit these spaces, but this is not necessary; a sprinkling of loose earth, sufficient to fill up the triangular gaps which appear in the section, is enough for all purposes. In proof of this, I may state to you that I have walked along the top of as many as twenty rods of peat drain, put in as quickly as the turfs could be dug from the mass, without any drying or preparation whatever, and I did not break through, or effect more than a consolidation of the upper halves of the opposite turfs; and as you well know, I am no chicken in point of weight.

A moderate day's work of a man and boy will produce from five hundred to six hundred feet of such turfs. I mean from one thousand to twelve hundred single cuts, twelve inches in length, per day; I have known a man and boy produce twenty-seven hundred. Tiles in this country, I conceive, would cost somewhere about two dollars per hundred, in a well-supplied market, and more where scarce. The advantage of the above adaptation to farmers, will then be specially obvious, as many in New England have *plenty* of peat swamp to operate upon, and *more* land which demands draining operations. The permanency of peat is well known. Cultivators of such land need not be told of the tenacity of this vegetable mould to its original composition. I have seen peat drains of sixty years' standing, which retained excellent operative qualities, but the instance was isolated, and purely incidental; still it was sufficient to test the lasting quality of peat as a medium for draining.

I find that I have presumed upon too much of your valuable space already, and by your kind permission, will take advantage of the next consecutive number, and its successors, to follow out this subject. I really hope I may interest and profit, for no other motive lies at the base of the wish of

A FIRESIDE FARMER.

Boston, *Feb.* 19, 1850.

For the New England Farmer.

BONE DISORDERS IN COWS.

Mr. Editor: Your correspondent Wm. R. Putnam, of Danvers, in his communications on this subject, in the N. E. Farmer of Nov. 24th and Feb. 2d, adduces some facts in support of the theory that this disorder in milch cows is owing to the want of a sufficient supply of the phosphate of lime in their food, which, as it seems to me, do not justify his conclusions. For example, in endeavoring to assign a reason why this disorder has not manifested itself in Hamilton, he says, "The farmers in that town are in the habit of using a considerable quantity of hay from the salt marshes of Ipswich and Essex. It is the practice of many there to keep a portion of their best salt hay till the time the cows go to pasture; they will often eat it then, when they will not eat the best of English hay." This is all true — and equally true is it that salt hay is then fed out to our working cattle, and that they will eat it with better relish than the best of English hay. Not that salt hay is the sole feed for either cows or oxen at this season, but as a change of food. Now, if your correspondent arrives at the conclusion, from these facts, that salt hay supplies the waste of bones in our cows, I ask if it also furnishes the bone material to our oxen, when he states, too, that oxen are never affected with this disorder?

But I would inquire, what reason is there to believe that salt hay contains more of phosphate of lime than other hay? The only evidence brought forward by your correspondent, is in the shape of an inference: "From the large quantity of lime in the shells of clams and muscles found about these marshes, the *inference* is, that it contains a large amount of phosphate of lime." With him I can say that I have never seen an analysis of this kind of grass; but in Hitchcock's Geology of Massachusetts, page one hundred and six, is an analysis of marsh mud, by which it appears that the amount of phosphate of lime contained in specimens from three localities, viz., Newburyport, Cambridge, and Medford, is less than one per cent. The inference then would seem to be, that the amount of this ingredient in salt hay must be very small — so trifling as hardly to keep the bones of our milch cows from going the same way as the bones of those in Danvers, providing that this disorder is really owing to the want of a sufficient quantity of this same ingredient in the food of milch cows.

I have always supposed that cattle are fond of an occasional foddering of salt hay, for the same reason that they are fond of licking salt; and I believe it to be true that cattle of all kinds, oxen as well as cows, farrow cows and heifers as well as milch cows, are equally fond of it.

Another fact stated by your correspondent is, that milch cows are liable to this disease "even while they were well fed upon good English hay and Indian meal." And again he asks, "Why is it that oxen and dry cows do well, while milch cows fed from the same haymow and meal barrel, become poor and stiff, if it is not because they do not get phosphate of lime enough to make milk and support the bones?" If your correspondent will consult any analysis of Indian corn, he will find that the third largest ingredient contained in it, is this same bone-making phosphate of lime, being indeed more than seventeen per cent. of Indian corn. How he will reconcile this fact with his theory, I am at a loss to conjecture.

Again, he says, "Those farmers in Danvers whose cows have been affected by this disorder, have not been in the habit of raising stock, but have sold their calves to the butcher;" and he then goes on to show the probable amount of animal matter (meaning, as you, Mr. Editor, say he means, phosphate of lime) that has been taken in this way from the soil. Now, it is a fact, I believe, that few, very few farmers raise many calves in Essex county — nine tenths of the calves in this part of the county are sold to the butcher. If this exhausts the soil of phosphate of lime in our part of the county, why should it not exhaust it in another?

There are many more pertinent questions that might be asked in reference to this subject. But it is much easier to ask questions on a subject like this, than to answer them. I am free to confess that I feel the want of a better acquaintance with the whole subject — the diseases of animals and the analyses of various substances, and with other matters out of the range of ordinary experience and observation — a want, indeed, of just that kind of knowledge which an agricultural school would impart. This disorder in milch cows, whatever it may be, is one of those subjects which scientific men can best investigate and treat of — showing the cause and the remedy, and the reason of the remedy. All the facts in the case are important; but the inferences drawn from them must be legitimately drawn, to command assent. I am as yet unable to see that the (so called) bone disorder in milch cows is at all attributable to the want of enough phosphate of lime in their food — or, indeed, that their bones are any more affected than other parts of their system, when suffering under this disease. ALLEN W. DODGE.

Hamilton, *Feb.* 23, 1850.

For the New England Farmer.

NOTES OF THE SEASON.

Winter set in with just a sufficient fall of snow for good sleighing, about the first of December. The storm came off mild, and the snow remained quiet as it fell, so that it furnished fine opportunities for travelling, hauling wood, or, indeed, any business in which the farmer wished to engage. With small additions of snow, the sleighing continued fine until near the middle of the month, when in many places it was spoiled by the thaw, while in others, from the ice formed when the storm came off, it remained passable. On the afternoon of the 22d, a violent storm of snow came on from the south-east, from which the wind soon changed to north-east, and blew a tempest for three or four hours. This storm, as north-easters usually do, came off mild; but on the afternoon of the 24th it grew colder, and the 25th was a rough, cold, boisterous day. The morning of the 26th was the coldest of the season thus far; the mercury sunk 10° below 0.

January came in very mild, but not warm enough to waste the snow. Unusual mildness has characterized the month. The whole depth of snow which has fallen during the month is thirty-three and one quarter inches; greatest fall at one time, nine inches, January 18; — the gross amount of rain, ten and one quarter inches; — greatest fall on the afternoon of the 11th, three and one half inches. Rain and hail fell to the depth of two inches the 21st. The number of days on which storms fell during the day and night was sixteen. There were seven days of entire cloudiness, when neither sun, moon, nor stars were seen, during the month. There have been but few days on which it has not thawed some, and very frequently the snow has softened through. The coldest day was the 29th, and the coldest morning the 30th. The ground has been unfrozen in the woods through the month, and timber has been perceptibly frozen only once or twice, and that only for a short time. The singing of Phebe birds was heard on the 4th and 18th of the month, as blithe and gay as though spring had really given them welcome.

The winter, with so much fine sleighing, and so much mildness, has of course thus far been a fine one for business or pleasure. Farmers have improved it well, as fine wood-piles and other visible facts will fully testify. If it should continue so fine until the spring opens, it will have no claim to the character of a dead, unprofitable one, as our New England winters are so often called: we hope it will prove an agreeable exception to all such.

Yours truly,

Feb. 1, 1850. W. BACON.

For the New England Farmer.

MAKING SUGAR.

Mr. Editor: As the time for making maple sugar is approaching, a few remarks on the subject may not be wholly uninteresting, even though some of them may not be altogether new.

In this, as in every thing else, the profits depend very much upon the manner in which the work is done. Some fifty years since, all that was required in this part of the country was, a few troughs made by digging out one half of a poplar log, two or three feet long, and three or four iron kettles, which were suspended between two logs, in the open air. A chip was cut from the tree with an axe, sloping in such a manner that the sap would run to one corner of the cavity, and a spout was inserted with a gouge. At the close of the sugar season the troughs were inverted, and allowed to remain through the summer. Under such circumstances we shall be almost ready to admit the remark of an old gentleman not particular for neatness, that the sap from his trees was so sweet that he could not see to the bottom of it; and after adding the coals and ashes which would fall into it in boiling over an open fire, we shall readily perceive that the color of the sugar must have been decidedly rich.

Now, although there may not be any one at the present time who is as slovenly as this, yet there are some who do but little better, making sugar as near to the color of tar as to sugar made as it should be, and but little better in taste.

I do not pretend to any particular skill in this business, but for the benefit of those who know still less, I will endeavor to give a few plain directions, by which maple sugar may be made equal to the best brown sugar made from cane.

In the first place, suitable vessels should be provided to catch the sap; and for this purpose I prefer pine tubs, made smallest at the top, because they are less liable to leak than those made of other timber, and they will catch less water, in rainy weather, by tapering upwards. They should not be painted on the inside, as the paint is liable to come off, and give an unpleasant taste to the sap. Hemlock and spruce tubs are apt to leak, and butternut will give a dark color.

Spouts may be made of common sumac with the least labor, but perhaps pine ones would be neater. The trees should be bored with a five eighths bit, and the tubs suspended by a cord or small wire from the spouts, or hooks, made for the purpose. When the trees are so scattered that it is necessary to use a team to gather it, a tub may be made of any required size, with a square hole cut in the upper head large enough to admit a pail, and a lid fitted closely to this space.

The tub should taper towards the top in order to retain its hoops, and stand firm on the sled. The sooner the sap is gathered and evaporated the better. For this purpose "sap pans," as they are called, are much the most economical.

They are made of sheet iron, which should be of the best quality, from five to seven feet in length, from two to three in width, and from six to nine inches in depth, and stiffened by a large wire around the top, with two handles on each side, for convenience in handling. This should be placed on cast-iron bars, over a fireplace built of brick, the inside of which should be about half an inch on each side smaller than the bottom of the pan. About one third of this, next to the chimney, should be bricked up to within eight or ten inches of the bottom of the pan, as this will save fuel. A space the size of a brick should be left on each side, at the bottom, and about the middle of the fireplace, which will prevent it from filling up with coals, and may be stopped up at any time with a couple of bricks. With a pan five feet by two on the bottom, and three inches larger each way on the top, six barrels may be evaporated in a day, by filling it at night, and leaving a good fire under it. Care should be taken, however, not to leave too much fire, unless the pan is deep, as it sometimes "burns down."

The pan should rest on the bars at all points, as otherwise they will be exposed to be bent by the heat. Good dry wood is absolutely necessary, and soft wood, such as hemlock or pine, is best, as it makes less coals, and burns clearer. The sap should be boiled to a sirup as thick as will run through a woolen strainer after it is cold; it should then be strained, and allowed to stand over night to settle, after which it should be drawn off carefully as long as it runs clear. The white of eggs and saleratus, the quantity proportioned to the impurities contained in the sirup, should be mixed with it while cold, and it should be heated slowly until it begins to boil,

when it should be carefully skimmed, or, if it is wished to have it very pure, strained through a woolen strainer, and then placed over the fire and the boiling finished. It is usually boiled until it becomes quite hard, by stirring until it is cold; but the nicest sugar is made by evaporating until it will grain, and then, after letting it stand several weeks, draining off the molasses.

For the purpose of "sugaring off," as it is called, a sheet-iron pan is as much superior to any thing else, as for boiling the sap; but it should be made smaller, say three and one half feet long by two in width, and nine inches in depth, and put together in the best manner.

I almost forgot to allude to the article in No. 3 of the second volume of the Farmer, in which a correspondent of the Ohio Cultivator recommends pans with plank sides. Such pans were "all the rage" here a few years since, but those who made them, after using them a year or two, threw them aside, and obtained those made wholly of sheet iron.

W. F. B.

Ashfield, *March* 4, 1850.

For the New England Farmer.

AGRICULTURAL EDUCATION.

My dear Sir: For some days have I been anxiously waiting the action of the legislature in relation to the contemplated modes of promoting instruction in agriculture. I hope no local or sectional prejudices are to be brought in to waiver the minds of any in relation to it. I care not *where* the experiment is to be commenced, if it can be done under auspices most favorable. Let it once be fairly started, and some Lyman will appear to help it onward. If not, the state itself is abundantly able, and the yeomanry of the state should not be otherwise than willing.

I have been hoping to witness a more distinct expression of opinion from the hard hands themselves than I have yet seen. In the reports of the discussions at your agricultural meetings, it appears that the remarks are usually made by those who are more distinguished for speaking than for working. We want something from both. I care not how rough are the blocks, when first taken from the quarry; three chances to four, the roughest exterior covers the smoothest internal substance. Gems of purest water are often found surrounded with the most forbidding accompaniments.

Is it not true that one half or more, of those who occupy the seats in the halls of legislation, are ranked under the denomination of farmers? But have one half of these yet favored the public with their opinion? Ask any of these gentlemen, at their own fireside, and they will be ready to give you a reason—and oftentimes very sound ones too—for the faith that is in them. Why should they not be equally ready to give their reasons at the meetings mentioned? It cannot be that they are ashamed of their reasons; but it is that they are afraid they shall not express them with so much ease and propriety of phraseology as some of their more favored associates.

Whoever hesitates to give utterance to what he thinks, for this cause, fails in the duty he owes to himself and to the public. Of what use is a man's knowledge, if he will not let it be known? I would not be the advocate of much speaking, nor would I have any one presume to speak before he is prepared with something to say. But what I wish is, that each one would think for himself, and frankly and freely communicate what he thinks. In this way many valuable suggestions will be elicited, that can readily be moulded into form for use.

In some instances I have noticed, where gentlemen have turned their eyes from their lesson, and hazarded a remark that did not chime with all our notions, some have been disposed to sneer at their eccentricities. I doubt exceedingly the policy or propriety of any such movement. If a man makes his suggestions honestly, let him be commended, and aided in so doing. No true gentleman will ever presume to do otherwise. I fear that I have already prated too long, and perhaps some will think I have only been preparing an apology for my own condition. Truly yours.

Feb. 28, 1850.

For the New England Farmer.

PROFITS OF ORCHARDING IN MAINE.

Friend Cole: It may not be altogether uninteresting to the readers of the Farmer to learn something about the profits of this part of husbandry in Maine, in which, as a whole, such inattention has until recently been manifest. Notwithstanding the great majority of farmers in this state, who have paid any attention to the cultivation of fruit, have taken so little care of their orchards, as to receive but little, if any, profit, it is not the case with all. A neighbor of mine, who has a young orchard of about one acre, that has been well taken care of, informed me that he should realize about two hundred dollars for his crop of apples raised the past season. His trees have not yet come to maturity; consequently a greater amount of income may be looked for; yet it is difficult to conceive what other branch of husbandry, in this vicinity, could be made equally profitable, with so small an expenditure.

Another farmer in this county has a young orchard of about two hundred trees, of choice fruit, who, as I was informed, offered to sell his farm, valued at three thousand dollars, for what apples would grow upon it for fifteen years, to be transported from twelve to twenty-five miles, and the orchard kept in a flourishing condition.

Much more interest is now apparent among farmers in Maine than formerly, in the cultivation of fruit as a source of profit; and with many, less fears are entertained of the business being over-done.

D. TABOR.

Vassalboro', 2*d Mo.*, 1850.

For the New England Farmer.

"NATIVE TREES, SHRUBS, AND PLANTS."

Mr. Cole: I have been very much pleased, of late, to see the communications in the Farmer from Mr. Fowler, of Danvers, on the above-named subject. I think our native trees and shrubs have been neglected quite too long. I made up my mind last year that I would cultivate every native flowering tree or shrub that I could find; and having been employed some time in collecting them for nurserymen, I know where to find many of them; but there are some that I do not know where to find. Now, my object in writing at this time is, that, if there are others engaged in making such collections, that we can correspond with, and assist each other, by exchange or otherwise. Perhaps this may appear to some too much like an advertisement; if so, I hope they will take the benefit of it. I shall be glad to buy those I want, or sell those I may have to spare, or can procure. You may say to your correspondent N., of Danvers, that the hemlock here thrives well on poor, gravelly soils, and bears the shears as well as the buckthorn or arbor vitæ.

B. F. CUTTER.

Pelham, N. H., *Feb.* 25, 1850.

FACTS IN POTATO RAISING.

This being the season for planting potatoes throughout the Northern States, and the agricultural community, no doubt, thinking much of the rot, and the probabilities of its affecting the crop about being planted, I have thought best to record an interesting fact in regard to that apparently incurable disease.

In the spring of 1847, I turned under a sod on clay ground, and planted it with merino potatoes early in May. They grew well and yielded a heavy crop for the season. About the first of October I commenced digging, intending to bury them mostly in pits, on the field where they grew. I dug about fifty bushels, and buried them lightly in a round, shallow hole, when we were hindered from digging more at that time by a very heavy rain storm, and the ground was completely saturated by water. Those dug at this time presented no appearance of rot in any way, and I congratulated myself on having a sound crop of potatoes *once more*. After about two weeks had elapsed, and the ground became fit to work, I began digging again; but lo, the rot had appeared! Small white specks covered the skin of very many of the potatoes, and some few were already rotten. I knew they were *not to be saved*, and put them in small pits of twenty or thirty bushels each, intending to handle them over, sort them, and feed them up to the hogs and cattle as fast as possible. They rotted so fast that I lost over one fourth of the crop in two or three weeks, before I could feed them to my animals; and had they been left in the pit, I believe they would have all rotted before winter came; yet they had only a covering of rye straw, and about two inches of dirt. After I had disposed of these last small pits, I turned to examine the larger one dug and buried before the rain. I opened it about the middle of November, six weeks after it had been made, and to my surprise found but very few rotten. I handled them over, and buried them again, depending on them for seed the following year. They came out in the spring fine, and were very good for eating, being all that were left of about eight hundred bushels that grew on the same field of four acres.

Last fall, I dug early, and secured my crop before they were exposed to the heavy fall rains, and have lost very few by rot, scarcely any; and I conclude that early planting and early gathering are the best guards against the potato disease.

I have been confirmed in this opinion of late, by seeing a paragraph going the rounds in the newspapers, relating the success of the same management in some particular case; and I thought it worth while to give the above to the readers of the Dollar Newspaper. I have been sorely perplexed by this potato rot, and have never been able to find any other preventive than the simple one above mentioned. I shall try it again. B. L.

— *Dollar Newspaper.*

UNDERDRAINING MEADOWS WITH THE SUBSOIL PLOUGH.

Some of our best farmers have lately adopted, with entire success, the system of underdraining their heavy clay and wet meadows. This is done in the most summary manner, by attaching two yoke of good oxen, or two pair of horses, to a strong subsoil plough, which penetrates to the depth of fifteen to twenty inches below the surface. The sod is divided and separated by the plough to a distance scarcely exceeding one and a half inches, which immediately closes after the furrow; and if moist, when the operation is performed, the turf speedily unites, and not even a line is visible beyond a few days.

By this operation, a large underdrain is left at the bottom of the furrow, where the point, or nose, and wing of the subsoil plough has passed, and nearly of their size, which, in stiff soils, will remain open for years. On meadows where there are puddles of standing water, as is always the case on stiff soils after rains, the effect is instantaneous. If the plough has been started in a ravine, or low part of the meadow, (as it should be, so as to form a descent for the surface water,) when it passes through the little basins, the water vanishes as if by magic, and it is heard gurgling rapidly along its new-found aqueduct till it reaches the outlet. In addition to this more immediately perceptible effect, if the meadow thus drained be closely watched for a few weeks, and especially during wet weather, a marked improvement will be noticed over similar undrained meadows. The grass will be thicker, ranker, and more forward; it will mature quicker, and yield a heavier growth of sounder and sweeter forage.

The distance of these furrows, or drains, should vary according to the compactness or tenacity of the soil, and the frequency of the basins to be drained. In the heaviest soils, the drains may be advantageously run within ten feet of each other. If less adhesive, and few pond holes exist, the furrows may be a distance of twenty or thirty feet. No meadows, unless of the lightest kinds, will be injured by this operation, while all others will be decidedly benefited. This results from the imperceptible yet rapid drainage of the water which is held in excess by the soil, and the escape of which is so beneficial to the vegetation.

This operation has been adopted in England many years since, but with an implement considerably differing from the subsoil plough. It consisted simply of a pointed iron, some three inches in diameter at its largest end, which was connected with the beam by two strong, thin colters. The iron point was often sent three to four feet below the surface, and required a strong force to move it. This implement has been principally superseded, where first adopted, by the substitution of thorough and more permanent tile underdraining. — *Am. Agriculturist.*

WHAT IS A FAIR RENT FOR DAIRY COWS?

What is a fair average number of pounds of butter per annum to be expected from a common lot of dairy cows in this country?

A proprietor of land, in Orange county, proposes to rent me his farm next spring, with fifty cows, for which I should engage to give him a certain number of pounds of butter per head. Can you inform me what is a fair rent? I am satisfied with the terms of giving one third of the crop for rent, but fear to accept his terms for the cows.

A STRANGER IN AMERICA.

The average annual yield of pounds of butter per cow is a very uncertain matter. We doubt whether it exceeds one hundred pounds per cow in Orange county; though we believe that two firkins (one hundred and sixty pounds) are considered a fair average. We know one lot of ten cows that average three firkins each, equal to four hundred and eighty pounds per annum. We believe the most usual rent is one firkin for each cow. We saw fifty excellent cows the other day, for which the farmer gives the proprietor a rent of sixty-seven pounds each per annum. In this instance the farm is very productive for grass, and the dairy conveniences of the best kind. When this is not the case, the lessee cannot afford to pay so high a rent. — *Am. Agriculturist.*

FOUNTAINS.

Besides the great utility of a jet of water on ornamental grounds, it is one of the most refreshing and delightful things in the warm season. Fountains add greatly to the beauty of water jets. They may be had of various prices, from the simple vase, that costs but a few dollars, up to the large and magnificent, that are used in public places, that cost hundreds of dollars, according to one's taste, means, and situation. Any ingenious person may, by wood work, made in imitation of stone, or by bricks or stone, make very comely or beautiful fountains, at a very small expense.

A great many people have convenient means of having a jet of water on their ornamental grounds, at very small expense, especially in connection with water for the house and barn. What is more grateful to our feelings, on a hot summer's day, and in a dry location, than a stream or spring of water? And when it is thrown up in a jet, in an ornamental fountain, it is one of the most beautiful things that can gladden the heart of him who surveys a tasteful scene, in a garden, lawn, or other place of embellishment.

Literature and Economy. — If a young man has a taste for literature, and virtuous and intelligent society, his economy will be a thing of course; because his pleasures will not be expensive, and not dependent on the caprice of fashionable and extravagant associates.

Domestic Department.

For the New England Farmer.

How to live prettily in the country.* — It is possible that the leading word at the head of this chapter is not sufficiently comprehensive and emphatic to express all that is intended in what we here say of the farmer's wife in relation to good living. Admitting that to be the fact, it is not easy to decide what is living prettily, if it be not the fruition of the best fare at a very moderate expenditure. But, however excellent may be the smoking viands on the farmer's table, when duly prepared, much would be added to the zest with which they are received, if more attention were paid generally to the table furniture. It cannot be denied that a nice clean tablecloth, a supply of comely dishes, spoons, castors, knives and forks duly arranged, not only impart a relish for what is in the dishes, but make an impression that the family live prettily. Cheap as such articles are, it is surprising that they are not more abundantly provided. On the other hand, if the table furniture is in a ruinous condition — if it has been cast upon the table in wild disorder — if the whole indicate a sad estrangement from needful purifications, a relish for the repast is greatly impaired.

For such negligence there is no excuse. The excuse usually given, that none but the members of the family are present to witness it, is about as satisfactory as it would be for all the members of the family going to the table with unwashen hands because none but themselves are present to witness the indecency. It is a species of domestic economy with which we have no fellowship, that a family live like pigs when by themselves; and that all their efforts for good cookery, table furniture, and good fare, are to be produced only once in three or four months, when visitants are present to witness the display. We think families should have respect for themselves, for each other, as well as for those who occasionally partake with them. Such as make all their efforts in dress, or furniture, or in the culinary department, to please the eye or to secure the applause of strangers and doubtful friends, become miserably paid for their toils. They live for others, and not for themselves. They toil for others, and not for themselves. And this they do, not on the principle of Christian charity, but for a breath of popular favor, as empty as the wind. A very large portion of family expenditures, particularly in what is called fashionable life, is made wholly on this principle, for others to gaze upon — perhaps to ridicule; and not for the comfort or benefit of those who make them.

Allusions have been made, in other parts of this work, to the article of clothing appropriate in the country; but it may not be amiss to refer to it here, as one of the main features in living prettily. To dress neatly at all times, and yet so as to occasion no pecuniary outlay incompatible with the ordinary means in rural life, requires good taste and good management of a high grade, especially in the female head of the family. The mother who can clothe her children, as well as herself, in a style of comeliness — always in a condition to be seen by strangers without mortification, and without an expenditure to embarrass her husband — deserves of him, and of others, high commendation. This is one of the most valuable accomplishments of the housewife; and nothing in a greater degree contributes to the end made the subject of the present chapter. Where we see a family of children decently clad, clean, tidy, and of good breeding, especially in the more humble walks of life, we impromptu exclaim, They must have an excellent mother! The country district school, with its forty or fifty little boys and girls, attired in the manner described, furnishes one of the best specimens of the healthful simplicity, and the good domestic economy, in rural locations. Here the farmer's wife may gather laurels of unfading beauty and verdure; in comparison of which the jewels and the costly attire of the fashionable lady in the ball-room are contemptible and worthless. And, indeed, what are the fashionable accomplishments of the lady of rank — her music, her drawing, and her flippancy in French, to the ability of the farmer's wife to rear up sons that will be eminent statesmen and divines, and daughters that will hold the highest position in society?

While the farmer's wife is doing thus much towards living prettily, we have a few things to add for the farmer himself to do, in this good work. Who is to see that the Sunday wagon, which is to take the family to church, and now and then appears on a holiday, is free from mud and dust, and has been duly honored with a coat of varnish? The farmer himself, or his sons, if he have them of sufficient age. Who is to see that the court-yard and garden fence is in good repair, and made white with paint? Not the farmer's wife, but the farmer himself, or some one under his direction. Who is to see that the family mansion and the various out-buildings have been properly regarded; the hinges and fastenings upon the doors all sound; the paint kept bright; the windows free from broken glass; and no loosened weather-boards to become Æolian harps to the rats and mice, while the family is asleep? It need not be said, that this is the duty of the male portion of the household. Let not the male reader be displeased, if one question more be propounded on this subject. Lastly, then, whose duty is it to see that the walks about the mansion be made clean and hard, and the grounds contiguous to it be relieved from nuisances of every description? Surely, this is not the work of the farmer's wife, nor of his daughters. He should himself see that it is done. Hence, let it be said to the reader, male and female, Do respectively what is here set forth, and when the minister, or the doctor, or your relatives from the city, make you a visit, they will say to you in sincerity and truth, How prettily you do live!

JOHN L. BLAKE.

Orange, N. J., *Jan.* 30, 1850.

* From the manuscript of the Farmer's Every Day Book, by the Rev. John L. Blake, D. D., to be published early in the spring of 1850.

Youth's Department.

Thoughts for Young Persons. — In a previous communication I intimated a purpose to converse with you, briefly, upon the importance of *correct early habits*.

First, then: Such habits will appear important, when we consider their connection with *physical* advantage. Health is among our greatest blessings. Whatever, therefore, can lawfully be done to promote it, must be acknowledged our duty; and whatever impairs or destroys health, should be avoided as an evil, and regarded as an enemy.

Every sinful indulgence, every irregularity of habit, at a period when our physical natures are *so* susceptible of injury, must, in some degree, disadvantageously affect the constitution, weaken our energies, and hasten premature decay.

Young lads who smoke cigars, and chew the poisonous weed of which they are made, reap an

early harvest of nervous diseases, as well as render their persons filthy and disgusting in polite society.

Intemperance, also, despite all the efforts as yet made to abolish it, still has its votaries; and young boys, not twelve years of age, are not *too* young to become the victims of strong drink. Let the infant be fed with wine from the teaspoon — the prattling child hold the gin glass in his own little hand — let the youth drink freely the well-mixed brandy and rum, and bloat upon copious draughts of strong beer, nor change his course up to manhood, and at the age of twenty-five, you may behold in his person the infirmities of age.

Eating late at night is also injurious to health. After having taken regular meals through the day, and the hour has arrived when the head should be safely pillowed in the arms of "nature's sweet restorer," the young lad strays away (and some old lads) with his associates to the oyster saloon, and there imposes upon his already weary digestive organs the additional task of oysters, clams, nuts, pies, cakes, &c. Now, who will be at all surprised if the remainder of the night is spent in restlessness and frightful dreams? The number is few, indeed, that can retire upon a full meal and sleep without interruption. Quiet rest is essential to the development of the physical powers; and to deny that these and similar practices do waste the bodily energies, is to contradict philosophy and experience. Admitting then that such habits do us harm, it is not unreasonable to infer that great advantage must accrue to him, who, while in his youth, gives strict attention to rules of temperance, and whose hours for labor, recreation, and repose, are carefully prescribed. He who has no *system* of living, is like a noble ship at sea without chart or compass, driven before the ever-varying winds of appetite and passion. If he do not split upon some rock of error, or go in pieces upon some rugged shore of disease and pain, or float dismasted, unmanageable, and useless, upon the bosom of life's great deep, he will at least make a hazardous voyage, and reach the haven of longevity, as the soldier escapes unscathed from the field of bloody conflict, where ninety-nine of a hundred have fallen. Let us then, my young friends, estimate the true value of health, and carefully endeavor to promote it by every suitable means. In a word, let our every act be but a part of a *complete system of habits and duties*, and it can scarcely be possible that we fail to enjoy health, and secure its attendant blessings, down to a good old age. More anon. M. H. A.

Hallowell, *Feb.* 4

— *Maine Cultivator.*

Health Department.

Remedy for Asthma. — An individual who has suffered much from asthma, and who has in vain sought relief from regular physicians, wishes us to give publicity to the following remedy:—

"Procure common blotting paper, and thoroughly saturate it in a solution of nitre, (saltpetre,) and let it be carefully dried by the fire, or by exposure to the rays of the sun. On retiring at night, ignite it, and deposit it, burning, on a plate or square of sheet zinc or iron in your bedroom."

In many cases, it is said, this has enabled persons painfully afflicted to enjoy their rest. — *Maine Cultivator.*

Hundreds of nights within the last five years, when the bitter pain widened the time in proportion as respiration became more difficult — hundreds of nights has the difficulty been lessened by a suspension of what seemed an almost interminable agony in the smoke of burning nitre. As a means of averting present suffering, the subscriber can recommend, from his own experience, the use of saltpetre almost identically prepared as above. Many times has he lain down in a smoke condensed seemingly to the smothering of a common healthy breather, and found relief from the worst suffering. — *Hon. Isaac Hill.*

How to preserve Health. — Medicine will never remedy bad habits. It is utterly futile to think of living in gluttony, intemperance, and every excess, and keeping the body in health by medicine. Indulgence of the appetite, indiscriminate dosing and drugging, have ruined the health and destroyed the lives of more persons than famine or pestilence. If you will take advice, you will become regular in your habits, eat and drink only wholesome things, sleep on a mattress, and retire and rise very regularly. Make a free use of water to purify the skin, and when sick take counsel of the best physician you know, and follow nature.

Mechanics' Department, Arts, &c.

Difference between Iron and Steel. — Steel is iron passed through a process which is called cementation, the object of which is to impregnate it with carbon. Carbon exists more abundantly in charcoal than in any other fusible substance, and the smoke that goes up from a charcoal forge is carbon in a fluid state. Now, if you can manage to confine that smoke, and put a piece of iron into it for several days, and heat the iron at the same time, it will become steel. Heating the iron opens its pores, so that the smoke, or carbon, can enter into it.

The furnace for this purpose is a conical building of brick, in the middle of which are two troughs of brick or stone, which hold about four tons of bar iron. At the bottom is a large grate for the fire. A layer of charcoal dust is put upon the bottom of the troughs, then a layer of bar iron; and so on alternately, until the troughs are full. They are then covered over with clay, to keep out the air, which, if admitted, would prevent the cementation. Fire is then communicated to the wood and coal with which the furnace is filled, and continued until the conversion of the iron into steel is completed, which generally happens in about eight or ten days. This is known by the blisters on the bars, which the workmen occasionally draw out in order to determine. When the conversion is completed, the fire is then left to go out, and the bars remain in the furnace about eight days more, to cool.

The bars of steel are then taken out, and either sold as blistered steel, or drawn to a convenient size, when it is called *tilted* steel. German steel is made out of this blistered steel, by breaking the bars into short pieces, and welding them together, drawing them down to a proper size for use.

Substitute Paint Varnish. — Recipe for a composition to economize paint.

To one pound of gum shellac add four ounces of borax and two quarts of water. Boil till dissolved. These proportions may be varied according to the quality of the materials used. After the paint is prepared for use, add nearly an equal quantity of the above, and stir until it unites. The paint will then be thicker than before, and must be reduced with oil or spirits of turpentine. The paint will now cover twice the surface as at first.

CHEMISTRY AND VEGETABLE FOOD.

It is the object of chemical research not merely to explain known facts, but to remove misapprehensions and correct erroneous opinions. The recent determinations of the proportion of nitrogen contained in wheat have served both these purposes. Thus it was long asserted and believed, that the wheat of warm climates always contained more nitrogen, and was consequently more nutritive and of higher money value, than the wheat of our temperate countries. But later researches have corrected this hasty deduction; and have placed our home wheat in its proper position, economical and nutritive, as compared with the wheat of India, of Southern Australia, or of the Black Sea. Again, the British miller usually requires a portion of foreign wheat to mingle with our native grain, both to make it grind more easily, and to satisfy the baker with a flour that will stand much water. The pastry cook and the macaroni maker also demand of him a flour which will make a peculiarly adhesive dough. These several qualities were supposed to be inherent only in wheat which abounded, in an unusual degree, in gluten, and which was produced under specially favorable conditions of soil and climate. Modern chemistry has the merit of gradually removing these misapprehensions, and of directing us to the true causes of all such differences. So in regard to the superior amount of muscle-forming matter supposed to exist in wheat in comparison with other kinds of native grain, such as the oat. Experience had long taught the Scotch that oats, such as they grow in their climate, are a most nutritious food; but the habits of the more influential English, and the ridicule of a prejudiced lexicographer, were beginning to make them ashamed of their national diet. Chemistry has here stepped in, and by her analysis of both, has proved not only that the oat is richer in muscle-forming matter than the grain of wheat, but that the oatmeal is, in all respects, a better form of nourishment than the finest wheat flour. But, what is more, chemistry has brought us acquainted with the value of parts of the grain formerly considered almost as waste. The husk or bran of wheat, for example, though given at times to pigs, to millers' horses, and other cattle, was usually thought to possess but little nutritive virtue in itself. Analysis, however, has shown it to be actually richer in muscular matter than the white interior of the grain. Thus the cause of its answering so well as food for cattle is explained; and it is shown that its use in bread (whole meal bread) must be no less nutritive than economical. The true value of other kinds of food is also established by these inquiries. Cabbage is a crop which, up to the present time, has not been a general favorite in this country, either in the stall, or for the table, except during early spring and summer. In North Germany and Scandinavia, however, it appears to have been long esteemed; and various modes for storing it for winter use have been very generally practised. But the cabbage is one of the plants which has been chemically examined, in consequence of the failure of the potato, with the view of introducing it into general use; and the result of the examination is both interesting and unexpected. When dried so as to bring it into a state in which it can be compared with our other kinds of food, (wheat, oats, beans, &c.,) it is found to be richer in muscular matter than any other crop we grow. Wheat contains only about twelve per cent., and beans twenty-five per cent.; but dried cabbage contains from thirty to forty per cent. of the (so called) protein compounds. According to our present views, therefore, it is preëminently nourishing. Hence, if it can but be made generally agreeable to the palate, and easy of digestion, it is likely to prove the best and easiest cultivated substitute for the potato. And no doubt the Irish kolcannon (cabbage and potatoes beat together) derives part of its reputation from the great muscle-sustaining power of the cabbage — a property in which the potato is most deficient. Further, it is of interest —of national importance, we may say — that an acre of ordinary land will, according to the above result, produce a greater weight of this special kind of nourishment in the form of cabbage than in the form of any other crop. Thus twenty tons of cabbage, and good land, will produce, in good hands, forty tons of drum-head cabbage on an imperial acre — contain fifteen hundred pounds of muscular matter; while twenty-five bushels of beans contain only four hundred pounds; as many of wheat only two hundred, twelve tons of potatoes only five hundred and fifty, and even thirty tons of turnips only a thousand pounds. The preference which some farmers have long given to this crop, as food for their stock and their milk cows, is accounted for by these facts; while, of course, they powerfully recommend its more general cultivation as food for man. We may add, while speaking of cabbage, that it is known to be so exhausting to many soils, that wheat will scarcely grow after an abundant crop of it. It springs up, indeed, but yields little straw, and early runs to a puny ear containing little grain. But the same analysis, which shows the value of the cabbage crop, shows also what it takes from the soil; and explains therefore the kind of exhaustion produced by it, by what special applications this exhaustion is to be repaired, and how repaired at the least cost. Again: In many parts of our island furze or gorse grows up an unheeded weed, and luxuriates in favorable spots, without being applied to any useful purpose. In other districts, however, it is already an object of valuable though easy culture, and large breadths of it are grown for the feeding of stock, and yield profitable returns. Chemical researches show its nutritive property to be very great. Of muscle-building materials, it contains, when dry, as much as thirty per cent., and is therefore, in this respect, superior to beans, and inferior only to the cabbage. Under these circumstances, we can no longer doubt the conclusions at which some experimental feeders had previously arrived, nor the advantage which might be obtained from the more extensive cultivation of gorse on many poor and hitherto almost neglected soils. The history of the tussac grass is familiar to most persons. A native of the Falkland Islands, where it grows in the large tufts or tussacs from which it derives its name, it is described as fattening in an extraordinary manner the stock, and especially the horses, which graze upon it. Some of the seeds which have been lately imported into this country having vegetated, the grown-up plants have been analyzed; and it was found, "that the proportion of muscle-forming ingredients in the dried grass is as great as in the best samples of wheat, oats, or barley; and therefore the grass is of a very nutritious character." Thus its alleged feeding qualities are confirmed; and we may look forward to seeing it, on further trial, domesticated in Great Britain. The money value of the above investigations is obvious enough, and we do not dwell upon them. But the same branch of chemical inquiry deals with questions of a larger and higher kind. — *Edinburgh Review.*

The world is but one great family. What then is this narrow selfishness in us, but relationship forgot?

The making of turpentine has commenced on some of the pine forests of Florida, and has proved very profitable.

POTATOES.

Mr. Editor; I appear once more before the readers of the *Germantown Telegraph*, on a topic which all will acknowledge to be one of importance to the farmer — that of potato raising. I will give you our mode of culture, down here, where the potato may be regarded as a staple product, and where its cultivation is as well understood as perhaps any where else on the globe.

Potatoes planted early generally succeed better and produce more liberally than when planted late. There are various methods of cultivating this root practised, but I am aware of none that is preferable to the following: —

Break up sward land in the spring, roll, harrow thoroughly, and spread on your manure in liberal quantity, harrow again, and having furrowed, place some good compost in the drills, drop your seed, and cover. The compost should be fine, consisting of rotten leaves, chip manure or muck — say one load; house ashes, ten bushels; salt, four bushels; lime, five bushels; gypsum, one and a half bushel; nitre, twenty lbs.; the whole to be thoroughly incorporated and reduced, by repeated turnings, to a perfectly homogeneous mass. One shovel full of this in every hill will be sufficient. The potatoes may be covered with an instrument made by fastening two pieces of plank, six inches wide, and three feet long, together, in the form of an A, and drawing it lengthways of the rows by means of traces secured to the wide end. A cross-piece is secured to the upper part, into which handles are inserted for its guidance, similar to those attached to the hoe-harrow and cultivator. This instrument, which may be constructed in a few hours by any field hand who possesses sufficient ingenuity and artistic skill to "whittle a Yankee shingle," works admirably, and is one of the most perfectly operating labor-saving implements to be found on the farm. If necessary, the bottom of the sides may be scarfed away, say from one half the distance from the fore part to the hind part, reducing the sides by a gradual taper to one half or one third their width at the hind end. This will leave the rows over which it passes elevated somewhat in the middle, or just over the seeds — an arrangement sometimes necessary, especially where the furrow plough has excavated but a shallow trench, or where the soil is too close or compact, from recent rains or other causes, to admit of the coverer gathering sufficient earth competently to inhume the seed. By "shoeing" the coverer, which is effected by attaching two strips of iron to the lower edges of the triangle, and allowing them to project some two inches or so from the edges, inward, with a slight inclination downward, the entire surface between the rows will be "scraped," and the soil thoroughly loosened and refined. As soon as the plants make their appearance, a liberal dressing of lime and plaster, or house ashes and plaster, should be applied broadcast, and the cultivator introduced to arrest the development of weeds. No ploughing or harrowing should be allowed where the cultivator can perform its sufficient work; nor should there be any — not even the slightest — elevation permitted about the plant. Some, perhaps, will question the philosophy of this theory, as it is a practice to which they have always been accustomed; but this is neither here nor there in establishing the truth or falsity of the usage. Where a high conical hill is made around any vegetable, it can only serve as a drain or ditch, by which water is conveyed *from* the vegetable and into placers — the interstices between the rows, where it is not immediately wanted, and of course can effect only a remote advantage; but a flat surface allows the rain to penetrate the soil immediately about the roots, and to exert its invigorating influences at once and with power upon the plants. Besides, in a dry time, the gathering of soil into hills, by exposing a greatly increased surface, augments the effects of drought. This no one can doubt who reasons upon the subject candidly.

In cultivating the potato, many adopt a very loose and reprehensible method; they seem to think that it is a hardy vegetable, and will therefore "fight its way through," even though left alone and unassisted; but this is an error, for although the potato will sprout, push upward to the inviting air, and form tubers, even when unaided, yet its productiveness and value, as a field crop, must ever intimately depend upon the care and cultivation it receives. No production better repays extra attention, none is more essentially injured by neglect. Weeds should never be permitted to overtop the vines, or indeed to corrupt the soil devoted to this root. They are no less injurious in the potato field, than in the garden, or among the corn crop; and where they cannot be thoroughly extirpated by one or two hoeings, the operation should be repeated till they are completely eradicated, and the soil emancipated and cleansed.

A NEW ENGLANDER.

Near Claremont, N. H., *Jan.* 26, 1850.

— *Germantown Telegraph.*

CAUSE AND EFFECT.

In writing for the public, farmers should be careful to give nothing but the result of exact experiment on doubtful subjects. Too many, in their anxiety to discover the cause of diseases in grain, such as *smut* in wheat, or the *rot* in potatoes, judge from a single imperfect experiment; whereas, such subjects require the most careful examination.

Thus, a late writer in the "Newspaper" supposes he has discovered the cause of smut in wheat, from the single fact, that after sowing oats that had been harvested before fully ripe, and his crop was much injured with black, or smut oats, that of course the same must be true in regard to smut in wheat, and closes by asking, "*If this is not the true cause, what is?*" Now, he should remember that it is often much easier to ask questions than to answer them. Now, it is all right to call attention to such facts; but before coming to any conclusion, it would be better to make a few more experiments, and then find whether smut in wheat and smut in oats is the same disease, and arises from the same or similar causes. My own experience is rather opposed to his theory, having last season harvested both my oats and wheat rather greener than usual, and finding this season both remarkably clear of smut. Any thing calculated to throw light on such subjects should be carefully noted, and repeated experiments made before coming to a conclusion, as "appearances are often *very* deceptive."

Another subject to which I would like to call attention is, that in giving the result of experiments with lime, manure, &c., more care should be taken to state what kind of soil it has been applied on, as there is so great a variety of soil and such a vast difference in the component parts of many, that farmers are often led into error in this way. For instance, some one applies lime to a soil in which it is naturally deficient, and of course with good effect — the result is known; and others again spend time and capital in applying it to a soil in which nature has deposited a great sufficiency, and the astonished farmer is able to see no effect whatever.

Such has been the result in our neighborhood, where the soil is strongly impregnated with lime; although applied in different ways, not the slightest effect has been produced on the crops since raised on the land to which it has been applied. J. P.

— *Dollar Newspaper.*

VALUE OF CORNSTALKS AS FODDER.

The question is often asked, if cornstalks are of much value as fodder. We answer, without fear of contradiction, that if well saved and properly used, they are fully equal to the same weight of hay.

Last year we fed three yoke of oxen on cornstalks, with the addition of no more feed than we should have used with the best English hay. Our mode of preparing them was as follows: —

The stalks were cut with the ordinary cylindrical machine, in pieces of half an inch in length, and placed in a hogshead. Three gallons of boiling water, containing one gill of salt, was thrown upon them, and the top of the cask covered with a blanket. The steam arising from the hot water swelled and softened the cornstalks to their original size; and when cold, a little ground feed was thrown upon them, and thus fed to the cattle.

The oxen worked hard all winter, each yoke bringing three loads per day, of more than a ton each, from a distance of three miles, and in the spring they were as well conditioned as in the fall.

When corn is raised to be pulled while green for boiling, the stalks will contain much more saccharine matter than when suffered to ripen. The stalks should be permitted to grow after the corn has been pulled.

Cornstalks may be grown for fodder, with much greater strength than hay, and entirely capable of supplying food for animals, without the addition of grain of any kind; and for milch cows, it would be equal if not superior to any other food. We refer to the method adopted by Mr. Webb, of Delaware, for the purpose of making sugar.

As soon as the ears appear, pinch them off, and repeat this treatment twice; the consequence will be, that the juice of stalks thus treated will contain as much saccharine matter as that of the sugar-cane; indeed, we know of one experiment being made, which gave the juice of eleven degrees Beaume, while the juice of the sugar-cane as grown in Louisiana is but nine degrees Beaume. This mode of growth, however, will only answer in such districts as, from want of market, find it unprofitable to raise corn for the ears. When this mode is adopted, the planting should be early, for the stalks will necessarily require a hot sun to cure them. If cut too late, the sugar contained in the juice will be acid before they are dry. — *Working Farmer.*

THE PROPER MODE OF FEEDING CATTLE.

An English writer observes that two great points in feeding cattle, are regularity and a particular care of the weaker individuals. On this last account, there ought to be plenty of rack room, that too many may not feed together; in which very common case the weaker are not only trampled down by the stronger, but they are worried, and become cowed and spiritless; than which there cannot be a more unfavorable state for thrift; besides, they are ever compelled to shift with the worst of the fodder. This domineering spirit is so remarkably prevalent among horned cattle, that the writer has a hundred times observed the master beasts running from crib to crib, and absolutely neglecting their own provender for the sake of driving the inferior from theirs. This is, much oftener than is suspected, the chief reason of this difference in a lot of beasts after a winter's keep. It is likewise, he says, a very common and very shameful sight, in a dairy of cows, to see several of them gored and wounded in a dozen places, merely from the inattention of the owner and the neglect of coupling the horns of those that butt. The weaker animals should be kept apart; and in crib feeding it is in some cases a good method to tie up the master beasts at their meals. Dr. Dean says there should be more yards than one to the barn where divers sorts of cattle are kept. The sheep should have a yard by themselves, at least; and the young stock another, that they may be wholly confined to such fodder as the farmers can afford them.

THE MILKMAID'S EAR GUARD.

Every one who has had "*gumption*" enough to milk a cow, has experienced the miseries of a rap, now and then, over the ears, and sometimes in the face and eyes, by that effectual fly-brusher — the cow's tail. This is most troublesome in fly-time; but sometimes a cow, either being naturally ticklish, or uneasy from some other cause, will use her *lash* in midwinter, when that *appendage* is not in a condition to give you a very favorable idea of its savory or odoriferous condition. We have often thought that some simple mode of obviating this evil would be of great service to milkers; but we could never hit upon any thing that suited us, and so we have always, when milking, borne the infliction like a martyr. Being at Col. Swett's, in Hartford, Oxford Co., not long ago, we saw his son, while milking, use one of the most simple, and at the same time effectual contrivances for protecting your ears, in such cases, that you can imagine. On inquiring into the origin of it, we were informed that it was believed to be first used (in that vicinity at least) by the late John Allen, of Peru. It is made in the following manner: —

Take a rope of good size, say that which is called inch rope, and cut a piece off about six feet long. Tie the ends together, and make a loop or hoop. Spread this open, and throw it over the cow's back in such way that the upper part of it will lie across the loins and forward of the hip-bones, and the hinder part fall over and enclose the rump of the cow, and hang down about half way from the root of the tail to the hocks and gambrel joints.

This is all, and poor mully will find, on whisking her tail, that there is a limit to its circuit; and, although it is neither tied nor chained, nor slavery *entailed*, the "area of its freedom" is nevertheless essentially *curtailed*, and the milkmaid's ears no longer assailed. — *Maine Farmer.*

TREE PLANTING.

Among fruit trees, the apple, the quince, and the peach emit roots much more freely than the pear, plum, and cherry — and in light, sandy, friable soils, form much more easily than in stiff, moist, adhesive soils. These are familiar facts to all cultivators, and they serve as a guide in planting.

But under all circumstances it is unsafe to plant a tree without reducing its branches in such a manner as to compensate for the loss of root, and general derangement inseparable from removal. Let us take, for instance, an apple-tree, six feet high, with a fine head and numerous side branches. This tree was growing vigorously in the nursery, with its roots spread out and well at home in the soil; but the tree is dug and pulled up, part of its large roots are cut off, many of the smaller ones are dragged off, and before it is planted a great many more are dried or rotted and killed off. Thus the tree is left minus a great portion of its feeding roots, on which the top must depend for support. Its nice balance, which nature and art gave it in the nursery rows, is

destroyed, and without some compensation it cannot live — at least it cannot grow for a long time to come. The opening buds seek for nourishment, but after the little stock laid up previously is exhausted, they can find none, and perish they must.

If a tree has attained a considerable size, and has a branching head, these branches should be cut back according to circumstances. A tree with large and healthy roots, and abundance of fibres, will sustain a much greater amount of head than a tree with short, poor, or badly mutilated roots, and few fibres. Apples, quinces, or peaches will bear more head than pears or plums, and so on. Trees taken fresh from the soil and replanted do not require the same degree of cutting as those that have been transported to a great distance. Trees that are planted in a light, mellow, warm, soil, favorable to the formation of roots, will require less cutting than those planted in a colder, stiffer soil, where roots will be emitted slowly. Trees taken up with the earth around the roots, and evergreens are the only exceptions. These are a few of the circumstances to be well considered by every one who plants a tree.

Pruning and cutting back, must not only be done, but done well. It is next to manslaughter to cut and slash the branches of a tree with an old rusty saw-edged jackknife. It is nothing else than tree-slaughter. A pruning knife should be as sharp and smooth on the edge as a razor. When a branch is to be wholly removed, it should be done smoothly, close to the trunk or limb on which it grows. If a limb is merely to be shortened, it should be cut close to a good plump and healthy looking bud, that promises to make a vigorous shoot. If the future shoot is desired to grow erect, the bud should of course be on the upper side of the branch cut; and if desired to take a spreading or horizontal direction, the bud should be on the under side. The object in cutting close to the bud (not so close as to injure it, is to avoid the piece of dead wood that must remain, if cut between two buds. Then the balance of the tree must be thought of. If the branches are left longer on one side than on the other, the tree will inevitably grow one-sided; the shoots on one side will be more vigorous than on the other, and this will be another disaster. This is as plain as we can at present make the matter in a few words. To sum it up, in short, we would say: —

First. Place the roots of your trees in a soil favorable to the formation of roots.

Second. Reduce the heads in such a manner as to correspond with the character of the tree, the condition it is in, and the season and situation in which it is planted.

Third. In every operation exercise reason and care, for it is astonishing what even the unpractised hand will do, if he will but think. — *Genesee Farmer.*

HOMESTEAD EXEMPTION.

The following arguments in favor of exempting a man's homestead from liability, we find in one of our western exchanges: —

"There are two leading reasons which ought to have great weight. The first is, that the direct tendency of exempting the homestead from debt, is to preserve the integrity of the family, both in society and property. It will keep the family together by keeping them at home — safe from all the storms of adversity. Now, the state which legislates has a deep interest in maintaining the unity and prosperity of the family. The whole is made up of its parts. Society is founded in the family. If no family is driven out to seek a precarious support — the state will have no paupers to maintain. In every state of society, no matter what the laws, the solvent must maintain the insolvent. In both the natural and Christian state of society it is the duty of the members of a family to do this to one another. If, then, the family can be kept united, and have a home to rely upon, it is almost certain they will be able to do it.

"There is another reason almost equally strong, and which concerns the political health. There is no independence, strictly speaking, to be relied upon among people who have neither a homestead nor the means of getting one. Many of our laborers do get homesteads, saved from the profits of their labor. This should be encouraged — the whole community should be made independent, if possible."

WONDERS OF GEOLOGY.

More than nine thousand different kinds of animals have been changed into stone. The races or genera of more than half of these are now extinct, not being at present known in a living state upon the earth. From the remains of some of these animals, they must have been larger than any living animals now known upon the earth. The Megtherium, (large beast,) says Buckland, from a skeleton nearly completed in the museum in Madrid, was perfectly colossal. With a head and neck like a Sloth, its legs and feet exhibit the Armadillo and Ant-eater. Its fore feet were a yard in length, and more than twelve inches wide, terminating by gigantic claws. Its thigh bone was nearly three times as thick as that of the elephant; and its tail, nearest the body, was six feet in circumference. Its tusks were admirably adapted to cutting vegetable substances, and its structure and strength were intended to fit it for digging in the ground for roots, on which it principally fed.

FIELD AND GARDEN ROLLERS.

These implements are coming to be considered almost indispensably necessary, in an improved state of cultivation. They are most successfully used on lands that are free from stones and stumps, to smooth the uneven surface; and not only so, but their utility is also important in breaking the lumps of baked earth which obtain in clayey soils; also in smoothing and levelling grounds that have been newly sown with grain, or that are to be laid down with grass, tending to the production of greater crops of grass at a cost of much less than would otherwise be necessary.

The use of the roller on dry grounds sown with grain, causes the mould to enclose the seed, while it prevents the moisture from evaporating sooner than it otherwise would. The rolling of land in tillage, should be done when the ground is sufficiently dry to prevent it from adhering to the roller; but where grass lands are to be subjected to the process, it should be early in the spring, and when the earth is soft and wet.

Rollers may be of various sizes, according to the team by which they are drawn, as the weight must be increased in proportion to the size, consequently requiring a proportionate power to move them. The most suitable size for one horse, or for one yoke of oxen, is from twenty to thirty inches in diameter; and the most perfect roller we know of, is made of a series of cast iron rings, or rather wheels running on a large wrought iron shaft, which can be made of any required length or size, from a single section or ring, to use by hand on gravel walks, up to the various dimensions required for field work which are constructed with a frame or carriage, so as to form a box, or trough, running the whole length of, and both before and behind the roller, and intended to carry any additional weight, such as stones, &c., when it may be required. — *Worcester Transcript.*

NOTICES OF PUBLICATIONS.

Annual of Scientific Discovery, a Year Book of Facts in Science and Art, exhibiting the most important Discoveries and Improvements in Mechanics, Useful Arts, Natural Philosophy, Chemistry, Astronomy, Meteorology, Zoölogy, Botany, Mineralogy, Geology, Geography, and Antiquities, with other useful matter; by David A. Wells, of the Lawrence Scientific School, Cambridge, and George Bliss, Jr. — In preparing this work, the authors have had excellent advantages, by access to all the scientific works of this country, and of the principal countries in Europe, and by the counsel and contributions of some of the ablest scientific men in the country. They have performed their task in an able and faithful manner, and we recommend the work as one of great interest and utility. Published by Messrs. Gould, Kendall, & Lincoln, 59 Washington St. 400 pages, 12mo. The mechanical part of the work is neatly executed.

Hayward's Vermont Gazetteer. — This work is not only useful and interesting to the people of Vermont, but to every man of business, and to every family, particularly in New England. The convenient arrangement of a gazetteer renders the valuable information it contains readily accessible, and a work of this kind is as indispensable to a man of business or of general information, as is a dictionary to a man of letters.

The Common School Writing Book, by O. G. Badlam. New York, Collins & Brother; Boston, Reynolds & Co., 27 Cornhill. — This is the first work that we have examined that defines the breadth of letters, and the spaces between them, by fine oblique lines, leading the scholar to a uniformity of letters and spaces, until he forms the habit, and then these guides are omitted. It appears to us that this novel system possesses peculiar advantages, and we would commend it to the particular consideration of writing masters and teachers generally.

The American Phrenological Journal and Miscellany, by O. S. and L. N. Fowler. New York, Fowlers & Wells, publishers. — This work is monthly, about the size and form of the N. E. Farmer, at $1 00 a year. It makes a very neat volume. Besides the peculiar science to which it is particularly devoted, it is highly interesting to every intelligent man, as a work of philosophy, education, &c., treating of the qualities of the mind, its powers, liabilities to injury, and the importance of correct mental training.

The Water-Cure Journal, and Herald of Reforms, in the same form, at the same price, and by the same publishers, is among the most valuable periodicals of the day. It commends a system that is too much neglected. There is no remedy for disease so sovereign — there is no other thing, simple or compounded, that comes so near being a panacea as water. It may be used in a thousand ways, and by its variety of temperature from solid ice to the boiling state, it may be adapted to almost every disease, and to patients of every degree of strength, from the most robust to the most feeble invalid. Thousands, yea, millions of patients are paying for medical aid and remedies, and lingering long with disease, which water, that every where abounds, properly applied, would wash away. We are particular on this subject, as the people of this country are afflicted with hydrophobia — a dread of water.

AGRICULTURAL SONG.

BY JOHN PALMER.

Plough deep to find the gold, my boys!
Plough deep to find the gold!
The earth hath treasure in her breast
Unmeasured and untold.

Clothe the mountain tops with trees,
The sides with waving grain!
Why bring over stormy seas
What here we may obtain?

O, Britain need not bring her bread
From countries new or old,
Would she but give the ploughsharo speed,
And DEPTH to find the gold!

Earth is grateful to her sons
For all their care and toil;
Nothing yields such large returns
As drained and deepened soil.

Science, lend thy kindly aid,
Her riches to unfold;
Moved by plough or moved by spade,
Stir deep to find the gold!

Dig deep to find the gold, my boys!
Dig deep to find the gold!
The earth has treasures in her breast
Unmeasured and untold.

Thomas Fuller, the historian, so well known for his quaint sayings and bright points, was one day riding with a gentleman named Sparrowhawk. The name roused his fancy, and he asked him what was the difference between "a Sparrowhawk and an owl." "Why, sir," replied his companion, "the owl is *fuller* in the head, *fuller* in the body, and *fuller all over*."

Age and Perseverance. — It is a fault too much practised by both sexes to indulge in listlessness, and a kind of hopeless languor, at the decline of life. Our energies and talents were given us to persevere to the end.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, MARCH 30, 1850. NO. 7.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

DISEASES OF ANIMALS.

FEB. 14, at the agricultural meeting, Hon. Seth Sprague, of Duxbury, was called to the chair, and the above subject was discussed. Mr. Sprague remarked, that as there was a great want of skill in treating diseased animals, it was better to leave them to nature, than run the risk of injuring them by administering medicines injudiciously.

Dr. G. H. Dadd, veterinary surgeon, of Boston, said that he approved of the remarks of the chairman. He was in favor of a reformed practice in treating animals, instead of bleeding and other harsh modes, as had been the practice of the old school. He then read from a work which he was about to publish, showing the impropriety and the dangerous effects of bleeding, which had been practised to a great extent, and which was recommended generally in foreign works on this subject. He enumerated a large number of diseases for which bleeding was recommended; and he contended that as the principle of life was in the blood, the extraction of this fluid tended to death. Instead of this harsh and dangerous practice, means should be used to promote the general circulation of the blood, and produce an equilibrium over the whole system.

Col. Thayer, of Braintree, said that he had known cases in which he thought that bleeding was useful.

Mr. French, of Braintree, mentioned the case of a gentleman who was unwell, and wished to be bled; his physician refused; he was afterwards bled, and recovered.

Mr. Cole, of the N. E. Farmer, said that case of indisposition doubtless originated from too high living; and had the patient been abstinent, and lived a few days on gruel or other light diet, he would doubtless have recovered without the loss of blood. He said that we should depend on good management, as to pure water and air, wholesome food, protection from exposure, exercise or moderate labor, rather than medicine, to keep animals in a healthy condition. He agreed with Dr. Dadd, generally; bleeding was a harsh practice, usually unnecessary, and destructive to health. Frequently the modes of doctoring animals, and the powerful and harsh medicines given, would destroy healthy animals. Instead of this, mild means and safe medicines should be used. The restorative powers of nature are great, and when the animal is placed under favorable circumstances, it will generally recover.

Mr. Buckminster remarked that he liked the views of Dr. Dadd. He thought that medicines given to beasts generally do more harm than good. In most cases mild catharties should be given, to keep the bowels open, and the patient left to nature.

Dr. Dadd made some further remarks on the general treatment of diseases, recommending mild and safe means, and the use of such simple medicines as may be found in the forests and the field.

Mr. Wm. Parker, of Boston, stated a case of a horse, in which bleeding seemed to give immediate relief.

Dr. Dadd thought horses *might* recover after bleeding, but that did not show that bleeding was useful.

Hon. Mr. Newell, of Essex county, thought bleeding was good in some cases.

Hon. Mr. Calhoun moved that the thanks of the meeting be presented to Dr. Edward Brooks, for the interesting lectures which he had given at preceding meetings, which vote was passed. And he said that this discussion convinced him of the importance of having an institution where more could be learned of the diseases of animals and their remedies.

DISEASES OF HORSES.

We have a communication recommending three grains of corrosive sublimate, and three grains of red precipitate, as a dose for a horse afflicted with the horse-ail, stating that a horse recovered after taking two doses; also recommending saltpetre, flour of sulphur, and antimony, for a cough from common cold and exposure.

There may be cases in which horses have a constitution sufficiently strong to withstand both disease and the effects of unfavorable medicines; but we regard all such powerful minerals, some of which are rank poisons, as dangerous, and liable to kill a well animal.

GRASSES.

March 22d, at the agricultural meeting, Mr. Calhoun in the chair. Mr. Buckminster, of the Ploughman, said that our principal grasses were herdsgrass, redtop, and clover. Some farmers were satisfied with these, but he thought that further experiments should be made on other grasses. Fowl meadow makes excellent hay for a change, but it soon runs out. This grass originated in Dedham. We want some grass adapted to wet lands.

Mr. Asa G. Sheldon, of Wilmington, said that herdsgrass and redtop were the best grasses on strong soils, but on light soils clover was more profitable. He thought that the time in which grass sheds its seed was a good season for sowing seed. It succeeds better than when sown in spring. He thought that two tons of hay to the acre were enough, and land that was rich enough to produce four tons to the acre, should be devoted to other crops.

Mr. Brooks, of Princeton, remarked that as a grass, clover was not so good as herdsgrass and redtop, but it was better for the land, as its tap root runs deep, and obtains nutriment from the subsoil. Herdsgrass was not an exhausting crop; he had mowed land eight years in succession, and yet it was in good condition for other crops. He had tried lucerne, and it failed. Fowl meadow dies out in a short time; it makes superior hay for working oxen in summer, as it is less heating than herdsgrass. It is excellent for milch cows for a month before calving, owing to its cooling properties. He found an advantage in feeding it to a heifer that was affected with the garget. He would raise fowl meadow as a medicine for stock. It succeeds better by cutting late, but the hay is not so good. He knew of no other grasses that were useful. Couch or witch grass is a great pest to the farmer, and of but little value for fodder. It may be killed in a few years by preventing its going to seed. Large crops of grass are not profitable. Two and a half tons to the acre are sufficient.

Mr. J. C. Gray said that he had not a variety of soil. His was rather heavy, and he found herdsgrass and redtop to be the most profitable; the former was the better variety. In curing clover there was considerable waste of the fine parts. He thought that white weed, or ox-eye daisy, as well as witch grass, should be cut before going to seed, in order to destroy it. As the former flourishes well only on poor soils, he thought it might be kept out of grass lands by good culture. He inquired what effect subsoiling had on grass crops.

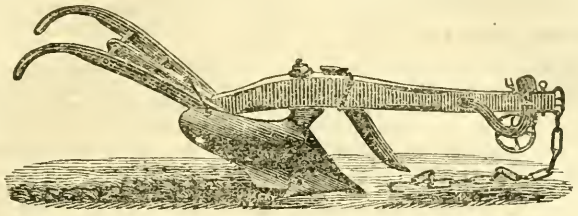
Mr. French, of Braintree, said that he had subsoiled about two acres of grass land, and it had a very favorable effect. When he had the care of the House of Industry, he sowed lucerne on a dry bank, and it did well. It is not adapted to clayey soil. Herdsgrass and redtop are our principal grasses. We generally keep our land too long in grass. Immediately after haying is a favorable season for ploughing grass land.

In making hay, it is best to haul it in in the heat of the day, also to rake up that which is not thoroughly made while the hot sun is on it. Then there will be time to mow after securing the hay, and the grass will be ready to receive the sun the next morning. As to the quantity of seed, he would sow half a bushel of herdsgrass and a bushel of redtop to the acre. He recommended sowing early in the fall. He had drained his salt marshes by making ditches thirty feet apart, three feet deep, and ten inches wide; these would nearly close at the top, but remain open at the bottom. By this mode both the quantity and quality of grasses were improved.

Mr. Cole, of the N. E. Farmer, said that Mr. Phinney and others had tried lucerne, but he knew of no one who continued its cultivation. It required land in high tilth, and as much culture the first year as a crop of beets or carrots, which would cost as much as the crop would be worth for a number of years. Fowl meadow will continue in the land if cut late, but the hay is not so good. This is the practice of those who raise this grass. He thought this grass was a native of different parts of the country. He had seen it years ago in new regions in Maine, and old people had long known it in the same location. [Mr. Brooks here remarked that it had been known in Princeton seventy-five years.] He thought clover had not been estimated sufficiently high. It made the best hay for sheep, colts, young cattle, and cows, and for horses not at labor, and for working cattle and horses he preferred part clover hay. Animals need a variety of food, and when feeding at large, they eat many grasses besides those cultivated, also numerous kinds of weeds and bushes. Herdsgrass and redtop abound with the same substance, silex or sand, taken up by solution, and which gives firmness to the stalk; but clover has less of this element, and more lime and other ingredients which may be essential to their health. Clover could be well made without waste, by putting it in heaps, after being partially dried, as the moisture will pass from the stems to the leaves, and it will soon dry on exposure to the air. By sowing grass seed thick, a large crop may be raised, and yet the hay be good and fine. He had raised three tons of excellent hay to the acre.

Hon. Moses Newell, of Essex county, said that he subsoiled a piece of land three years ago, and the crops were excellent, and they seemed to increase; the soil moist, but not so wet as to need draining. He had subsoiled gravelly loam, and found no benefit from it. He considered clover hay valuable.

Deacon Brooks Shattuck, of Bedford, N. H., said that he subsoiled a piece of grass land, leaving a part without this operation, for experiment, and the crop was considerably larger where the land was subsoiled, particularly last season, which was very dry. He considered clover a very valuable grass. A great account was made of it in his region. He had fed working horses one day on herdsgrass, and one day on clover, and so on alternately, and they preferred the clover, and worked as well on it. Clover could be made without waste, by making it partly in the heap, as had been suggested.



HILL-SIDE OR SWIVEL PLOUGH.

This plough is so constructed that the mould-board may be easily changed from one side to the other while the team is turning, which admirably adapts it to ploughing on hill sides, as all the furrows are turned down hill. It is superior for various other purposes, and may be used to advantage for all kinds of ploughing for which the common plough is used.

In ploughing on level land, furrows may be made in each direction, on the same side, saving the time required to pass from one side of a land to the other, and the disadvantage of the team passing frequently over land for that purpose, which is sometimes very injurious. By this mode of ploughing there is no dead furrow, which is often a serious inconvenience, so much so, that some neat farmers take up the slices of the first furrows, and place them into the dead furrows, to make the land level. Another disadvantage is avoided, which is the turning of two furrows together, in the beginning of a land, forming ridges. These prominences, contrasted with the depressions caused by the dead furrows, are not only unsightly, but very inconvenient, both in tillage and grass lands.

The hill-side plough is excellent for making roads, as the furrow-slice may be thrown to either side, as most convenient in constructing the road. It is also well adapted to ploughing by the side of fences or ditches, as the team may be kept close to them, and the furrow-slice thrown from them in passing either way.

Six or seven sizes of these ploughs are made, varying from the small, one-horse plough, up to the large, stout implement, suitable for a team of six or eight cattle, well adapted to breaking up rough, hard lands, or making roads upon an uneven surface, and with a soil filled with impediments. With a wheel and cutter, the hill-side plough makes smooth, even furrows.

AMERICAN FRUIT-BOOK.

As the season is at hand for attending to fruit trees, it may be well to call attention to the above book. It is not our design to recommend our own work, but we may be allowed to present the opinions of others. We copy the following from the Family Visitor, Cleveland, Ohio, by Professor Kirtland, senior editor of that valuable work. Prof. K. is one of the most distinguished pomologists and fruit-growers in the country.

"A Book for Every Body.—'The American Fruit-Book, containing Directions for Raising, Propagating, and Managing Fruit Trees, Shrubs, and Plants; with a Description of the best Varieties of Fruit, including new and valuable Kinds; Embellished and Illustrated with numerous Engravings of Fruits, Trees, Insects, Grafting, Budding, Training, &c. By S. W. Cole, Editor of the New England Farmer, and Author of the American Veterinarian.'

"This book is a neat duodecimo volume of two hundred and eighty-eight pages, so well got up that it faithfully fulfils all the promises held forth in its long and comprehensive title page.

"Its merits and value are justly estimated by one who was obliged to contend with the confusion and perplexities which surrounded the subject of fruits and their cultivation at the west for forty years, and almost up to the present time, with no other guides than Coxe and Forsyth.

"We take pleasure in recommending it to the public as a cheap and brief, but very perfect epitome of American fruit culture, including all the recent improvements and discoveries."

The following are a few of the commendatory remarks of F. K. Phœnix, Esq., a practical farmer and experienced nurseryman, who edits the horticultural department of the Wisconsin Farmer, a new and interesting periodical in the "far west."

"Mr. Cole has certainly approached far nearer the standard he has aimed at, than any other pomological author we are acquainted with. It is emphatically 'A Book for Every Body' — much in a small compass, and at a small price. To get up such a work, on a subject that has become so very much amplified and extended as pomology, and especially of late, required great condensation, to present any thing like a fair synopsis of it. But we think that, in the main, it has been ably done in the work before us."

Mr. P. in making an elaborate review of the whole work, says at the conclusion of his second chapter, "We cannot help unreservedly expressing our admiration at the skill and judgment, the decided ability manifested by the author, in executing his task."

One feature of this work is peculiar, as it is seldom met with in other books, which is, the naming the *defects*, as well as the *good qualities*, of fruits and trees. Intelligent fruit-growers have frequently remarked that the simple word *uncertain*, which occurs in the American Fruit-Book, would, had they seen it in previous works, have saved them, in several cases, an expense of fifteen or twenty dollars, in useless experiments on uncertain or variable fruits.

We have received hundreds of commendatory notices of this work from intelligent conductors of journals, and practical nurserymen, orchardists, and pomologists. But we need present no more, as our object is to call attention to the examination of the work.

For the New England Farmer.

CULTIVATION OF THE POTATO.

Mr. Cole: I have read with much pleasure the article upon "Potatoes," in your last number, from your correspondent, S. M. Stanley, Esq. The subject is an old one, upon which much has been written, and it seemed, a few years ago, as if nothing more need be, or could be, said about it. But since the potato has been attacked by an epidemic disease, it has required different management, and a greater amount of skill than before, in order to preserve the nicest varieties, and raise them in sufficient quantity for even home consumption. It is not my purpose, in the following remarks, to put forward a favorite theory upon the rot and its remedies, but rather simply to state by what means I have *always* succeeded in raising a full supply of sound potatoes, notwithstanding the disease that is abroad.

The first year that the rot showed itself in this section, I had planted three rows wide of potatoes around a cornfield of eight acres, which was well manured broadcast, with a compost of two parts muck to one of stable dung. The field was of quite broken surface, and the potatoes, in extending around it, encountered various qualities of loam. I had the curiosity to watch closely the effects of the epidemic on different parts of the land. Through the hollows, the soil was very rich, moist, (but not wet,) compact, and fine grained. Here the potatoes all rotted. Rising up from the hollows, the soil gradually became lighter, warmer, and more open, until on top of the knolls, it was either quite sandy or gravelly. So, too, the potatoes began to be gradually sounder, until on the warm open soil of the elevated portions of the field, they were almost entirely free from defect. Previous to this time, I had always chosen precisely the kind of soil of these hollows to grow potatoes in, and never failed of a large crop of fine quality.

In the fall, the potatoes were dug out, immediately picked up, and put into the cellar, with more or less moist dirt adhering to them, — as had been my previous custom. But they soon began to rot. In overhauling them, I found that all the way down, through the centre of the bin, they were more or less decayed; while those that rolled over towards the ends of the bin were all sound. The baskets were invariably emptied near the centre; the heap was of course the highest there, and the potatoes that rolled down to the ends of the bin, became free from dirt and moisture in so doing. As my bin was quite wide, and the accumulation of potatoes and dirt was the greatest in the centre, from always emptying the baskets there, I thought that healthful ventilation was thus prevented, and that was the reason they did not keep well.

From the lights of that year's experience, I was induced to think that by planting my potatoes on warm open soil, of moderate fertility, and by housing them in a dry state in the fall, and giving them proper ventilation after being housed, I should succeed in growing and keeping them sound. I selected my ground for the next crop accordingly. I planted a part of my seed in pasture land, covered with a thickly matted sward, and as the locality was unfavorable for getting on manure from the barn-yard, I simply put a handful of mixed plaster and ashes in each hill. The remainder of the seed was planted in a tillage field, which had been four years in grass, and which I manured well at planting time, from the barn-yard. The crop from the latter field was abundant, but not all sound. That from the pasture field was not so large as the other, but, beyond all comparison, of better quality. Not a single diseased potato was found, and their flavor and mealiness, when cooked, was remarkably fine. I was always aware that strong animal manure, applied to the potato crop, made the tubers a little unpleasant in taste.

In harvesting these potatoes, I was careful to choose a dry, sunny time, digging them out in the fore part, and picking them up in the latter part of the day, in order to get them into the cellar in a clean, dry state. I was also careful to sort out all diseased tubers from among the manured crop. I made a new bin, with a plank bottom raised up three or four inches from the cellar bottom, to prevent dampness; the sides of narrow boards, having a small space between them for ventilation; and the bin being, when done, about four feet wide. I put my potatoes into this bin in a dry, sound state, and they kept so through the winter. Now this may have been a needless precaution; but this I know, I have ever since pursued this course, and have not been troubled with rotten potatoes in my cellar. I have noticed that where a potato had at some time become slightly specked with rot, those specks would dry down, and the rest of the potato remain sound, provided it was placed in a dry, well-ventilated situation. I have also noticed that whenever I put potatoes in barrels, (which I sometimes do where I raise a few of some sort different from my main crop,) they are quite apt to get to sweating, and afterwards to show disease.

This year's experience confirmed my previous conclusions as to the proper soil and mode of harvesting and housing potatoes. I was further led to regard the effects of animal manure with suspicion, and my observation since would not lead me to advise the use of it, (certainly in large quantities,) until we shall have become pretty well rid of the epidemic that is now abroad. Ever since the experiments that have now been detailed, I have selected each year a warm, open, sandy or gravelly loam, bearing a rich thickly-matted sward. I find no land so favorable to the growth of *nice* potatoes, as good pasture. The land, by long lying to grass, becomes covered with a rich sward, whose roots intimately pervade the soil, forming a large mass of vegetable matter. This, when inverted by the plough, decomposes gradually beneath the surface, and furnishes a grateful and healthful food for the potato — a food far better for it, of late years, than strong animal manure.

I have had good success in growing this crop by applying a compost of muck and ashes, or muck and lime, the dressing being spread on the inverted furrows, and harrowed in. Three or four bushels of unleached ashes, or a bushel of fresh lime to a half cord of muck, is about the right proportion of parts for the compost; and they should be intimately mixed, so that the alkali may come in contact with *all* of the muck, thus neutralizing its acids. If lime is used, it is best to dry slake it, by sprinkling on just water enough for that purpose, and then mix it with the muck immediately, while it is yet warm. It will become diffused more uniformly through the heap if brought to a powder than if used in lumps, and its action will be equally as quick.

Last year I raised a fine crop of potatoes on a piece of pasture land, dressed with a compost of vegetable mould from the woodland, and lime. In August preceding, I dug up from the hollows of a wood-lot contiguous to the pasture, the leaves and mould there accumulated, and mixed the same with lime, in the proportion of a bushel of the latter to a half cord of the former. In the spring the mixture was spread on the inverted furrows, and the potatoes planted. The crop was abundant and sound, and the cooking qualities excellent.

With regard to the size of seed, I have never tried experiments with that precision that enables me to express an unqualified opinion. I will merely say,

that I prefer to use seed of full medium size to that of small potatoes, *thinking* that the crop will average of better size by so doing. I will say, confidently, that four or five stalks in a hill are better than more, and I adapt my seeding accordingly. I never use more than one half of a large potato in a hill for seed.

F. HOLBROOK.

Brattleboro', Vt., *March* 11, 1850.

For the New England Farmer.

NATIVE TREES, SHRUBS, AND PLANTS.

CULTIVATION OF NATIVE SHRUBS.

[Continued from p. 60.]

The Moose Wood is a beautiful small tree, and found in abundance on the high and rocky land adjoining the Magnolia Swamp in Gloucester. It is distinguished for its striped bark, the beauty of its opening buds in spring, its large, handsome leaves, and pendent fruit, and is of the easiest cultivation in any good soil.

The Swamp Pyrus, or June Berry, is a small tree or large shrub, found in low grounds, and blooming early in May. When in flower it possesses considerable beauty, and produces, in June, a small, pear-shaped fruit, of a sweet and pleasant taste, and is somewhat improved by cultivation. The June Berry belongs to the Apple family of trees and shrubs, and to which it is so nearly allied, that scions of the pear inserted into the stock of this shrub will grow and bear fruit. We have seen a Bartlett pear, of good size and quality, grown upon the stock of the June Berry. But we are inclined to think that pear-trees thus grown are short lived. From the early ripening of the fruit of the June Berry, and its sweet flavor, it is a favorite with birds and insects, and they generally appropriate all of it to their own use, some time before it is fully ripe. It is easily cultivated in any common garden soil.

The Witch Hazel is a large shrub, and very remarkable for putting forth its yellow flowers in November or December. Its forked branches were once much used for divining rods, in the discovery of the precious metals. Found on the borders of woods.

The Clethra is found on the margin of ponds, and exhibits its raceme of white fragrant flowers in August. It is a beautiful shrub, and will grow readily in a garden.

The Water Andromeda is a low evergreen shrub, found in this vicinity, on the borders of Cedar Pond, in Wenham. Linnæus has thrown a charm around this delicate and beautiful shrub, in his description of it, published in his tour in Lapland, where he there compares its flesh-colored corolla to the beauty of a fine female complexion. We have had it under cultivation for some time, and find that it requires protection in winter.

The Dwarf Cassandria is a low, evergreen shrub, distinguished for its copper-colored leaves, and showy vernal flowers. Found more common than the Andromeda, and requires the same protection in cultivation.

The Ink Berry is another low, evergreen shrub, of a handsome appearance, with flowers in the axils of the leaves, succeeded by black berries. It is usually found in wet swamps, but it may be seen on the margin of the Magnolia Swamp, in a comparatively dry and rocky soil. Under cultivation, it is well to give it protection in winter.

The Mountain Laurel, or Calico Bush, is a fine evergreen shrub, found in Gloucester, in the neighborhood of the Magnolia Swamp; it is rather difficult to cultivate in the garden; it probably requires a sandy, peat soil.

The Rhodora is a showy, early flowering shrub, found in low, wet grounds; the flowers, which are purple, appear before the leaves.

The Swamp Pink is another of those shrubs, whose flowers are conspicuous in low grounds. It is a fine, sweet-scented shrub, and is remarkable for the excrescences found growing on its leaves; these are sometimes sought after by boys, and eaten, under the name of swamp apples.

The Climbing Staff Tree is a twining shrub, and should be cultivated for its fine effect upon a lawn, when permitted to climb a tree. When cultivated in a rich garden soil, its great luxuriance prevents its showing many of its bright orange-colored berries.

The Sea Groundsel Tree is a rare shrub here, and nowhere discovered as yet in this state, except those plants found last year at Nantucket, by Prof. John L. Russell. It attains with us, under cultivation, a height of four feet in a season, and with all the protection we have as yet been able to afford it, it dies down to the ground every winter; but it appears again in the spring, like a perennial plant, brings forth its flowers in September, which are succeeded by its silky seeds late in autumn.

The Magnolia Glauca is found in a swamp, near the road leading from Manchester to Gloucester Harbor. We have been informed that it was first discovered, many years since, by Judge Parsons, who showed it to Dr. Cutler, of Hamilton, with a request that he would give him the name of the plant. The doctor informed his friend that he had seen it at the south, and it was there called the Beaver-Tree, or Magnolia Glauca, and expressed great pleasure, as well as surprise, that so rare and beautiful a plant was found in his neighborhood.

It is well known, in this vicinity, as an elegant shrub, of difficult cultivation when taken from the swamp where it grows. It is said to succeed better when obtained from seed sown in a sandy, peat soil. The plants should be sheltered from high winds, and the roots well mulched.

The Cow Berry, a very rare woody plant, is found in North Danvers, and is distinguished for its fine evergreen leaves, its pretty pink flowers, and small red acid fruit. It is found in a dry soil, of easy culture, and may prove worthy of cultivation for its fruit, as it can be used like the cranberry, which it much resembles.

The Twin Flower is a small, creeping plant, with a woody stem, and is to be found in the greatest abundance in Gloucester woods. The flowers of this plant are white, and growing in pairs, with a drooping habit, of a singularly modest appearance, and possessing some fragrance. This plant possesses considerable interest, from its being discovered by Linnæus, more than one hundred years ago, in Lapland; and he was pleased to name it Linnæ Borealis, in honor of himself. It has, like the Cow Berry, a delicate fibrous root, that requires protection in winter.

There are several other native shrubs worthy of notice, that we must omit, for we have not yet forgotten that you require your correspondents to be brief. Our next article will be upon the cultivation of native trees.

S. P. FOWLER.

Danvers New Mills, *Feb.* 4, 1850.

For the New England Farmer.

CULTIVATION OF THE GOOSEBERRY.

Mr. Cole. Sir: Much has been said and written concerning the Gooseberry, the cause of its disease, the mildew, and its cure. Strong soap-suds, and lye made of potash, have been recommended, both of which are useful in keeping the moss from the trees, and giving them a healthy appearance; but the only

effectual remedy for the blight upon the berry, that I know of, is transplanting. It had been the practice of my late husband, for the last eighteen years of his life, to transplant one third of his gooseberry-trees annually. The first thing done in the garden, as soon as the frost was out of the ground in the spring, was to prepare a piece of ground *very rich*, (as no other shrub requires, or will even bear, so much manure as the gooseberry,) take up the trees designed for transplanting, take off the shoots that had grown up around the trunk, and the trees planted out in the newly-prepared ground; the trees were set as near as possible the same depth that they had stood before, and when the holes were partly filled with earth, water poured in to settle it closely around the roots; then filled up, and the earth pressed down firm with the feet. If the work was well done, the fruit was *pretty* good the first year, splendid the second, and by the third it generally began to wane; but by adhering to the above-named plan, he was able to have an annual supply of perfect and delicious fruit. He had some old trees that had been transplanted as many as eight times, and it had become so much a matter of course, that they seemed to have prepared for it; their roots had become interwoven like mats, and so flat on the bottom, that when taken out of the ground they would stand erect upon its surface without support. If the shoots could be taken off with a little root attached, they would live, and make new trees, if well planted out.

As the gooseberry thrives best in moist situations and climates, and as a few hours' exposure to the hot sun at midday, in our climate, frequently scorches the fruit so as to make it drop from the tree, or become insipid, shaded situations are recommended; and the general remark is, that the shade of buildings or fences are preferable; but I take the liberty to press the subject, that it should always be an artificial shade, if any — for in dry seasons, large trees, whose roots strike deep into the earth, will of course absorb all the moisture, and leave the more feeble shrubs in their neighborhood to perish.

Respectfully,
MRS. NOYES DARLING.

New Haven, Conn., *March* 15, 1850.

For the New England Farmer.

AGRICULTURAL EDUCATION.

Mr. Cole: I have noticed with interest the discussions on the great subject of a contemplated agricultural school, as those proceedings have been faithfully recorded in your valuable paper. Since this subject is discussed, — since, moreover, that no two persons ever *saw* the same subject in *exactly* the same light, — an individual of even narrow and contracted views *may* suggest something of some importance by proclaiming his views, whatever they may be. I think an agricultural education can hardly be called a new thing even in this country, for it is a fact, and a happy one too, that the greatest portion of New England's rural students are acquiring the above-mentioned kind of education on their own or their fathers' farms; and they are doing it in such a manner, that they never can forget the *rules*, that is, by practice and experience.

An agricultural school was established at Hofwyl, in Switzerland, by a certain philanthropic gentleman, which combined manual labor and the improvement of the mind; but there is a class of people in all European countries — the peasantry — who are in a servile state, and it is a very easy matter to better their condition; but there are none in this free country who will acknowledge themselves to be peasants. If all the students of such school could be of the same stamp, that is, indigent students, the plan would be far more practicable; but manual labor has always been despised, or at least underrated, by the majority of students, wherever it has been adopted in our schools.

I can conceive of no better plan to instruct *generally* the young agriculturists (and old ones too) of our country, than by means of *good* agricultural papers; and such I believe there are. Instruction is given in this way in a general and widely-diffused manner; all can choose or refuse, at their option. The instructors (the editors) are, or ought to be, learned men, who have theory and practice combined; who understand botany, chemistry, geology, &c.; the nature of domestic animals; the nature of various soils, and the proper manures for them; the proper manner of cultivating fruit trees; the manner of constructing drains and ditches, barns, and rural dwellings; who can baffle the diseases of our domestic animals, and all the ills incident to the farm except the potato rot, which we can hardly ask of any editor.

With such a one (and I have not named half his requisite good qualities) to manage an agricultural paper, and means to diffuse them, bearing intelligence to every part of the country, cannot the mechanic who is disgusted with his trade, learn whether he must plant corn two, three, or ten feet asunder, in hills, drills, or broadcast? Every farmer can afford to take an agricultural newspaper, but the indigent cannot afford their sons a scientific education, which is necessary for the gentleman farmer, laying aside the great disinclination to unite manual labor and study; and the latter is not so unreasonable after all, for I know by experience that it is difficult to study when fatigued by labor, and generally it is unprofitable to do more than one thing at a time. Yours, W.

Middlebury College, Vt., *Feb.* 22, 1850.

Remarks. — Our correspondent should give the greater part of the credit for a good agricultural paper to the correspondents, for they are numerous, and many heads are better than one. They are among the very best farmers in the country, and it is a peculiar trait of American farmers to freely communicate the result of their experience, instead of keeping it secret for the purpose of monopolizing the advantages of discoveries and improvements. — Ed.

For the New England Farmer.

EFFECTS OF THE BARBERRY ON GRAIN CROPS.

S. W. Cole, Esq. Dear Sir: My attention has lately been called to correspondence in your valuable paper, respecting the barberry bush, and the injurious effects it has upon the wheat crop. I write to obtain from you any facts that may have come to your knowledge, in reference to its injurious effects on wheat crops.

Have there been any suits at law growing out of their having been destroyed, or otherwise? We have some of these bushes in this county, which causes considerable anxiety on the subject; and at the request of Mr. T. Whitson, and others formerly of your city, I write you this, trusting that we may have your views, &c., at length on the subject, as soon as convenient after the receipt of this; and oblige, very respectfully,

Yours, &c.,
R. C. VAN RENSSELAER.

Little Fort, Lake Co., Ill., *Jan.* 23, 1850.

Remarks. — As to our own experience on this

subject, we have known cases of the barberry growing in the midst of wheat and other grain crops without any injury to the grain, and it is our opinion that the barberry has no unfavorable effect on grain; but as there is so much evidence to the contrary, we are not confident in this opinion; but we regard it as a doubtful subject, that should be more thoroughly investigated, rather than as a settled point.

A great deal has been said on both sides of this question, and no small amount of evidence has been offered in support of either side; but the largest amount of testimony, and that of a most positive character, goes to show that barberry bushes have no unfavorable influence on grain crops around them. Still we want more experiments to settle this question, and we should be pleased to receive facts that throw light upon it. — Ed.

For the New England Farmer.

MANAGEMENT AND PROFIT OF FOWLS.

Dear Sir: Since the exhibition of fowls last November, there has been great interest shown in regard to different breeds of hens and their management. It is a subject of more or less interest to every reader of your paper. Most persons are trying to obtain the largest hens. I think that small hens are much more profitable as layers. They will lay more eggs than those of the large breeds, and they can be kept at half the expense of those that are extremely large. My object is to obtain the hens that will yield the most eggs according to the expense. I have purchased a pair of Poland Top Knots, from which to raise stock for next year. They weigh about seven pounds to the pair.

I will now give you an account of my management the past winter. I kept twenty-five hens and a protector, of the native breed. My pullets that were hatched in April commenced laying in November, and those hatched in May began to lay in December. I have not kept an account of the number of eggs they laid during the winter. The first week in January they laid ninety-one eggs. In the first two weeks in February, they laid one hundred and ninety-two eggs. I sold the eggs at fifteen cents per dozen, and during the winter the cost of keeping the hens was only equal to two fifths the value of the eggs.

I give my hens corn and cob meal every day, mixed in milk or hot water. I kept corn, barley, and oats by them all the time; I also kept by them ashes, lime, and oyster-shells. Raw meat was given to them every day; I kept all the egg-shells during the summer, and gave them to the hens in the winter. I keep my hens in a house twenty by fifteen feet, with a large window in the south side. I find no difficulty in making my hens lay in winter; most people fail by neglecting to supply animal food, as a substitute for the numerous insects which they devour in summer.

Hens should be let out a few hours during the day, when the ground is bare. The best layers should be selected as breeders, and the protector changed every year. Grain should be kept by hens at all times during the year. The principal reason that some farmers find no profit in keeping hens, is because they only half feed them; therefore they are always in mischief, scratching for food. When farmers plant corn, they should give their hens a good supply, and they will not scratch it up. If hens are well managed, they afford more net profit than any other stock. Young hens should always be kept over, as they will lay better in winter than old hens.

NOAH W. HARDY.

Nelson, N. H., *March* 5, 1850.

From Mr. Williams's Address before the Kalamazoo Co. Agricultural Society.

DO YOU LOVE GOOD FRUIT?

As it is with the animals and vegetables, so it is with fruits. You can have stinted, astringent, crabbed fruits, or the most delicious. The precaution to send your neighbor's boy the slip of a shoot from a fine tree, while you are stopping to decide the affairs of the nation with him — a few moments taken to slide it under the bark, while you are waiting for a meal at home — will transform a useless shoot into a valuable tree, that shall furnish pleasure and nutriment to generations of men. A few minutes improved now and then, which would otherwise be idled away, will surround your dwelling with a grove, which shall prove of the greatest utility, and a delightful embellishment. I know men say they have no time, yet I have always observed that the men who make this excuse, have plenty of time to lounge at the tavern; plenty of time to run after some mountebank or charlatan; plenty of time to litigate with a neighbor. No, man! plant the tree. It will grow while you sleep. Bud it — graft it — nurse it — and it shall gladden the sight and please the palate of people unborn, and you shall leave a memorial of your existence, springing from the green sod, when you repose beneath it.

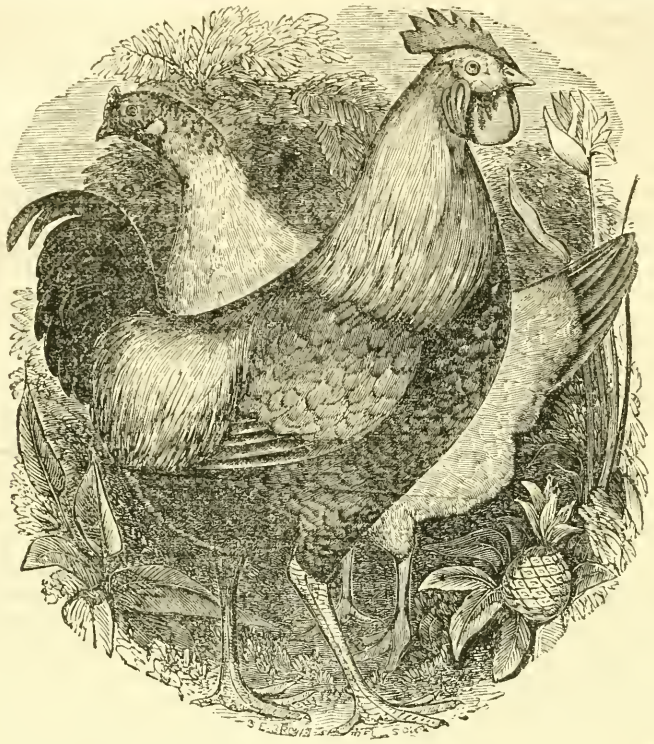
Some five or six years ago, I found, on the place where I reside, some scrubs of natural fruit. The tops of the trees, my neighbors said, were too large to graft. But they were grafted with considerable labor. My predecessors might have budded or grafted each with a single germ, and saved me nineteen twentieths of the time and expense. Another set of men told me the country was not natural for fruit. I put in the grafts, and for years have had abundance of delicious fruit for the table or cookery, for myself and my neighbors, in summer, fall, and winter; and I find none will eat it more greedily than those who have no time to graft their own trees, and who curse the climate as unfit for fruit. — *Literary Gazette.*

THE CHRYSANTHEMUM IN CHINA.

The Chrysanthemum is the Chinese gardener's favorite flower. There is no other with which he takes so much pains, or which he cultivates so well. His Camellias, Azaleas, and Roses, are well grown and well bloomed, but with all these we beat him in England; in the cultivation of the Chrysanthemum, however, he stands unrivalled. The plants themselves seem, as it were, to meet him half way, and grow just as he pleases; sometimes I met with them trained in the form of animals, such as horses and deer, and at other times they were made to resemble the pagodas so common in the country. They are always in high health, and never fail to bloom most profusely in the autumn and winter. — *Gard. Chron.*

The French Academy, after discussing the new dictionary of the national tongue during the last nine years, have not yet completed the letter A.

Resolve to perform what you ought; perform without failure what you resolve.



COCHIN CHINA FOWLS.

For the New England Farmer.

The portraits of these fowls were delineated and engraved by Mr. S. E. Brown, from a pair now in the possession of, and recently imported by, George P. Burnham, Esq., of Roxbury, Mass. These fowls are descendants of the pair exhibited by her majesty at Dublin Cattle show, in 1846–7, and afterwards presented to Lord Heytsbury, then the lord lieutenant of Ireland.

The fowls imported by Mr. Burnham are quite young, and have suffered greatly from neglect while on the voyage from England, having been nearly starved; so much did they suffer for want of attention and food, that they lost in weight nearly two pounds apiece, and when landed were filthy beyond conception.

Notwithstanding these disadvantages, Mr. Burnham consented that the drawing should be made; and the engraving shows the fowls as they appeared on the 20th day of February, 1850 — angular from leanness, not fully feathered, and their form imperfectly developed for want of maturity. The writer had preconceived opinions as regarded this breed of fowls, and was fully confident, that in this case, the truth of the adage, "the king's chaff is better than other people's corn," would be fully verified. In this he was disappointed. The fowls show many good points, and exhibit much beauty of form and outline, and will, without doubt, prove a very valuable breed. That they are hardy, and capable of bearing privations, they have given incontestable proofs. They were landed January 26, 1850, and the pullet began to lay on the 11th day of February. The eggs are not nankeen-colored, as are the eggs of the Shanghae, but are flesh-colored, and are quite large.

The comb and wattles of both cock and pullet are imperfectly developed; the hackles on the neck of the cock are not fully grown, and the feathers of the tail have not yet appeared; a few plumes only are seen. The feathers on the body and breast indicate that the prevailing color will be a brilliant black, intermixed with dark buff or orange. The color of the hen is a bright orange, each feather being marked with a single bar of black. The legs of both sexes are smooth, and of a yellow color. When these fowls shall have arrived at maturity, they will exhibit a beauty of form and a splendor of plumage not equalled by any other breed; and in weight of body will not be surpassed by the Chittagong or Shanghae breeds.

Subjoined is a letter received from Mr. Burnham:

Dear Sir: In accordance with your request for a description of my Royal Cochin China fowls, I would say, that they were imported in January, 1850, from the establishment of J. Joseph Nolan, Esq., of Dublin; and were hatched in July and August, 1849. On the 20th of March, I find the cocks to weigh, one nine pounds, the other eight and a half, light. The pullets weigh, on the average, eight pounds, and are now laying, all of them.

The importation consists of six fowls — two cocks and four pullets. The color of the male birds is red and brown, or black and brown; that of the hens is a yellowish brown, generally, the feathers being barred and tipped with black. The form of these fowls resembles that of our best bred Shanghaes, and my opinion strengthens with a further acquaintance with both, that the two varieties sprung from the same original stock. My Cochin Chinas are clean-legged, the Shanghaes are, as you are aware, *feathered* upon the legs.

I have found these birds very prolific as layers, and

I believe they cannot be excelled by any breed known, in this respect. One of my pullets commenced laying in seventeen days after arrival, and in thirty-two days laid twenty-eight eggs; five of the number weighing nearly a quarter of a pound each, and measuring seven and a half by six and a quarter inches each in circumference. She showed but slight inclination to sit, and is now laying a second litter, after a recess of six days only. Two others have laid over twenty eggs each, and the fourth nearly as many. They have proved very hardy thus far, never having shown a sign of illness as yet. From two of the hens I have had thirteen eggs, such as I have described above, seven of which have been exhibited in Boston. The others have been set from time to time, two have been hatched, the rest are due.

The color of the plumage of these fowls is very even, comparatively, for parti-colored birds; the legs are generally yellow, though one or two of them are darker than the rest, as are the feathers also. The combs are small, small wattles, and small head; the eye is unusually large and bright. At full maturity, that is to say, after the second moult, I do not doubt that a cock and hen of this breed will weigh over twenty pounds; this is *large* enough for all useful purposes.

I have been fortunate thus far, too, with their chickens. I have set some thirty of their eggs, out of which I have now coming up nearly twenty thrifty chicks; which are very even in color and general characteristics. How fine these birds will prove ultimately, remains yet to be determined. I am daily better pleased with them, however, and they have been universally admired by those who have seen them.

In reference to the artist who has pictured them for you — Mr. Brown — allow me to say that he has done full justice to the fowls; the drawing is very faithful, and the proof you kindly sent me is a good picture. I am yours, &c., GEO. P. BURNHAM.

Roxbury, Mass., *March* 22, 1850.

Mr. Burnham is entitled to the honor of being the first to import this most valuable breed of fowls into this section of the United States; and these fowls do great credit to their breeder, Mr. J. Joseph Nolan, No. 33 Bachelor's Walk, Dublin, Ireland. Mr. Nolan has the reputation of being one of the most successful and scientific fanciers in the kingdom of Great Britain.

By thus speaking of Mr. Nolan, the writer does not intend to convey the idea that he is a breeder of poultry for sale. Mr. Nolan is actuated by a commendable spirit of emulation, and has competed successfully with Royalty itself, in the various shows held in the kingdom of Great Britain.

The difficulties attending the procuring thoroughbred fowls from abroad, are so great as to deter most persons from attempting to import them. Many instances have occurred within the writer's knowledge, where orders having been executed by the officers or agents of vessels from the United States — the fowls procured have proved worthless, and have been the cause of much chagrin and vexation, although every precaution had been used by the parties to whom the fulfilment of the orders had been intrusted, to procure the wished for breeds of fowls.

The writer believes the collection of Mr. Nolan contains every known breed of fowls, and each race is preserved and bred by him in the utmost purity; and any fowls procured from Mr. Nolan, without the intervention of any go-between, will be thoroughbred, and superior specimens of the race to which they belong, as he is a gentleman in whose integrity the utmost confidence can be placed.

Yours, &c.,
S. BRADFORD MORSE, JR.

Note. — A pair of the Royal Cochin Chinas, imported by Mr. Burnham, will be exhibited at the Agricultural Warehouse of Ruggles, Nourse, Mason, & Co., on Wednesday and Thursday next. — Ed.

SWEET POTATOES.

The following is Mr. Timothy A. Bascom's (of Hinsdale, N. H.) method of cultivating the sweet potato, of which he presented a fine specimen at the late Agricultural Fair: —

"There are many kinds of sweet potato, as of the Irish potato. The Mississippi yam is the best. Make your hot bed in April. Put in one foot of horse manure fresh from the stable. Cover it two inches deep with good loam. Place the potatoes in the loam one or two inches apart. Cover them one and one half or two inches deep. They will come up in two or three weeks. Care should be taken not to have the bed too hot or too cold. After they are two or three inches, they will do to set out. Place one hand on the potato to keep it from moving, and pull the sprouts off with the other hand close to the potato. The potato will continue to shoot out new sets of sprouts for three or four weeks. They will do well from the middle of May to the last of June.

"Place your sprouts in drills ten or twelve inches apart — a little deeper than they stood in the hot bed. Let the hill be a little dishing, to hold the water. If it is dry weather at the time of setting, water them as you would cabbages. Prepare the soil as soon as the frost is out and the ground is sufficiently dry. Plough or spade it to the depth of a foot or more — spread manure broadcast before ploughing — harrow and plough again before setting. Throw the ground into ridges by turning two furrows together. Set your sprouts on the top of the ridges. All that is necessary afterwards is to keep the weeds down. If you plough between the rows, plough *from* the hill the first time, and remove the dirt from the surface of the hill with the hoe. At the last hoeing, draw a little earth up to the hill, leaving the top a little hollowing to hold the water. Care should be taken not to leave the vines covered with earth, as in that case they will take root, which will prevent the growth of the first setting. Follow these directions, and you will have a good crop. They can be cultivated in any part of the Granite State as well as at the south. They will grow on any soil where corn will. I have tried them on different kinds — sandy loam is the best. I think they will be a good crop to raise for milch cows. They eat them greedily. I can raise double the quantity of sweet to any other kind of potato on the same ground."— *Vermont Chron.*

THE FARMER.

It does one's heart good to see a merry, round-faced farmer. So independent, and yet so free from vanity and pride. So rich, and yet so industrious — so patient and persevering in his calling, and yet so kind, social, and obliging. There are a thousand noble traits about his character. He is generally hospitable — eat and drink with him, and he won't set a mark on you, and sweat it out of you with double compound interest, as some people I know will; you are welcome. He will do you a kindness without expecting a return by way of compensation,— it is not so with every body. He is usually more honest and sincere, less disposed to deal in low and underhanded cunning, than many I could name. He gives to society its best support — is the firmest pillar that supports the edifice of government; he is the lord of nature. Look at him in his homespun and gray; laugh at him, if you will; but, believe me, he can laugh back, if he pleases.

Domestic Department.

Advice to Young Ladies. — The editress of the Literary Gazette, Mrs. Lydia Jane Pearson, in an article addressed to young ladies, upon the subject of marriage, discourses as follows: —

"Do not, as you value life and its comforts, marry a man who is naturally cruel. If he will wantonly torture a poor dumb dog, a cat, or even a snake, fly from him as you would from cholera. We would sooner see our daughter dying of cholera, than married to a cruel-hearted man. If his nature delights in torture, he will not spare his wife, or his helpless children. When we see a man practising cruelty on any poor helpless creature, or a fractious horse unmercifully, we write over against his name, *devil*, and shun him accordingly.

"We once knew a man, ay, a gentleman, who, during a ride for pleasure, became so demoniacally enraged at his horse, which refused to go, that he sprang from his carriage, drew his knife, and cut out an eye of the poor brute. The lady who accompanied him fainted, suffered a long nervous illness, and will never recover from the horror the outrage gave her. And we knew the young lady who, knowing this of him, was fool-hardy enough to become his wife. And we know how he tortured her; how he outraged all her feelings; how he delighted to destroy whatever she prized, or took pleasure in; how in his fits of passion he broke up her furniture, seized her by the shoulders, and shook her till she could not crawl to bed; how he beat her; how he kept her poor babe black and blue with blows and pinches until her parents took her home, and sheltered her from his cruelty.

"If you have a suitor whom you feel inclined to favor, look narrowly into the temper and disposition of the man. Love may soften it for a while, or it may induce him to restrain or disguise it, but be assured, the natural temper will remain, and the time will come, when your presence will be no restraint upon him. We have heard wives complain, 'I was so deceived in my husband; men are so deceitful,' &c. But we believe, in nine cases out of ten, these women deceived themselves. They suffered the romance of their own foolish heart to adorn their lover with all the excellences which their fancy attributed to a perfect manly character, and to draw a veil over all his vices and defects, which, if it did not conceal them, greatly softened or disguised their features.

"Men are not perfect — women are not perfect. In all cases, there must exist a necessity to bear and forbear, but it does not therefore follow that you should marry a bad man, knowing him to be a bad man. If you do so, you deserve chastisement; but a life-long misery is a terrible punishment. A bad man's wife must either live in a continual torment of fear, apprehension, and the bitter disappointment of her fruitless efforts to please; or she must become callous, cold, insensible to pain, and consequently to pleasure. Will you take upon yourselves either of these terrible alternatives? We hope not."

Custards without Eggs. — One quart of new milk, four tablespoonfuls of flour, two of sugar. Season with nutmeg or cinnamon, and add salt to your liking. The milk should be placed over a quick fire, and when at the boiling point, the flour should be added, being previously stirred up in cold milk. As soon as thoroughly scalded, add the sugar, spice, and salt. This is an excellent dish, and deservedly prized by every one who has tried it.

Youth's Department.

Beware of Beginnings. — Young persons should, above all things, beware of beginnings, and by no means parley with temptations: their greatest security is in flight, and in the study to avoid all occasions of evil; for the cockatrice, which may be easily crushed in the egg, if suffered to hatch and grow up, will prove a deadly serpent, hard to be destroyed.

Advice to Young Men. — Let the business of every one alone, and attend to your own. Don't buy what you don't want; use every hour to advantage, and study even to make leisure hours useful; think twice before you spend a shilling — remember you will have another to make for it; find recreation in looking after your business, and so your business will not be neglected in looking after recreation; buy low, sell fair, and take care of the profits; look over your books regularly, and if you find an error, trace it out; should a stroke of misfortune come upon you in trade, retrench — work harder, but never fly the track; confront difficulties with unflinching perseverance, and they will disappear at last; though you should even fall in the struggle, you will be honored; but shrink from the task, and you will be despised.

Health Department

Hints to the Bald-Headed. — According to the following extract from an editorial article in the Boston Medical and Surgical Journal, the easy and sure way to prevent baldness, is to go bare-headed, or wear a well-ventilated hat: —

"A refined civilization has brought with it a train of physical evils which it is in the province of science to control or subdue. Our tight hats, our warm rooms, closely fitting caps, silk nightcaps, from which the perspirable matter cannot escape, by their combined agency, in connection with other influences, not always easy to define, bring off the hair prematurely, and turn it gray, sooner than personal vanity is willing to exhibit such evidences of decay. And this is not all; the skin is actually in a low state of disease, the effects of which are recognized in the accumulation of dandruff — desquamation of the epidermis. The bulbs of the hair are inflamed also from the same cause, and from year to year the hair degenerates and becomes thinner, and not unfrequently ends in baldness. On all that part of the head not covered, viz., from the back side, between the ears, and on the temple, the hair generally remains to extreme old age, however much the apex may be denuded. If females wore equally tight covering, the hair would probably suffer very much in the same manner; but their light, airy bonnets admit of ventilation, and hence a bald-headed woman would be a phenomenon. Who ever saw a bald-headed Indian? We have had an opportunity of seeing various tribes, in all the freedom of an unrestrained savage life, but a sparse head of hair we have never noticed. Atmospheric exposure conduces to the luxuriance of the hair, and a healthful condition of the scalp."

Dandelion Coffee. — Dr. Harrison, of Edinburgh, prefers dandelion coffee to that of Mocha, and many persons, all over the continent, prefer a mixture of

succory and coffee to coffee alone. Dig up the roots of dandelion, wash them well, but do not scrape them, dry them, cut them into the size of peas, and then roast them in an earthen pot, or coffee roaster of any kind. The great secret of good coffee is to have it fresh burnt and fresh ground. — *Cottage Gardening.*

Mechanics' Department, Arts, &c.

Asphaltum for coloring Wood Work. — *Advantages of staining inside Wood Work of Dwellings, Stores, Offices, School Buildings, &c.* — Editor Ohio Cultivator: From recent investigations and experiments, I think it can be shown, that much expense may be avoided, a more durable finish obtained, and better effect produced, by *staining* with *asphaltum*, (*bitumen*,) and varnishing the inside wood work of dwellings, offices, stores, school buildings, and even churches, instead of painting in the ordinary mode.

To finish well inside (not the best) with plain painting, *three* coats are necessary; and then to preserve the paint, improve the effect, and render cleaning of the work more safe, two coats of varnish should be applied, unless the paint is white, and in that case it will have to be frequently repainted; and in either way, the work has but a dead, heavy, and monotonous appearance. Graining gives a pleasing expression, and is very durable; but it is expensive, and I suppose for that reason, is comparatively but little used. The staining process obviates the chief difficulty, (the expense,) and where the highest finish is not desired, may be substituted in most instances, where graining would be proper, particularly upon pine. It shows the grain of the wood with perfect distinctness, and in skilful hands the depth of the color and shading may be varied, so as to produce excellent effect with but very little trouble. Increasing or diminishing the quantity of asphaltum used, or rubbing off, or suffering the full coat of stain applied to remain on, are the means of varying the color; and it may be varied from the appearance of a finish of mere oil and varnish, to that of a dark shade of rose wood.

To prepare this staining matter, all that is needed is to dissolve the asphaltum (say two or three pounds to the gallon) in linseed oil, by boiling and stirring it; then add a small quantity of spirits of turpentine. (For inside work, painters usually apply oil and spirits turpentine in nearly equal parts.)

A coat of oil may be first applied, followed by the stain; or there may be two coats of stain, as may be preferred. But one coat of the staining matter, I think, will generally be found sufficient, and make a more agreeable finish. After the stain there should be two coats of varnish. Window sash may be finished in this way with very good effect.

From experiments which I have had made, and the opinions of experienced painters whom I have consulted, I doubt not that a given quantity of this staining matter would go much farther, and might be applied at less expense, than the same quantity of common paint. Lead ground in oil will mix twenty-five pounds to the gallon of oil, and dry lead sixteen pounds; and in three coat work, every superficial yard will require about one and a half pounds of paint. Asphaltum may be obtained at from eight to twelve cents per pound. I give these facts to assist those who wish to test the comparative expense of staining, with plain painting. Experienced painters here tell me that to oil, stain, and varnish two coats, would be about equal in expense to two coats of painting.

A room, the wood work of which is grained or stained in the manner proposed, is already more than half furnished, and needs no profusion of expensive furniture to complete the other half. Plainness and simplicity in furniture, in such a case, will answer, and in my humble opinion, give better effect, than *can* be produced where the finish is with white, or any other plain painting.

In Barnard's work on School Architecture, staining with asphaltum is highly recommended, and it seems to have been used in finishing the best school buildings in Boston. CHARLES W. HILL.

Toledo, *Feb.* 1850.

— *Ohio Cultivator.*

NAKED FALLOWS AND NAKED SOILS TEND TO STERILITY.

There is no doubt of the truth of this proposition. Any observing man who has travelled far, and observed carefully what was before him, cannot have failed to note this result. Occasionally old fields, or commons at the north, and whole plantations at the south, illustrate the assertion; while in ancient kingdoms, once world-wide renowned for fertility, as Palestine, large portions of Syria, Greece, Italy, and Spain, sterility now reigns supreme, where once the golden harvests waved in the richest profusion, and lowing herds and bleating flocks fattened on the luxuriant meadows and grassy hill-sides. A few years of bad cultivation, followed by abandonment of the naked surface to the elements, have wasted the remnant of fertility left by the last thriftless occupant. A little consideration will show the inevitable tendency of such management to similar results in our own country.

A soil judiciously cultivated, where all that is produced upon it is fed off upon the field; or the refuse vegetation, as of stalks and roots, after its consumption by man or animals; the offal of the finer portions, as of grain, the leguminous plants or farinaceous roots,— where these are carefully husbanded and returned to the soil, with the addition comparatively of a trifle in some of the essential mineral ingredients, as of plaster, lime, or salt, when they are deficient, the soil will be constantly improving. The reason of this is perfectly obvious. Vegetation draws no inconsiderable share of its carbon, which is between forty and fifty per cent. of its entire weight, from the carbonic acid of the atmosphere. This is stored up in the roots, stalks, and leaves; and if carried back to the soil and incorporated with it, tends greatly to augment its fertility. In fruits fed to man or animals, much of this carbon is converted into carbonic acid, and given again to the atmosphere by their respiration. Yet much of the carbon, and nearly all the salts, or mineral ingredients of the food, are retained in their fæces; and if these are applied to the field, they will be found to have improved, rather than deteriorated, the soil from which they had been taken.

It is the loss by the partial fermentation and decomposition of plants, grains, and grasses, in the curing and preparation for food, in addition to their large waste from respiration in the animal system, which renders the process of improvement by manuring with green crops (in which the whole product, as of oats, buckwheat, rye, clover, or cow peas, grown upon a field, is turned under by the plough) so much more speedy and efficient, than the slower, yet not less certain mode of restoring all the offal and manure derived from the crop to the soil where it has been grown. Even a small quantity of such mineral manures, as lime, plaster, salt, or bone-dust, has a tendency to absorb carbonic acid and ammonia; and by a small outlay, the fertility of the soil may

be greatly increased, and the loss of these fertilizers by respiration and perspiration, when they first pass through the animal system, before their residuum is given back to the soil, may be fully compensated.

One exception is to be admitted of the tendency of uncultivated fields to sterility. This is seen where they sustain a natural growth of vegetation, such as is exhibited in woodlands, prairies, and the spontaneous growth of other plants in tolerable profusion; for here the work of a self-sustaining fertility is constantly in operation. In all other cases, the rule holds true, and from this perfectly plain and obvious principle. If the soil be upturned and exposed to the sun, air, and rains, unsheltered by the kindly protection of its natural covering of vegetation, the oxygen from the air, and moisture it imbibes, stimulated by the sun's rays, acts upon the carbon of the soil, and converts it into carbonic acid; and this, finding no rootlets of plants to absorb and condense it, speedily escapes to the surface, where it mingles with the atmosphere, and is wafted thousands of miles from the spot of its origin. As they become soluble, the earthy salts, finding no plants to appropriate them, are soon washed out of their native bed by the drenching rains, and pass onward through rills, brooks, and rivers, to the mighty ocean, hopelessly beyond reach. Calcareous and aluminous soils are partial, and only partial, exceptions to this general result. They absorb a certain amount of these fertilizing salts and gases, while all beyond pass off into irreclaimable waste.

The relevancy of these principles is shown, by the devastations of numerous and once fertile cotton plantations in our Southern States. It was not the quantity of carbon and salts, (ash,) abstracted in the comparatively small proportion of lint, (pure cotton,) taken from the fields, although this, in a long series of years, would be considerable; but it is owing to the necessarily cleanly cultivation required by this crop, and the *nearly naked fallows* thereby exposed to the drenching rains and an almost tropical sun. No weeds nor grass must be suffered to grow where a good crop is to be secured; and the narrow strips, (rows,) of vegetable growth, which alone are suffered to usurp the field, except for the brief time when the crop is in full foliage, gives every facility for the escape of fertilizing matter through the action of the elements. Added to this, is the too frequent waste of the stalks, leaves, and seeds; the two former being often suffered to decay on the surface and gradually disappear from rains; and the latter succeeds, at a later period, the other portions of the plant; or if fed to cattle or swine, their manure is dropped in the roads or by the sides of gullies, where it soon follows the same channels.

A similar effect is produced from the constant cultivation of grain, tobacco, flax, and most other plants; and from their abstracting a greater amount of the fertilizing elements to give them maturity, than are taken out of the soil by cotton, this result is sooner reached.

What is the remedy for this? is the very pertinent inquiry. There are but three, and one or more of these must be applied, or sterility is inevitable. The fields must have a frequent rotation of grass, clover, or some of the forage plants fed off, where grown, by animals, and their droppings left to fertilize the surface; they must be restored by green crops ploughed in, as of clover, cow pea, or other crops, or they must be manured from the cattle yard, or its equivalent in mineral and vegetable manures. Each of these modes has been often treated of in our preceding volumes, and they will continue to be noticed in all their varying phases and merits in the succeeding ones. — *Am. Agriculturist.*

He is unfit to rule others who cannot rule himself.

USEFUL KNOWLEDGE IN AGRICULTURE.

Every practical man well knows that almost any kind of soil, using the term soil as applying to single farms or small patches of territory, bears a certain kind of weeds, which tell, in language not to be misunderstood, whether the soil is stiff or light, wet or dry; whether it is easily or hardly tilled, what kind of husbandry is suited to it, what kind has been adopted. The lecturer could furnish a long list of the names of plants going to prove this. Now, this kind of knowledge comes directly home to every practical farmer, and it can be shown in a brief manner in what view this knowledge is most desirable to him. The weeds determine the method of cultivation, from the ease or difficulty with which the farmer can remove or eradicate them. If they are annual, once cutting them down will effect the desired object; if biennial, they must be frequently cut down; once or twice doing it will not eradicate them. It is important, also, to know something of the nature of the seeds; whether they easily rot, or whether, being covered with a scaly coating, they will retain the principle of vitality for a long period. The farmer must also ascertain whether the weeds are those which propagate by their roots; because, if they do, merely tearing them from the soil will not destroy them.

Microscopic examination of plants is of the very greatest importance to the agriculturist. Smut affects, it is well known, many varieties of our grain now: this smut is proved to be a minute vegetable substance, and this proof is obtained only through a microscopic examination. Rye is affected with ergot; growing with it and being ground up with it, it has caused, at times, the most alarming sickness, and has resulted in death; it is now used as one of our most powerful medicines. It has been ascertained *recently*, that the same fungus attaches itself to different varieties of grass, and springs up under much the same conditions that the ergot does upon the rye. It makes its appearance in cold, wet lands, or when an excessively wet season is followed by a hot, dry summer. When this grass grows, it has been long known that cattle will not thrive; in some seasons it has been impossible to raise a single calf. Attention was called to the grass from a knowledge of the effects of ergot upon the system. Thus it will be seen how important is a *minute* investigation of matters pertaining to the art of agriculture. The remedy in the case of grass would be to thoroughly drain the soil, and thus to kill off the rank, coarse vegetation. And this general remedy should be applied for the rust and mildew, though special remedies may be adapted to special localities. Drainage not only removes the water, but renders the air drier. — *Prof. Johnson.*

HOW TO SUBDUE A VICIOUS HORSE.

The following fact occurred in the city of New York a few days ago. A beautiful and high-spirited horse would never allow a shoe to be put on his feet, or any person to handle his feet, without a resort to every species of power and means to control him. At one time he was nearly crippled by being put in the stocks; he was afterwards thrown down and fettered; at another time, one of our most experienced horse-shoers was unable to manage him, by the aid of as many hands as could approach. In an attempt to shoe this horse yesterday, he resisted all efforts, kicked aside every thing but an anvil, and came near killing himself against that, and finally was brought back to his stable unshod. This was his only defect; in all other respects he is gentle, and perfectly docile, especially in harness. But this defect was just on

the eve of consigning him to the plough, where he might work barefoot, when, by mere accident, an officer in our service, lately returned from Mexico, was passing, and being made acquainted with the difficulty, applied a complete remedy by the following simple process: He took a cord about the size of a common bed-cord, put it in the mouth of the horse like a bit, and tied it tightly on the top of the animal's head, passing his left ear under the string, not painfully tight, but tight enough to keep the ear down, and the cord in its place. This done, he patted the horse gently on the side of the head, and commanded him to follow, and instantly the horse obeyed, perfectly subdued, and as gentle as a well-trained dog, suffering his feet to be lifted with entire impunity, and acting in all respects like an old stager. That simple string thus tied, made him at once as docile and obedient as any one could desire. The gentleman who furnished this exceedingly simple means of subduing a very dangerous propensity, intimated that it is practised in Mexico and South America in the management of wild horses. Be this as it may, he deserves the thanks of all owners of such horses, and especially the thanks of those whose business it may be to shoe or groom the animals. — *Selected.*

UTILITY OF INDIAN CORN.

But what gives to Indian corn its great importance, is the actual amount of nutritive matter which it contains. It is said to be third in this respect, wheat and rice containing a somewhat greater amount, though many place maize second only to wheat. We have the analysis of Indian corn, which may be given as follows: —

Silica,	38.45
Potassa,	19.51
Phos. of Lime,	17.17
Phos. of Magnesia,	13.83
Phos. of Potassa,	2.24
Carbonate of Lime,	2.50
Carb. of Magnesia,	2.16
Sulph. of Lime and Magnesia,	.79
Silica, mechanically found,	1.70
Alumina and loss,	1.65 — 100

making in all one hundred parts. In other words, we may say, on the authority of Dr. Dana, of Lowell, there are in it, of

Fat-forming principles, gums, &c.,	88.43
Flesh-forming principles, gluten, &c.,	1.26
Water,	9.00
Salts,	1.31 — 100

A glance will show how greatly the fat-forming principles predominate in the one hundred parts. There is hardly any grain which yields so much for the support of animal life. The difficulties and contingencies of raising wheat in the eastern parts of Massachusetts have discouraged its cultivation, so that we may say that Indian corn is by far the most profitable crop, especially as, when the offal is properly managed, there is no grain which restores so much to the ground. It is a fact, too, that it may be cultivated longer in succession than any other grain; and if kept dry, it may be preserved for an indefinite period without injury. The ease and rapidity with which it recovers from a drought is truly remarkable. Many predicted, during the last summer, that the corn crop would be destroyed. The leaves were badly curled, and there was every indication that the crop would greatly suffer. Every one remembers how speedy was its recovery, and how rapid its growth after the change of weather.

As a fattener for cattle, swine, and poultry, we may say that Indian corn is unrivalled in utility. The analysis of Dr. Dana, as given above, is sufficient to show, at once, how important it is for such purposes. As a food for man, it is extensively used, though by some thought to be too stimulating. — *Flint's Essay in Essex Ag. Transactions.*

A HINT ON A PRACTICAL SUBJECT.

I have always felt a deep interest in the discussions of "Deep *vs.* Shallow Ploughing," which have of late been had in your useful paper. I cannot bring myself to believe that any practical farmer would seriously advocate the system of shallow ploughing, where wheat and corn are the staple crops. It is, to me, such an absurd theory, that I ascribe the opinion to theoretical farmers alone.

Twenty years' experience, upon a variety of soils, has taught me that all land should be ploughed deep; in the wet season, the rains stand less on the top of the ground, to the injury of the growing crop; in the dry season, the roots strike deeper and suffer less from the drought; for that the roots of wheat or corn reach to the depth of the deepest ploughing will be manifest to any observer. In ploughing poor soils deep for the first time, a top dressing is necessary to give the crop a vigorous start, when the roots will soon reach as far as the ground has been stirred. Your correspondent, "J. A.," says — "Suppose you plough six inches, when your soil is but two, you have now mixed four inches of clay or sand with two of soil, consequently, you have now a predominance of those inferior elements over the productive soil, and deterioration of land is the inevitable consequence." How is this possible? Are we to be told that the roots of the plants will not penetrate four inches of loose earth? And if they do, where is the deterioration in either the land or the crop? All know that land is injured by being exposed naked to the frosts of winter, or the heats of summer. Does it not then naturally follow, that the deeper it is ploughed, the less proportion of the soil is exposed upon the surface to be injured in this way?

"Plough deep, while sluggards sleep,
And you'll have corn to sell and keep."

Leesburg, Va., 1819. W.

— *Dollar Newspaper.*

GET THE BEST IMPLEMENTS.

Mr. Editor: There is a species of mongrel economy practised by some farmers, which cannot be too severely deprecated. If they are under the necessity of purchasing a plough, scythe, rake, hoe, or cultivator, instead of searching out the best and most perfectly finished, they inquire for a cheap or medium-priced article, in order to economize their cash.

Now, my experience in purchasing farming implements indicates exactly an opposite course. I inquire for the best, and purchase it. I would no more spend my money for a cheap plough, or harrow, or a cheap wagon — which are always much the dearest in the end — than I would for a cheap school teacher, or a cheap minister. Buy only the best articles; this is the true economy, and all will find it so. — *Germantown Telegraph.*

VALUE OF BONE DUST.

In speaking of the value of bone dust as a manure, Professor Gray says, that "one bushel to a load of yard manure increases its value, as determined by experiment, one half." He estimates that it is "eight or ten times as valuable as cow dung, and the quantity of salts is sixty-six times that contained in an equal quantity of that substance."

LABOR.

I see the man who scorns honest labor. Who clothes him with fine linen, and bids him fare sumptuously every day? On his back is the fleece of the peasant's sheep, sheared by the peasant's strong hand, whitened in the clear flow of the mountain stream, and spun by hands, if not as white, more true and stainless than the crowned queen's! Not a rag of all that curiously wrought, colored, and fashioned gear, which defends him from the keen frost, and scorch of summer, and gives him a grace in the eye of beauty — not a single rag is there, but rises up in judgment, and gives him back scorn for scorn. Fool and drone! He has mistaken the true attitude of man — the heart of the great universe itself. Annul that labor which he scorns, and he stands amid the elements of nature nude as when born. The polished hide which has felt the busy touch of many hands, over which eyes have cried and hearts grown faint, crumbles from his shiftless feet — the bright, fair cloth, in its thousand forms, vanishes from his shrinking limbs — and the great inheritance of brick and mortar, the broad, fruitful lands sprung from the brain of genius and the hand of toil, and bequeathed to that miserable heir of humanity by hard, honest thrift, fly back into their wilderness being, and the proud foot occupant stands possessionless and alone. Who now will minister to his wants? who kindle even on the rudest cabin hearth a fire to stay the pitiless finger of the storm? All-charitable Nature moulds not herself into palaces and ingots, and slaves rise not at the beck of imperious will. Ah, thou man, who scornest labor, look around and see that there is yet some dignity and beauty in toil; that she has compassed some oceans, bridged rivers, delved in mines, and founded empires and practical religion in defiance of the taunt. Her giant will is busied with loftier thought than scorning thee as thou deservest! Let her reproof and thy scourge be that thou art condemned by God and man; by God, who scorns not to build for himself a universe, clothe himself about with angels and hovering glories — by man, proud of his power to exalt the image and imitate the example of God. — *Nineteenth Century.*

WIRE FENCE.

At request, I send you a description of a wire fence we have been building, and the cost of the various items used in its construction.

The wire used was No. 9, weighing one pound per rod. The posts are cast iron, three feet six inches high, besides a dowel of two and one half inches in length and one and one quarter inches in diameter, inserted in stone, and weighing about eleven pounds each. We first built a wall, three feet wide and eighteen inches high, placing large stones for receiving posts, at the distance of twelve and one half feet. This will guard against geese and swine, and attract the notice of larger animals, that they may not run against it. Had not the stone been on the ground, we should not have made it quite so heavy.

As the fence separates a permanent meadow from the highway, we set our posts about six inches from the front of the wall. The form of post is tapering to the top, flattened at the sides, and thinnest at the middle — designed to obtain the greatest strength of the iron used. (?) The distance of the first wire from the stone is four inches; then a space of six inches, then seven inches, then nine, and, finally, of twelve inches; the posts rising four inches above the top wire. The holes in the posts were not cast in, but drilled. Every other post we braced with round, half-inch iron, one end clasping the post eighteen inches from the bottom, the other entering the same stone as the post, eighteen inches from it. Midway between the posts, we placed others, of oval iron three quarters of an inch in breadth, drilled, like the others, but not fastened to the stone.

We purchased unannealed wire, but were under the necessity of annealing it before we could use it. This we did in a fire in the open air; and one side of each coil became more pliable than the other, which made it troublesome in putting in. We introduced our wires, five in number, without much trouble, except from our movable posts; one person holding the coil and turning it in his hands. I think the better way would be, to have a reel for this purpose, as the wire would come off more easily, and get less crooked. At each end we had strong, well braced, wooden posts; and fastening the wire to one of them, we strained it tight at the other, by passing it through the post, and then through a cylinder of white oak, about two inches in diameter, and twelve inches in length, which we turn by a carriage wrench, fitted to one end, and an iron rod put through a hole in the other; the rod, being close to the side of the post, was made fast by a nail, to keep the wire straight.

In order to straighten the wire the whole length, we found it necessary, at the same time we strained at the end, to draw on it in various places, as the friction of the posts, and catching in some, would break one end before the other would be straightened. This we effected, by putting sticks through the joinings of the wire, and drawing by hand. After the horizontal wires were drawn tight, we put in No. 15 wire, passing diagonally from the top to the bottom of every post, and crossing in the centre. It may be woven in any desirable form. The whole is painted white, to protect it from the rust, improve its appearance, and attract the attention of cattle.

We have another short piece, which has no wall at the bottom, and is painted brown, which the cattle do not see, and they run into it, much to its injury. The length of this fence is thirty-five rods. The cost was as follows: —

180 lbs. No. 9 wire, at 6 cts.,	$10 80
20 lbs. No. 15 wire, at 8 cts.,	1 60
46 cast iron posts, 529 lbs., at 3 cts.,	15 87
36 lbs. American iron for braces and small posts, at 5 cts.,	1 90
Blacksmith's bill for drilling posts, &c.,	3 83
Paint,	1 00
Labor at wall, &c., 30 days,	30 00
	$65 00

being $1 85 per rod.

Our experience alone would enable us to construct another at less cost; and by bracing each post, they might be farther apart, without any loss of strength. Many of the processes adopted by us were not original; but as the building of wire fence is yet in its infancy, many parts of our plan may be worthy of adoption.

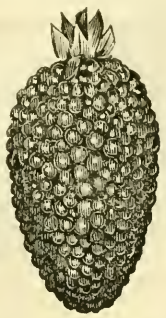
If any one wishes the fence invisible, let him set the stone for the posts in the ground, and paint the whole green or brown. A short piece of wire fence does not look well, but in our case, it has added so much to the beauty of the field enclosed by it, as to be noticed by every one who sees it.

T. S. GOLD.

West Cornwall, Ct., *Jan.* 25, 1850.

— *Am. Agriculturist.*

Oregon Wheat. — We have seen some samples of wheat grown in Oregon, which, from its quality, deserves a passing comment. The grain is extremely fine, being very round and full, and, compared with that produced in Illinois, or other grain-growing states, has an evident superiority. — *N. O. Pic.*



CULTIVATION OF BLACKBERRIES.

In the days of our boyhood, thousands and thousands of brier bushes impeded the progress of the farmer as he labored to bring the forest into a fruitful field. On removing the forest growth, the brambles succeeded, and were considered no small nuisance, though they often yielded bushels, and sometimes cartloads, of fine fruit, beyond the consumption. At that time, we did not dream of ever cultivating, or recommending the culture, of this then obnoxious bush, as many barelegged and barefooted urchins could testify.

But now our natural or wild fruits have disappeared, and large cities and towns have created a demand for fruits, and those of the highest order command a high price; and among the very best and dearest fruits is the high bush blackberry, so common in Maine, and it may abound in other parts of New England, but in this region, the low bush or running blackberry prevails, which, in Maine, is called the *sour* blackberry, being far inferior to the high bush, both in size and quality.

In Maine, the blackberry grows in all soils, from those that are tolerably moist and very rich, naturally, to the dry and poor. But on light, poor soils, the fruit is smaller and much inferior. The larger the fruit, the better the quality. This fruit abounds in new lands; and after the land has been long cleared up, it flourishes well by the side of walls and fences, among logs, and in and around stone heaps, when it is not molested by more thorough culture and regard to neatness than usually prevail where land is comparatively new and cheap.

From the natural habits of the blackberry, we must infer the mode of culture, in the absence of experiments on this subject; and perhaps some of our readers can give information on the garden culture of this fruit. There is no doubt that it will flourish best in lands that are new, or comparatively so. If cultivated in old gardens, or on lands that have been long under tillage, apply as manure leaves from the forests, also wood ashes and charcoal. Leaves, straw, old hay, and other litter used as *mulching*, would be excellent, especially on dry soils, and save the fruit from the effects of extreme heat and drought.

We recommend the culture of the blackberry in the garden or field, as a matter of trial, both for supplying the family and the market with fruit. As so little has been done in this way, we cannot say whether it will be profitable; but we think it will, for the raspberry, thimbleberry, and other wild fruits, flourish well in the garden.

A few amateurs raise fine blackberries in this vicinity, and we have seen some sold at a dollar a quart box, which were no larger nor better than we have seen in Maine of spontaneous growth. These gentlemen have a particular kind, that are held in high estimation, and we have obtained some of them to try by the side of some which we have procured from Down East. In our native place, we have picked a pint of blackberries from a single bush; and we have stood in one spot, without moving our feet, and picked a quart of as fine fruit as we have ever seen of this, or any other kind of fruit, from the highest cultivation.

The blackberry is a valuable dessert fruit without preparation, or, like many other delicate fruits, it may be used with sugar, cream, &c. In cooking, it may be used in a great variety of ways, in puddings, cakes, pies, tarts, &c., &c. It is the very finest of fruits for vinegar, and in new countries, before orchards are established, and where farmers have not learned to avail themselves of the sap of the maple for vinegar, the blackberry is used for this purpose. We now have some fine blackberry vinegar, which we made a few years ago, from some fruit that was becoming too soft for other purposes. It is of a beautiful rich color, and it retains the peculiar aroma of the fruit. It far excels common vinegar. This fruit may be saved for future use, by making it into jelly or jam.

SETTING FRUIT TREES.

Great care should be taken in selecting fruit trees, in order to procure those that are vigorous and hardy, of good form, and suitable size; and for this northern climate, they should be raised in the north, or in nearly the same latitude. It is of great importance that the trees should be taken up with the greatest care, and well packed. In many cases trees are wrenched forcibly from the ground, with a loss of no small portion of their roots; and sometimes there is a negligence in packing, so that the roots become dry and nearly dead.

Trees should be taken up early, before vegetation commences, and secured by packing or laying in by the heels; and then it may be well to delay setting till the soil is dry enough to be worked conveniently. If any roots are broken, they should be cut off smoothly and the top should be reduced even more in proportion. Even if no roots are lost, it is best to prune off a part of the top, especially when trees are moved in the spring.

Dig large holes 18 or 20 inches deep, unless the land is wet, and first fill in with loam and decomposed sods, to a suitable height, and then plant the tree with the roots extended in their natural position, so that they will be covered only a few inches deep when the earth is levelled. Scatter the subsoil from the bottom of the hole on the surface. Make a basin

around the tree to catch the water; and lay a few stones almost close to the tree, to keep the roots firm in their places, and some sods between the stones and tree, to protect it against the winds. It is much better to *mulch* the trees by laying straw, old hay, sea-weed, or other litter around them, especially the first season, as this keeps the roots cool and moist in dry weather.

If the land has been well prepared by thorough culture, and liberal manuring of previous crops, no manure will be necessary; otherwise, use well decomposed compost, and do not apply that directly to the roots unless well mixed with loam. If coarse manure only can be had, lay it around the tree for mulching, and as it decomposes, it will run down to the roots.

NOTICES OF PUBLICATIONS.

THE POULTRY BOOK, a Treatise on Breeding and General Management of Domestic Fowls; with numerous original Descriptions and Portraits from Life; by John C. Bennett, M. D., Physician and Surgeon. Boston; Phillips, Sampson, & Co. 310 pp. 12mo.

In the execution of this work, the publishers have done themselves much credit. The paper is fine, the typography beautiful, and the engravings are on a liberal scale. We have barely noticed the appearance of the work, and shall delay an opinion of its merits, as we have not had an opportunity to examine it.

REPORT of the Committee of Supervision of the first Exhibition of Poultry, held in Boston, Nov. 1849.

This is a very neat and beautiful pamphlet, containing an account of the different breeds shown, and by whom exhibited, with valuable statistical information, and suggestions on the importance of forming a permanent association for the improvement of domestic fowls. It is embellished with numerous portraits of fowls, which show well on fine paper, with the excellent specimen of Mr. H. L. Devereux's typographic art. Price twenty-five cents. Sold by J. P. Jewett, Redding & Co., Ticknor, A. Bowditch, and Phillips, Sampson, & Co.

THE GRANITE FARMER. — This new paper was received a few weeks ago, but has been neglected as it was mislaid. It is in quarto form, neatly executed, and well filled with interesting and valuable matter. It is under the patronage of the New Hampshire State Agricultural Society. Published at Manchester, by James O. Adams; Thomas R. Crosby, M. D., Editor. Price $1 50 per year. We trust that the intelligent farmers of the Granite State will give this paper a liberal support.

AMERICAN INDUSTRY AND SKILL. — It is said that the new Pasha of Egypt has ordered a set of elegant equipages to be built for him in the United States, to be ready during the spring.

THE NEWSPAPER.

BY CRABBE.

Lo! there it comes before the cheerful fire,
Damp from the press its smoking curls aspire
(As from the earth the sun exhales the dew,)
Ere we can read the wonders that ensue;
Then eager, every eye surveys the part
That brings the favorité subject to the heart;
Grave politicians look for facts alone,
And gravely add conjectures of their own;
The sprightly nymph, who never broke her rest
For tottering crowns or mighty lands oppressed,
Finds broils and battles, but neglects them all
For songs and suits, a birthday or a ball.
The keen, warm man o'erlooks each idle tale
For "moneys wanted" and estates on sale,
While some with equal minds to all attend,
Pleased with each part, and grieved to find an end.
To this all readers turn, and they can look
Pleased on a paper, who abhor a book;
Those who ne'er deigned their Bible to peruse
Would think it hard to be denied their news;
Sinners and saints, the wisest with the weak,
Here mingle tastes, and one amusement seek.
This, like a public inn, provides a treat,
Where each promiscuous guest sits down to eat;
And such this mental food as we may call,
Something to all men, and to some men all.

THE OLIO.

WHAT THEY SIT FOR. — A Quaker, who was examined before a court, not using any other language than "thee" and "friend," was asked by the presiding judge, —

"Pray, Mr. ——, do you know what we sit here for?"

"Yes, verily do I," said the Quaker; "three of you for two dollars each a day, and the fat one on the right for one thousand dollars a year."

A wager was laid on the Yankee peculiarity to answer one question by asking another. To decide the bet a Down-Easter was interrogated.

"I want you," said the bettor, "to give me a straightforward answer to a plain question."

"I kin du it, mister," said the Yankee.

"Then why is it New Englanders always answer a question by asking one in return?"

"*Du they?*" was Jonathan's reply.

"We praise men for fighting," says a caustic writer, "and punish children for doing the same."

If you are too poor to own a garden, buy a tub and fill it with earth, and cultivate a rose bush or a dahlia bulb.

TERMS. — THE NEW ENGLAND FARMER is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

THE POSTAGE

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, APRIL 13, 1850. NO. 8.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

LIST OF APPLES.

WE are often requested to give a choice list of apples and other fruits; but a great difficulty attends the subject, as different varieties are suited to different climates, and to different purposes. The Baldwin is the most popular winter apple in this section, but it has less value in the northern part of New England, while the Ribstone Pippin, which is not worth cultivating here, succeeds well in Maine, and perhaps it may be valuable in other northern regions. Some fruits are fine for the garden, being of the best quality; but they may be of small size, and the tree a poor grower or bearer, so that they would not be profitable for the market. Yet there are some fruits that are generally good in different sections, and for various purposes.

SUMMER APPLES.

Red Astrachan, Williams, Sweet Bough, Cole's Quince, Foundling, Summer Rose, Manomet Sweeting, Benoni, Golden Sweet.

The Early Harvest is about a week earlier than any of the above, but it is very uncertain in New England, being liable to crack and blast; yet it may be worthy the attention of amateurs.

The Summer Rose is a beautiful and excellent apple for the garden, but rather small for the market. Williams requires a strong, rich soil, and with high culture it is very large, beautiful, and salable. It is a moderate bearer. Cole's Quince succeeds well in Maine, its native state, and we have disseminated it widely for experiment. It is a good grower, a constant and good bearer, of a large size, of superior quality for cooking, and when thoroughly ripe and mellow, very fine for the table. Sweet Bough flourishes well in all parts of the country, and is excellent. Manomet Sweeting is new and very promising, and is later than Sweet Bough.

FALL APPLES.

Benoni and Manomet extend into autumn. Golden Sweet, a very fine apple, comes into use the latter part of August, and continues nearly through September. The following are valuable:—

Richardson, Bars, Early Joe, Mexico, Garden Royal, Long Stem, Superb Sweet, Porter, Sassafras Sweeting, Gravenstein, Magnolia, Jewett's Red, Hubbardston Nonsuch, Mother, Hurlburt.

Richardson is a large and excellent fruit, moderate grower, not yet well tested. Bars has not been extensively tested, but it is a good grower, and the fruit is beautiful and fine. Early Joe is a beautiful and first-rate dessert fruit, but should be eaten as they come from the tree. Mexico is handsome and excellent, but a very slow grower indeed. Garden Royal is among the very finest dessert apples, well adapted to the garden, but rather small for market. Long Stem is a good grower, fair fruit, and of a very high character; new and promising. Superb Sweet is a fine grower, good bearer, the fruit handsome, tender, and rich; not extensively cultivated, but very promising. Porter and Gravenstein have their characters well established as highly valuable fruits, both for the dessert and kitchen. They are adapted to different climates and locations. Sassafras is one of the finest autumnal sweet apples. Magnolia is a new and very promising fruit, not yet well tested. Jewett's Red is an excellent apple for the dessert, but it requires very high culture, else the fruit will be imperfect. Hubbardston Nonsuch is one of the very best late fall apples for the market. It is large and fair, and very popular. Mother is also a late fall apple of the very highest character, and promising as to its habits, but not yet well tested. Hurlburt is one of the very best apples, late in fall and early in winter. It is a good bearer, and the best and largest grower that we have among a variety of sixty or seventy in the nursery. It grows more rapidly than the Baldwin, which is famous for this quality.

WINTER AND SPRING APPLES.

Mother and Hurlburt are early winter apples. The following are considered very valuable varieties: Rhode Island Greening, Danvers Winter Sweet, Baldwin, Sutton Beauty, American Golden Russet, Ribston Pippin, Seaver Sweet, Red Russet, Roxbury Russet, Ladies, Sweeting, Northern Spy, Table Greening.

Some cultivators consider the Rhode Island Greening one of the best of apples, but many complain that it does not yield so much fair fruit as the Baldwin. As it has been somewhat neglected, the fruit

has of late sold higher than the Baldwin, early in winter. Danvers Winter Sweet is very popular, and yet a great many who cultivate it complain that much of the fruit is too small for market. We prefer the Seaver Sweet, as the fruit is larger, equally as good, a better grower, and bears more in odd years, when apples are usually scarce.

The Baldwin is the most popular apple in New England; but in the northern parts, some prefer the Ribston Pippin, and others adapted to a cold climate. Sutton Beauty is a new and very promising fruit, well worthy of experiment. See our first volume, page 146. But little known. When we prepared the American Fruit-Book, we had not fairly tested this fruit; since that time we have tried it, and given it a place in a new edition now in press. American Golden Russet is one of the very best of apples, and it retains its excellence into spring, but it is rather small for market.

Red Russet is new, but very promising, and worthy of general trial. It keeps as well as the Roxbury Russet, is a better grower, and the fruit is better. Roxbury Russet is valued for its late keeping; but it requires very moist, strong, rich land. It is uncertain, especially on old land, and dry or moderate soils. The fruit is dry, and not first rate either for the table or the dessert. Ladies Sweeting is rather large fruit, very beautiful, and of the highest character. It retains its excellence even till summer. A moderate grower. Not yet well tested in New England. Northern Spy has become famous for its beauty and excellent flavor, and particularly for its freshness after long keeping, even sometimes into summer. Some say that in its native region, Western New York, it requires high culture and close pruning, else the fruit will be small and imperfect as the trees grow old. We think this variety will cost about twice as much to raise it as the R. I. Greening or Baldwin, and owing to their later keeping and superior quality, that they will be worth twice as much. Table Greening is a new variety, which we have disseminated widely for experiment. It has not yet borne, excepting in its native region, in Maine. It is excellent for cooking, and a very good dessert apple, excepting the flesh is rather firm. It has not the fine aroma of the Northern Spy, but it keeps much better.

Further experiments are necessary, to show what are the best apples for spring and summer. A good cooking apple for this season will rank high, as it will save us from the disagreeable necessity of using dried apples, which we should hardly do, were it not for the reputation of apples established by their use in the green state.

LIST OF CHOICE PEARS.

Hundreds of varieties of pears have been tried and rejected, and a large number have generally succeeded very well under good management. The following are among the most valuable, or the kinds that generally succeed well with good treatment. The list is arranged nearly in the order of ripening.

SUMMER PEARS.

Madeleine, Bloodgood, Dorr, Rostiezer, Tyson, Dearborn's Seedling.

Madeleine is our best early pear. Bloodgood is rather uncertain in New England, yet generally good. Dorr is not of high quality, but remarkable for growth, hardiness, and production. Rostiezer is a very great grower, and the fruit is first rate, but small for the market. Tyson is a little larger than the last, but not quite so good. Dearborn's Seedling is a fine, hardy variety, but as it is small, it is not profitable for the market, as the Bartlett comes into the market nearly at the same time. There are several other promising native summer pears on trial, among which are the Wadleigh, Muskingum, Osband's Summer, Zoar Seedling, &c.

FALL PEARS.

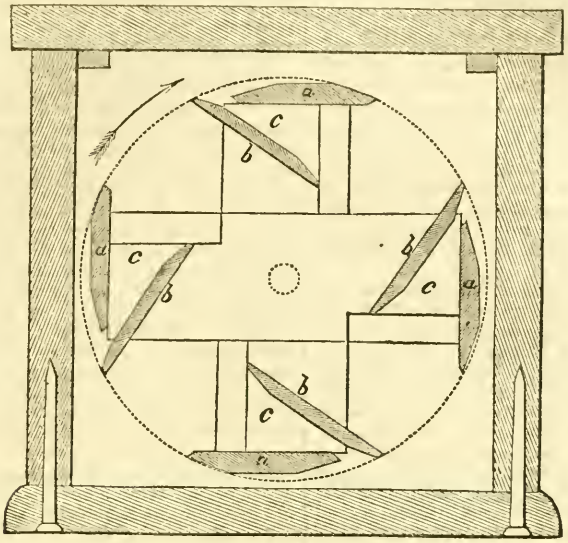
Bartlett, Wilbur, St. Ghistlain, Stevens's Genesee, Belle Lucrative, Cushing, Flemish Beauty, Andrews, Beurre Bosc, Seekel, Louise Bon de Jersey, Buffum, Fulton, Swan's Orange, Urbaniste, Dix, Vicar of Winkfield.

Bartlett is the most popular fall pear here, but it is rather tender for a northern climate. Wilbur is a native, and very promising. St. Ghistlain is excellent for the amateur, but too small for market. Cushing does not rank so high in quality as others with which we have associated it, but it is a hardy native, and a great bearer. Beurre Bosc is of an excellent quality, but as it is a slow grower and moderate bearer, it is not profitable for the market. Seekel is small, but it is the standard of excellence. Louise Bon de Jersey is very productive on the quince stock, but it has not been well tested, in orchard culture, on the pear stock. Buffum and Fulton are natives, and among our very best pears for the orchard; they are very productive and salable. Swan's Orange is a new native, and promises to be one of the very best for orchard culture. Urbaniste is one of the finest and surest of foreign pears. Dix is a native, but like some foreign kinds, very liable to crack and blast. Best for the amateur who has an extensive list, Vicar of Winkfield is a great grower, and a great and sure bearer. Fine for cooking, and very good for the table, when grown in a warm location, and well ripened.

WINTER PEARS.

Winter Nelis, M'Laughlin, Lewis, Beurre de Aremberg, Lawrence, Echassery, Easter Beurre, Pound for cooking.

Winter Nelis is a sweet, rich, luscious fruit, and generally succeeds well, but like nearly all foreign pears, it is a little uncertain. M'Laughlin is a hardy native of Maine, very promising, but not well tested. Lewis is a native, and succeeds well in a strong, rich soil, and rather warm location. Beurre de Aremberg is a very fine fruit, but rather uncertain. Lawrence is a native of New York, and is rather promising in New England; not yet well tested. Echassery is an old variety, not hardly first rate, but very hardy and sure in orchard culture. Easter Beurre is a difficult fruit to grow and ripen. When perfect, it is of a high character, and keeps late. It is adapted to a warm location in the garden.



CENTRIFUGAL AND CENTRIPETAL CHURN.

This engraving represents an improvement in the churn dasher, recently patented by Mr. Z. C. Robbins, St. Louis, for which a medal was awarded by the American Institute at their fair last autumn. This dasher has a rotary motion, by a crank on a horizontal shaft. The cut represents a transverse section, or end view of the dasher. From the inventor's specification, we gather the following account of this machine.

The dasher has several beating blades, *a*, *a*, *b*, *b*, &c., confined at each end to arms *c*, *c*, &c., which form the ends of the dasher. When the dasher is in motion, the cream is gathered between the diverging surfaces of each pair of blades, giving it an outward or centrifugal direction, and by the joint action of pressure and suction, it is forced through the narrow space between their after edges, producing a most efficient action on the cream for the production of butter.

When the butter begins to separate from the cream, the motion is reversed, and the rear surfaces of the blades, *b*, *b*, &c., will give the butter a centripetal direction, and gather the butter, as fast as it is formed, into a roll in the centre of the dasher; thereby preventing the clogging and obstruction to the free movement of the dasher by the accumulation of butter upon it; so that the churning operation may be easily pursued, until all the butter is separated from the cream, and gathered into a roll. This dasher may be used to advantage in either a round or square churn.

"The peculiar position of the dasher blades, causing them to pass edgewise through the cream, prevents their putting the whole mass of it into a rotary motion; in consequence of which absence of rotary motion in the body of the cream, the efficiency of the churning action of the dasher blades is greatly increased, and the dasher can be operated with equal advantage in either a round or a square vessel. This form of churn dasher, it is believed, has the largest amount of effective agitating surface that can possibly be given to it, consistently with the preservation of such a degree of simplicity of form and arrangement of parts as will allow of free access to all the surfaces thereof that are brought in contact with cream, for the purpose of cleansing them; without which last qualification, no churn will receive favor with dairy-women.

"The centrifugal and centripetal churn dasher is equally well adapted to the churning of milk as it is to the churning of cream. After repeated experiments, it is believed by the inventor, that it will produce butter from cream or milk in less time, and with a less expenditure of power than it can be accomplished by the use of any other churn that has ever been patented or brought into use.

"And also, that a larger quantity of butter will be produced from a given quantity of cream or milk."

We copy the following from that very valuable work, the Farmer and Mechanic, New York: —

"This invention, to which we alluded in the Farmer and Mechanic of November 1, appears to us to be based on purely scientific principles, and from the extensive sale, and numerous testimonials in their favor, their practical utility has not been over-estimated. Hundreds are in use in our own state, in some of the best dairies, and all who have used them speak of them in terms of enthusiastic approbation. We are informed that many are also in operation in Maryland, Virginia, and the District of Columbia, where they are equally admired, saving, it is said, by their application, nearly fifty per cent., in time and labor, over the common upright reciprocating dasher. Any contribution to the great dairy interest of the country is worthy of high commendation, and this we deem a valuable improvement, and worthy of general adoption by the farming community."

These churns are manufactured and sold by Messrs. Ruggles, Nourse, Mason, & Co., at Worcester and Boston.

For the New England Farmer.

CULTIVATION OF INDIAN CORN.

Mr. Cole: A field of stout corn, with lusty ears standing out in every direction, has always been a pleasing sight to me; and it has been rather a matter of pride with me, to grow about as good corn as any body. I now propose to give you an account of my management of two fields of this grain; and should your patience tire with the particularity of my details, I must remark that I am often obliged to lay aside that which I read upon farming, as of no practical use to me, because of the absence of details important for me to know.

I shall first mention a field of ten acres, that had lain to grass four years, and the soil of which is a warm, sandy loam. It was nicely ploughed to the depth of nine inches, in November. The manure was drawn on to the land in the fall, winter, and early spring, and placed in large heaps to prevent evaporation, and at convenient distances for again loading it into carts for spreading. One heap of forty loads was of muck from the barn-yard, upon which the cows had been yarded nights through the summer; other heaps were of muck, turf, and scrapings of various sorts, thrown to the hogs, and by them worked over; others were a compost of two parts muck to one of horse or cattle manure; and the last was sixty loads of muck, composted with six hogsheads of fresh lime, of seven bushels each, mixed in August before planting.

In May, these heaps were deposited over the field in smaller heaps, for the purpose of spreading, and at the rate of thirty loads per acre. The loads would average about thirty-five bushels each. The compost was evenly spread on the inverted furrows, and at the same time a heavy hinge-harrow was started lengthwise of the furrows, going several times in a place, and then across the furrows, until the soil and manure were perfectly pulverized and mingled to the depth of three or four inches. I harrow planting ground as much again as farmers in general do, and find my account in it too; for the extra fine tilth thus obtained, makes much easier and better work of planting and the first hoeing, besides contributing to the rapid growth of the young corn.

The field was next marked out in rows, north and south, and east and west, at three and a half feet apart each way. Much care was used to keep straight rows both ways, in order that the horse and cultivator might afterwards work the crop with the best execution. If rows are straight, one can shave the weeds, and stir the ground close up to the hills with the cultivator, leaving little for the hand-hoe to do. Besides, I perfectly abhor the sight of crooked corn-rows. Three and a half feet is pretty wide planting; but my corn is a large sort, and it will cover the ground at that distance apart, giving larger ears, as well as standing a drought longer than if planted nearer. I am suspicious of the reasoning by which the conclusion is arrived at, that close planting obviates the effects of drought; for each stalk, in seeking to perfect itself, draws on the soil for its due amount of moisture, and the demand is in this respect greater than that by evaporation.

In planting the corn, six to eight kernels were well scattered in each hill. I find that corn ears heavier, if well spread in the hill, than if thrown down into a heap, one kernel on the top of another. As the soil was a light sandy loam, the seed was covered about three inches deep. I have had my corn fail to come up well for want of sufficient covering. If a dry spell succeeds planting, the corn will find more moisture to set it growing if well covered; and again, if a frost succeeds, which is not unusual with me, the little tender plants will not be injured permanently, if the planting has been deep; but if it has been shallow, their vitality is destroyed. The seed was planted dry, with the belief, after a trial of various steeps, that it is as well so as any way.

As soon as the corn was up sufficiently to follow the rows well, the field was worked with a horse and cultivator, twice in a row, both ways, and the hills were dressed with the hoe. A week or so after, the horse and cultivator were again used, both ways; and so again, in another week; and again, for the last time, the earth, this time, being slightly raised with the hoe, making the hills broad and flat. The stalks were also thinned to four or five in a hill. Nothing more was done till harvest, and nothing more needed to be done. The ploughing had been nicely executed the fall previous; in the spring the surface was clean of grass or weeds, and brought to fine tilth with the harrow; the manure was sufficiently fermented to destroy the seeds of weeds contained therein; the frequent use of the cultivator kept the surface clean, and so mellow that the young corn came rapidly forward; and soon after the second hoeing, the ground was completely covered with the crop, and all weeds were choked down.

My cornfield was a handsome sight, on account of its perfect uniformity of luxuriance. It yielded me seventy two-bushel baskets full of ears to the acre. Premiums are frequently taken for single acres, yielding double the corn that any one acre of mine did; but whenever I can grow *ten* acres of corn, *averaging* seventy two-bushel baskets of ears per acre, I say to myself, *that* is doing very well.

Last year I planted a field of two acres to corn, in drills. The preparation of the ground did not differ materially from that of the ten acre field just described. From some experiments in drill planting tried on a small scale, in previous years, I was induced to think that on good land, well manured, corn would yield rather more in drills than in hills. This lot being one where these conditions were all right, I marked it out in rows three and a half feet apart, and dropped the seed in the rows nine inches apart, which gave just the same number of stalks to the acre as if I had planted in hills three and a half feet apart each way, four kernels in a hill. The seed was dropped by hand, and covered with the hoe; and it took about twice as long as it would to have planted in hills three and a half feet apart. The corn was worked with a horse and cultivator at six several times, in quick succession, and dressed twice with the hoe. As the rows were very straight, the cultivator was worked up close to the stalks each time, and the hoeing was not much, if any, more laborious than usual.

As I was absent from home during the whole of harvest time, no measures were taken to ascertain the exact yield of this field. But myself and others were well persuaded, upon comparison of the corn growing in drills with that in hills, on equally good ground, that the yield of the former would exceed that of the latter by at least fifteen bushels per acre. The stalks standing singly, nine inches apart, had each a better chance at air, moisture, and pasture; the ears in consequence grew larger, and more of the stalks bore two ears, than would have been the case if planted in hills. On the whole, I was well pleased with this crop, and intend, this coming season, to plant five acres in drills.

While upon my present subject, I will say a word about saving seed corn. All experienced farmers are aware that the productiveness and early ripening of any kind of corn, depends very much upon the manner of selecting the seed. I have a long-eared variety, which I have been planting and improving for some ten or twelve years; and although during that time I have tried, I presume, a dozen other sorts, I give the preference to the first-named sort. What-

ever may be said in favor of a change of seed, as regards other crops, there is no need of changing seed corn, *provided* proper care is used in the yearly selection of that for planting. By proper attention to this matter, a variety may be perfectly adapted in its habits to a given climate and soil, and changed much for the better as to productiveness. The difference in product, between careful selection in the field, and taking seed at random from the crib, will, in a very few years, be much in favor of the former mode, — the soil and cultivation being in both cases alike.

As soon as the earliest ears are thoroughly glazed, I go over the field myself, selecting from those stalks that are "stocky" and vigorous, and that produce two good ears. The selected ears are taken immediately home, braided, and hung up in a dry, airy place. When I commenced with my favorite variety, it was difficult to find twin ears; but now they are abundant. My crops also ripen ten days earlier than at first. I will not mention the length of the ears that might be found in my fields, but will say to you, Mr. Editor, come and see for yourself.

F. HOLBROOK.

Brattleboro', Vt., *March* 26, 1850.

For the New England Farmer.

CORN FODDER.

Mr. Cole: In your number for December 8, you published a communication headed "Corn for Fodder." In your remarks I entirely coincide, except in one statement, viz.: "But thirty tons of green stalks will not make twelve tons of dry fodder; probably not more than six tons." Wishing to have some exact data from which to judge of the profitableness of this crop, I tried some experiments last year, for that purpose, and wrote down the results at the time. The field where I tried the experiments, was planted the 5th of June, in drills nearly three feet apart. On the middle of September, I cut a bundle which weighed thirty-four pounds. The stalks were green, with a few small ears fit for boiling. I spread this bundle in as exposed a situation for drying as I could find, and after three days of good weather it weighed nineteen and one half pounds. In seven days it weighed seventeen and one half pounds, and after a fortnight, *fifteen and one half* pounds. I put it under cover every night and every dull day.

I also cut a bundle of green "tops" in the cornfield, which weighed thirty-one pounds; one day after, it weighed twenty-two and one half pounds. After a week of sunny warm weather, it weighed fifteen pounds. This result, showing a shrinkage of about eleven twentieths, was not quite as much as I expected. We had *guessed* the loss in drying would be from two thirds to three quarters of its weight.

It would be interesting to me to hear of other experiments on this matter, and also the grounds upon which you estimated the loss in drying to be four fifths of the weight; as *one* experiment is not entirely conclusive.

I should be glad to learn what mode of curing corn fodder in large quantities you would recommend, and what modes are practised in the vicinity of Boston.

I was about to write a list of other inquiries, but I will not extend this communication.

Yours respectfully, J. H. A.

Hillsborough Co., N. H., *Jan.* 19, 1850.

Remarks. — By some mistake this article has been delayed. Our statement that "thirty tons of green fodder will not make twelve tons of dry," is founded partly on experiments in weighing, and partly on judgment; but we say "*probably* not more than six tons." This latter remark is guess work, as appears from our qualification; yet we have some facts, on which this fact is founded.

We do not dispute the results of experiments as communicated, but we think experiments will not generally give such results. Our opinion is founded on the loss of weight in top stalks, as we have handled them much more than corn cut up at the ground; and a bundle that is quite heavy green, weighs only a few pounds when dry. A farmer who raised large quantities of corn fodder, said that it required good land, highly manured, and well managed, to produce six tons of dry fodder. Now, on such land we should expect twenty or thirty tons of green fodder. Mr. Willard Earle, of Worcester, raised forty tons of green fodder to the acre. Is it possible to get twenty tons of dry fodder to the acre?

We are much obliged to our correspondent for calling attention to the subject, and we shall be happy to learn that we are mistaken, and that the crop of dry corn fodder is far larger than we considered it, forming our opinion by inferences from facts, instead of direct facts. We regard this subject as unsettled, and request farmers to make experiments, both on top stalks, and on corn fodder, and report to us the result.

As to curing corn fodder, it is best to sow it sufficiently early for it to be fit to cut while the weather is warm, and the ground warm and dry. After cutting it, expose it considerably to the sun, carefully securing it against storms and heavy dews.

For the New England Farmer.

NATIVE ORNAMENTAL SHRUBS.

Mr. Cole: There are many species of shrubs found in our woods and hedges, far more beautiful than a large portion of the exotic kinds which are carefully and extensively cultivated for ornamental purposes. Indigenous shrubs have been employed to a limited extent, as yet, for embellishment; but their merits are more appreciated as they become better understood. Some of the most splendid kinds have been transferred from the forest to the garden, and are much prized and sought for.

The Rhododendron maximum, or Rose bay, as it is sometimes called, is a magnificent flowering shrub. It is somewhat rare in this section.

The Kalmia, or Laurel, of which there are three species in this vicinity, all of which are beautiful, but rather difficult to cultivate, is an evergreen, and adds much to the landscape in winter, by its green leaves, which are always cheering to the sight at that dreary season.

The Azaleas, of which we have two species in this section, are most splendid; one bearing pink flowers, and the other white, and both having a very fragrant odor, resembling that of the garden pink. No collection of shrubbery should be without them.

The Rhodora Canadensis, or false Honeysuckle, is a beautiful early flowering shrub, common in wet grounds, and worthy of a place in every collection.

The common Sweet Brier, or native rose, is much improved by cultivation, and perfumes the air with

its grateful odor; it is also one of the stocks on which to bud the foreign kinds with the greatest chance of success.

We have many species of Cornus and Viburnum with fine flowers, and more worthy of cultivation than much of the exotic shrubbery now seen in gardens and pleasure-grounds.

There are many other species which might be enumerated; but the above will suffice, as examples, to awaken an interest on the subject, and remind us, while we are eagerly collecting the productions of foreign lands, that our own fields and forests bloom with equal splendor, though forgotten or unknown.

O. V. HILLS.

Leominster, *March*, 1850.

For the New England Farmer.

CULTIVATION OF FLOWERS.

Mr. Cole: It is pleasing to see, year after year, the increasing interest taken in the cultivation of flowers; for it indicates the advancement of civilization and refinement, as well as a higher standard of morality in the community. But there is yet a large class so wanting in good taste, that they consider the cultivation of flowers as a very useless employment. To this class I would say, that happiness is the aim and object of all the labor of man. The happiness of the least refined consists in sensual gratification. In proportion as mankind advance, they seek for more extended and more intellectual sources of happiness. One of these is the cultivation of flowers. Any one who has cared for, watered, and trained some choice flowering plant until it has rewarded the cultivator with its perfection of form and brilliant bloom, will assent to this. It not only gives pleasure to the senses and intellect, but it teaches a moral to the heart.

"God might have bade the earth bring forth
Enough for great and small,
The oak-tree and the cedar-tree,
Without a flower at all."

But would the amount of our happiness have been as great, without these beautiful forms of nature?

Much more might be said on the refined character of floriculture as an amusement; but I have already occupied more space with this part of my subject than I intended.

Many who set about filling a border with choice flowering plants, and who wish to select those both easy of cultivation and beautiful, are at a loss which to select among the thousands offered by seedmen and florists. It is not my purpose, in this article, to offer a select list, but to make some remarks on a few of our native plants worthy of cultivation, and which Mr. Fowler, in two interesting articles on pp. 12 and 60, current volume of the N. E. Farmer, has omitted to mention.

Scarlet Columbine is a well-known May flower, growing on dry, rocky hills, and in gravelly soil, of elegant habit, and bearing delicate pendulous scarlet flowers. When removed from its wild locality to the richer soil of a garden, it grows with great luxuriance, and produces tenfold more flowers than in its wild state; but it should be transplanted into fresh soil every second or third year. The White English and Wild Columbines should be planted together for the contrast of color. When thus situated, beautiful hybrids can easily be obtained from the seeds of the English Columbine, partaking of the character of both species, and distinct from either.

The Cranesbill, (*Geranium maculatum,*) when cultivated, produces an abundance of purple flowers in May and June. The root is valuable for its medicinal properties.

The Bloodroot (*Sanguinaria Canadensis*) is another plant valuable in medicine, easily cultivated. The flowers appear in April; they are very pretty, but short lived.

Lilies.—*Lilium superbum, L. Canadense* and *L. Philadelphicum.* These are all fine. The *L. superbum* is the most magnificent of our wild herbaceous plants,—far more showy than the much-lauded new Japan lily, (*L. lancifolium.*) They do best when transplanted, early in spring, into deep, rich, and, if possible, moist soil. If not naturally moist, the ground should be covered with straw or litter through the heat of summer.

The Wild Lupine is found on dry sandy land, and well deserves a place in the garden. Its blue flowers appear in May, and are arranged in a long terminal spike.

Ground Laurel (*Epigæa repens*) is a beautiful wild flower, blooming very early in spring. It has been introduced into the gardens of Europe, but is not cultivated here. Probably it would not stand our hot dry summers in exposed situations, but it might do well in a garden where it could be partially shaded.

The Harebell (*Campanula rotundifolia*) is worth cultivating for its poetic associations. It is a slender plant, with narrow leaves, and pretty bell-shaped flowers. Rare in this part of the state. M.

North Easton, *March* 21, 1850.

For the New England Farmer.

PROPAGATION OF BOX.

Mr. Editor: In gardening, as in dress, and other subjects, individual taste will more or less prevail; accordingly the little evergreen dwarf box, has ever been to me a peculiar favorite; not as a hedge or border for my flower-beds, but standing promiscuously in single trees, and growing as much to nature as possible. Having but few trees in my garden, and wishing to increase my stock, and as my husband had relinquished the floral department to myself and daughter, I consulted such authority as I could find, as to the best method of propagating it. The uniform opinion was, that it would grow readily from slips. I accordingly made a number of efforts, but either through want of skill or perseverance, had the mortification of seeing them all wither and die. One autumn, in the month of September, while having some tender plants potted for the greenhouse, the earth got accidentally heaped up around one of my box-trees, so as to cover the trunk and lower part of the branches; and it remained so until the following spring. When the earth was removed to dress the borders, I discovered that the part of the branches that had been covered, had thrown out roots from one to two inches in length; it then occurred to me that I might probably accomplish my wish. I therefore took up the tree, and divided it into about thirty parts, laying the lower parts of the slips in water to keep the roots from drying, had a piece of ground prepared, and the slips set out, water poured around so as to settle the earth, and then pressed down close with the foot. I had the satisfaction of seeing every slip that had any root attached, live and thrive well without further trouble, more than to keep out the weeds. The foregoing seem, indeed, a small matter to make so many words upon; but if others can feel the satisfaction that I have done, in seeing the work of their hands prosper, it may not be wholly useless.

Respectfully,

MRS. N. DARLING.

New Haven, Conn., *March* 15, 1850.

For the New England Farmer.

COCCUS, LINN.

Mr. Cole: The family Coccidæ, or scale insects, (to which the cochineal insect, coccus cacti, so highly prized as a material for dyeing, also belongs,) contain many species which live as parasites on various plants, and do them considerable injury. They are very singular insects, passing the greater part of their life on one and the same spot, rather resembling an excrescence than a living creature. They belong to the order *Hemiptera*, Linn., in which the bugs, plant-lice, and *Cicadæ* are included; although the main characteristic of the order corresponds only with the males, as they only are winged. The females are shaped like a scale or shield, convex above, flat or concave below; provided with six very delicate feet, which sometimes, chiefly when the female has grown old, merge into the substance of the body. Anteriorly, at about the third part of the length of the insect, is situated a short or long rostrum on the under side, which it inserts into the epidermis of plants, and sucks out their juices. After pairing, when the eggs begin to develop themselves, the female dies, and her body serves as a protection and shield to her posterity, by covering the eggs till the young are hatched, when they crawl away. While young, both sexes are alike; afterwards the winged specimens are developed from the male's larvæ, and acquire two wings, and usually two long tail-threads; they are thus very distinct from the female, which looks like a larva during her whole life. There is also a great dissimilarity in point of size, as the male in all the species is scarcely to be distinguished with the naked eye, while the female sometimes attains the size of a grain of linseed, and even that of a pea.

The trees mostly infested with *Coccus hesperidum* are the orange, the peach, the plum, and damson, the wild chestnut, and the vine.

After many experiments, and due consideration of the nature of these insects, I luckily happened to think of a remedy which hitherto has proved the most effectual; and I submit to the public the fruit of my investigations, with the pleasure that I can recommend it to the agriculturist, with entire confidence in his good success; thus the ravages of the Coccidæ or coccus in the orange-tree shall disappear.

Receipt. — Take one pound of quicksilver, put it into a glazed vessel, and pour upon it one gallon of boiling water, which let stand till it becomes cold; then pour off the water for use. Repeat this on the same quicksilver (for it will retain its powers) till a sufficient number of gallons are provided to fill a vessel intended for the purpose. One in the form of a trough, that will hold twenty or twenty-four gallons, is the most convenient, especially for large plantations. Then to every gallon of this mercurial water add six ounces of soft green soap, dissolved in a portion of the prepared water. Let the mixture stand till it becomes about milk-warm, which is the degree of warmth it must be kept to during the time of operation, which is performed in the following manner: —

It is necessary to brush off a few of the insects, (as in a common dressing,) especially towards the bottom of the leaves, where they will sometimes be so numerous as in appearance to lie one upon another, in which case the mixture might be prevented from penetrating to the bottom insect. Then apply the composition to the tree with a large garden syringe, in a manner that the mixture will descend and penetrate to the very bottom of the leaves in the centre of the plant, whereby the insects which are concealed there will be totally destroyed; after that, the leaves of the small-sized plants should be tied together; in such manner they will be longer impregnated with the liquid. The mixture will change the plants to a sad green color, which will give them the appearance of being spoiled, but as they become dry they will in a great measure resume their proper hue. During the operation it will be necessary to add a supply of hot mixture, in order to keep the whole to a proper degree of warmth, as also to make up the deficiency which must naturally happen. It will be proper to do this work on a fine day, and as soon in the forenoon as convenient, that the plants may have time to dry, which they will do in a few hours, and then they must undergo the same operation a second time. The most eligible season for the dressing of the plants are March, in the beginning of the spring. The following mixture I have found to be equally efficacious with the former: —

Take two ounces of soft green soap,
One ounce of common turpentine, (resin,)
One ounce of flowers of sulphur.

Put these ingredients into a proper vessel, and pour upon them one gallon of boiling water. Let the whole be well worked together with a whisk, which will bring it to strong lather, and cause the ingredients to incorporate. The mixture should be used milk-warm, and kept gently stirring during the time of using, to prevent the sulphur from subsiding. I must beg leave to observe, that I think this mixture may be of considerable use in preventing the mildew on the peach and apricot; for sulphur alone retards the progress of that most fatal disorder, and the soap and turpentine render the mixture of a slimy consistence, and leave a clammy coat or covering on the leaves, of a glossy appearance, which very likely may contribute to stop the progress of that disorder. But the fruit trees here having been constantly clear of the mildew, I have therefore not had an opportunity of making any experiments with them. All the orange-trees under these operations did not seem to have sustained the least injury; they grew more luxuriantly than ever, and with the greatest safety.

Having thus described my method of destroying these most troublesome insects, I shall now make a few necessary observations. It is allowed, that if boiling water be poured upon a sufficient quantity of quicksilver, it receives a power capable of destroying lice or insects; but there wanted something to enable it to reach to the insects in question. Soap seemed to be the most proper vehicle for that purpose, on a double account; it is a penetrating substance, and contains a quality of the former nature. Soap-suds have, perhaps, as great powers of penetration as oil, but oil being added to the second operation must make the mixture of equal force. The quantity of soap used renders the mixture of a thick, slimy consistence, and consequently leaves a kind of coat or covering upon the leaves, which very probably may prevent the insects from remaining, or even coming upon the plants in case any of them were left. For this reason it is of high importance to prefer the dry season for these operations, as I have already observed. Soap-suds effectually destroy the different species of insects that infest fruit trees growing against walls. Of these insects, the *Aphis* is the most common, as well as the most destructive. It generally attacks with great violence the peach, cherry, and plum. The *Aphides* are universally known by the appellation of *lice*.

BERNARD REYNOSO.

For the New England Farmer.

BOMMER MANURE.

Mr. Cole: Much has been said upon the Bommer Method, as it is called, of making manure, within a few years, and much money has been paid for it, which I think in most, if not in all cases, might be

appropriated more economically in saline muck and other substances, is left to decompose by nature's process, without being to the trouble entailed by *this method.* I feel no disposition to detract from the merits of any, and equally willing to accord both honor and the benefit of improvements to their rightful discoverers. But from public statements, and which I have not known controverted, I have been induced to believe that "*The Bommer Manure Method*" claims that to which it is not justly entitled in respect to originality, (if not in point of merit,) as it has been proved to be in substance the old French method of Jaufrett, to which the public have a right without purchasing of Bommer. The writer of this is one of the many (probably thousands) who have been duped with the flattering statements proclaimed of the great benefits to be derived from the "Bommer method." I have bought it and proved it, and have been reminded of Franklin's whistle. I am acquainted with many who have proved it, but do not know of one who practises it. Farmers are a hard-working class, and should be informed in such matters, in order to prevent being sponged out of their hard earnings by inexperienced speculators.

A KENEBECK FARMER.

For the New England Farmer.

EFFECTS OF CHARCOAL ON FLOWERS.

Mr. Editor: I clipped the enclosed article from the Boston Weekly Messenger some time since. I have tried the experiment but once, on my petunias both white and red, and I could see no effect like that described by Mr. Berauds. As it was a single experiment, and no particular pains taken with it, I do not consider it a full test.

Will some of the votaries of Flora try it, and communicate the result through the columns of the Farmer? No one need fear any bad effects from the charcoal, as it is decidedly beneficial to plants in pots, aside from the change of color. W. F. B.

Ashfield, *March* 26, 1850.

The Effect of Charcoal on Flowers. — The following extract cannot fail to be interesting to the botanist and the chemist, as well as to every lady who has a rose-bush in her garden, or a flower-pot in her parlor. It is from the Paris "Horticultural Review" of July last, translated by Judge Meigs, of New York, for the Farmer's Club of the American Institute. The experiments described were made by Robert Berauds, who says, —

"About a year ago, I made a bargain for a rose-bush of magnificent growth, and full of buds. I waited for them to blow, and expected roses worthy of such a noble plant, and of the praises bestowed upon it by the vender. At length, when it bloomed, all my hopes were blasted. The flowers were of a faded color, and I discovered that I had only a middling multiflora, stale enough. I therefore resolved to sacrifice it to some experiments which I had in view. My attention had been captivated with the effects of charcoal, as stated in some English publication. I then covered the earth in the pot, in which my rose-bush was, about half an inch deep with *pulverized charcoal!* Some days after, I was astonished to see the roses, which bloomed, of as fine lively rose-color as I could wish! I determined to repeat the experiment; and, therefore, when the rose-bush had done flowering, I took off all the charcoal and put fresh earth about the roots. You may conceive that I waited for the next spring impatiently, to see the result of this experiment. When it bloomed, the roses were, as at first, pale and discolored; but, by applying the charcoal as before, the roses soon resumed their rosy red color. I tried the powdered charcoal likewise in large quantities upon my petunias, and found that both the white and the violet flowers were equally sensible to its action. It always gave great vigor to the red or violet colors of the flowers, and the white petunias *became veined with red or violet tints;* the *violets* became covered with *irregular spots of a bluish* or almost *black* tint. Many persons, who admired them, thought that they were new varieties from the seed. *Yellow flowers* are (as I have proved) insensible to the influence of the charcoal."

PREPARATION OF SARSAPARILLA.

We would call the particular attention of our readers to the advertisement of Messrs. B. O. & S. C. Wilson, on our cover. The preparation of sarsaparilla has become deservedly popular, from its great efficacy in purifying the blood, removing chronic complaints, and giving a general healthy tone to the system. We would urge upon the invalid the important consideration of using vegetable medicines, which are not only safe, but efficacious. The prominent feature of this sirup is its preparation without alcohol, which is not only highly important in a moral point of view, from its *temperate* tendency, but it is far more powerful as a restorative; for alcohol, in many cases, counteracts the valuable virtues of medicines, and frequently originates diseases more formidable than those for which the medicine is administered.

SHOW OF FINE FOWLS.

Agreeably to the notice which we gave in our last number, two pullets of the Cochin China fowls, recently imported from Dublin, by G. P. Burnham, Esq., also a cock and pullet, owned by Mr. B., recently imported from Canton, China, were exhibited in the Agricultural Hall, adjoining our office.

These fowls are remarkably large for their age, and of fine appearance, considering their hardships in a recent passage from a foreign country. Those from Dublin appear to be a superior race of the large India fowl.

Mr. Coffin, whose advertisement appears on our cover, also exhibited some fine fowls of the Shanghae, and various crosses.

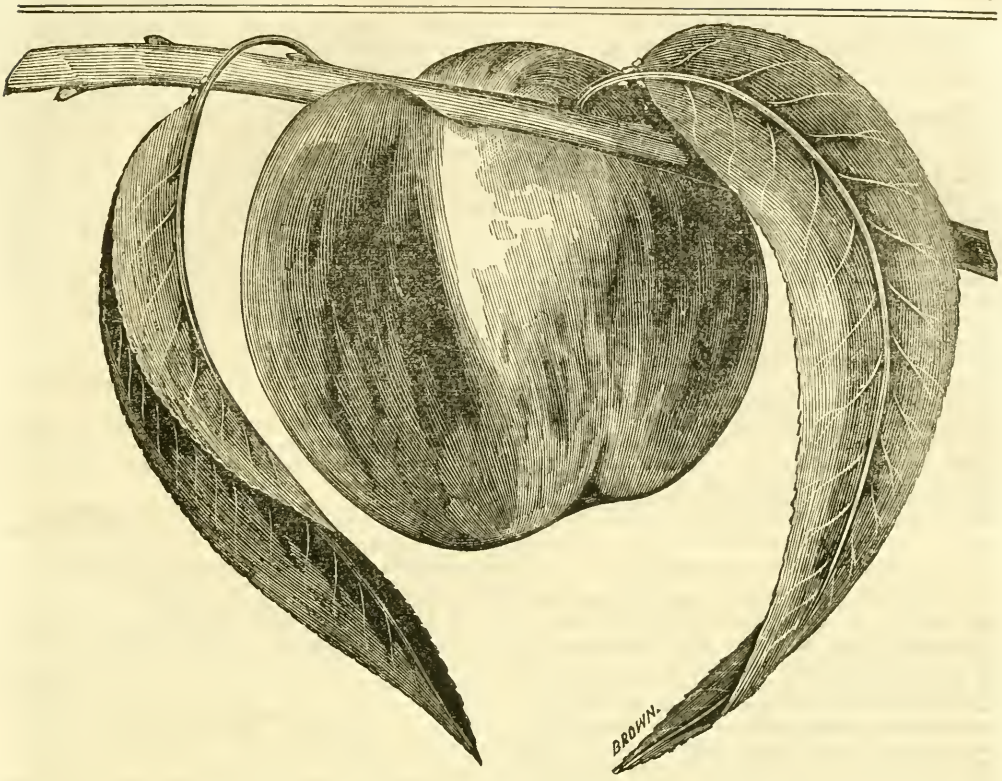
Mr. Dorr, who also advertises through the same medium, showed some fine specimens of Bolton Gray fowls.

TEXAS AS A SUGAR COUNTRY.

A Galveston letter of the 2d ult. says that the sugar production of this state is greatly on the increase, and that the quality is very superior. The grain and color are unsurpassed for brown sugar, and the flavor vastly superior. There is also sirup or cane juice, half boiled into sugar.

From a document just sent to Congress, it appears that the production of wool in this country, during the last year, was 70,000,000 pounds, valued at $25,000,000.

Ohio. — The bill making ten per cent. legal interest, in Ohio, has become a law.



TARBELL PEACH.

We cannot trace the origin of this fruit, but it has been long cultivated in Lincoln, in this state, and it is probably a native of that place. It has had several names, among which Royal Kensington has been the most common; but it is very different from that variety. The tree is vigorous, and very hardy; and the fruit is large, handsome, of excellent quality, and very salable in the market. It bears carriage well, and retains its good properties some time after gathering. The qualities of the fruit, and the habits of the tree, render it one of the very best varieties for orchard culture in the north, and preferable to foreign varieties, or those that have originated in warmer climes. An important requisite to success in peach culture, in this region, is the cultivation of those kinds that are natives of the north.

The fruit is large; roundish, a little flattened at the base, a broad suture extending nearly round it; a rich yellow ground, nearly covered with red, which is very deep and purplish full in the sun; flesh yellow, red at the stone; very juicy, rich, sweet, and of a delicious flavor. Ripens from the 10th to the 25th of September.

ROOT CULTURE.

This is a very important branch of farming, for roots are highly valuable, both for the table and for stock. In our long winters, animals become tired of dry fodder, and roots are excellent to keep up a healthy condition of the system; and with this valuable food, various kinds of coarse fodder may be consumed, and the stock kept in good condition. Root crops yield a very large amount of food to the acre. Where there is a demand for roots, this crop is very profitable for market.

The land for roots may vary from tolerably moist to tolerably dry. The beet requires rather a moist soil; the carrot will flourish well on a rather light, sandy soil. The land should be ploughed deep, and very finely pulverized, and the manure mixed intimately with the soil. The manure should be well decomposed, but if not sufficiently mellow, it is best to hasten decomposition by adding ashes or lime, and soil, with the animal manure, to prevent the escape of gases; or mix the manure with the soil as soon as the earth is dry enough, that it may become partially decomposed before sowing the seed.

There is a great advantage in ploughing the land, and applying the manure early in the season; and as soon as the weeds start, plough, harrow, or cultivate again, and so on till the season for sowing; and these operations will produce fine tilth, destroy weeds, and intimately mix the manure and soil together.

By pouring warm, or rather, hot water on hard seeds, such as carrot, beet, parsnip, &c., and soaking them two or three days in a warm place, the seed will vegetate much sooner, and get a start of the weeds, which will save great expense in hoeing; and in case of hot, dry weather, and in a dry soil, the seed will be far more sure to grow. Another advantage, in case of late sowing, the process of soaking hard seeds will expedite the growth about one week.

Domestic Department.

Female Education. — No woman is educated, says Barnap, who is not equal to the successful management of a family. Although it does not require so much talent to rule a household as it does to govern a state, still it requires talents of the same kind. As he makes the best general who has begun at the lowest post, and passed up through every grade of office; as he makes the best admiral who entered the navy in the most inferior station; because they, and they alone, are acquainted with the whole compass of a subaltern's duty,—so that woman will manage a family with the greatest ease and efficiency, who knows experimentally the duties of every member of it.

Daughters who neglect this part of education are entirely without excuse, and their mothers are still more to blame. The very apology which is often made for the neglect of it, is the greatest condemnation of those who offer it. It is said by those who are growing up in ignorance of these things, "Any one can learn how to keep house when it is necessary. Any one who loves her husband, and is devoted to his interests, will make herself accomplished in those things as soon as she is married." As well might the young man say, "O, what use is it for me to learn a profession, or make myself acquainted with the details of my business? When I am married, if I love my wife, it will then be time enough to learn a profession, or to accomplish myself in the details of business." Would there be any surer omen of total failure and discomfiture? That which a woman can learn to do under the tuition of love, can certainly be learned to much greater advantage under the tuition of a mother. If it is all so easy to learn, then certainly they are utterly inexcusable who neglect it. It is no degradation to the finest lady to know all the details of domestic affairs. It is honorable, and ought to be her pride. A woman, though she may be as beautiful as the morning, as wise as Minerva, and as accomplished as the Graces, ought to know all the details of house affairs.

Washing Clothes. — Mrs. Swisshelm gives the following direction how to wash clothes much soiled by field or out-door work, especially when they are much saturated with perspiration.

"If you would take a teacup full of spirits of turpentine, and as much spirits of wine, with a quart of water, and a gallon of soft soap, or two pounds of hard soap, put them on the fire and boil a few minutes, then put the mixture away for use, and the evening before wash day, put your white clothes into cold water, with enough of this mixture to make suds, and let them stand all night, you will find your clothes very easy to wash. A little of this stuff thrown into the boiler, makes them white and clear, and if you rinse them well, does not injure the clothes."— *Prov. Transcript.*

Youth's Department.

Pleasures of Gardening. — No one can be truly said to live, who has not a garden. None but those who have enjoyed it can appreciate the satisfaction, the luxury, of sitting down to a table spread with the fruit of one's own planting and culture. A bunch of radishes, a few heads of lettuce, taken from the garden, of a summer's morning, for breakfast, or a mess of green peas or sweet corn, is quite a different affair from the same articles brought in large quantities from market in a dying condition, to be put in the cellar for use. And a plate of strawberries or raspberries lose none of their peculiar flavor by passing directly from the border to the cream, without being jolted about in baskets until they have lost all form and comeliness. And yet how many in the smaller cities and villages of our country, possessing every facility for a good garden, either through indolence or ignorance, are deprived of this source of comfort! And how many farmers, with enough land lying waste to furnish them with most of the luxuries of life, are content to plod on in the even tenor of their way, never raising their tastes above the "pork and beans" of their fathers.

For the Boys. — Seven classes of company are to be avoided, viz.: —

1. Those who ridicule their parents, or disobey their commands.
2. Those who profane the Sabbath or scoff at religion.
3. Those who use profane or filthy language.
4. Those who are untruthful, play truant, and waste their time in idleness.
5. Those who are of a quarrelsome temper, and are apt to get into difficulty with others.
6. Those who are addicted to lying.
7. Those who are of a cruel disposition, and take pleasure in torturing or maiming animals.

Health Department

Down upon Calomel. — The Scalpel, a New York medical publication, edited by Dr. Dixon, deals very plainly with many subjects connected with medical practice. The following quotations from a late number will serve to show the views of the editor upon calomel: —

"In dyspepsia, or indigestion, when nothing goes right, and nobody knows why, it is a perfectly philosophical deduction, that something is wrong. It may be the blood, it may be the solids, it may be the spleen, it may be the brain. The whole case appears to be a doubtful one — 'a may be.' Does it not strike every medical logician, that the *treatment* of a disease should be in accordance with its *condition?* What better mode of treatment could be pursued than the 'may be' one? Give calomel! 'May be' the patient will get better notwithstanding the calomel, and you, 'may be,' will get the credit. The worst which 'may be' is, that the calomel 'may be' fatal to him; but if it be, you have only carried out the theory of a medical 'may be,' to its *therapeutic conclusion.*

* * * * * *

"Some of the alterative effects of calomel are very apparent. We have known stout, healthy persons altered to lean, feeble ones. Some, whose stomachs were capable of taking and digesting any thing, were rendered incapable of taking or digesting at all; others, who were always regular in their bowels, were so altered, that they found the necessity to regulate them the future business of their life. Some have a moderate-sized liver altered to a large one; others are so altered as to lose a large portion of their liver, already diminished. Some find out that they have kidneys, who never knew it before, and many can define the exact boundary of their stomachs, by the uneasiness which they feel, who formerly did not know they had a stomach.

"There is, however, one valuable property in calomel above all other medicines. It is this: If there

is nothing the matter with the person who takes it, there very soon will be; and although, before its administration, it might be impossible to know or say what was the matter, if any thing, it will be very easy to do both, after it has been given. Decayed teeth, bad breath, foul stomach, irregular bowels, pains in the bones, weakness and weariness, are a small portion in the catalogue of ailments, which are most distinctly traceable to calomel. Dyspepsia, dropsy, and piles or fistula, may be very easily procured, by one who will undergo a course of calomel.

"If a medical man cannot find enough of disease to employ him, let him give calomel to that which he does find, and he will most assuredly find more. It may be proper, in some cases, to give sarsaparilla as well; but that depends upon whether the doctor sells it. If he does, let him give it by all means."

Mechanics' Department, Arts, &c.

Singular Uses of Gutta Percha. — Nothing will better illustrate the infinite variety of uses to which this substance may be applied, than its complete adaptation to every work connected with the creation of a book. From it a paper very difficult to rend, and especially adapted to any documents exposed to wear and tear, as bills of exchange, share certificates, &c., and also for wrappers and envelopes of all sorts, may be made. It may be mixed with colors in printing, and thus a degree of permanency be given to impressions which they would not otherwise possess. A strong and perfectly water-proof fabric may be formed, by simply laying a number of gutta percha threads, side by side, upon a foundation of cotton, linen, or other textile material, and passing the substance between two heated rollers, which has the effect to cement the threads firmly to the cloth, and to one another; and finally, the threads of the gutta percha may be combined in the construction of fine cords or strings. The use of this material in binding books is important, as giving them additional strength. Its durability renders the treasures of a library less liable to the destructive attacks of insects, than they are where paste, glue, and leather are employed. The London Company for the manufacture of it, have taken out a patent, comprehending among its objects the binding and covering of books, pamphlets, portfolios, writing cases, and similar articles.

A solution of it used for paste, size, gum or glaive, wherever the same are ordinarily employed in any of the processes of binding or covering; as for example, in pasting in or down any of the end papers, or joints in attaching leather or vellum to the boards and backs, or in sizing for marbling and gilding. Another solution of the same description is used as a vehicle for coloring and marbling the covers. In the sheet state it is used as a substitute for vellum, leather, and cloth.

The advantages attending the use of this article are, first, a saving of time and expense in most cases, as it supersedes the necessity of sewing or stitching, or of embossing or figuring each article separately; and secondly, a great increase of durability, it being affected by neither cold nor water, nor by damp, nor by any of the ordinary variations of atmospheric temperature, nor by oil or grease, nor subject to the ravages of insects.

We may rest easy as to the evil results of the loss of any common material. Gutta percha stands ready to take its place, if it is either hard or soft, fibrous or pulpy, hardware, ropes, wood-work, overshoes, plates, or any thing else.

Coal Tar. — Recent experiments have demonstrated the fact that coal tar may be used successfully as a substitute for paint. A correspondent of the Agriculturist says, —

"I think it would be well to call the attention of farmers to the use of coal tar as paint. The tar produced in the coal gas works, is extensively used in England for painting fences, out-buildings, &c., and is being rapidly introduced into this country also. It never alters by exposure to the weather, and one or two good coats will last many years. It is the cheapest and best black paint that can be used. Out-buildings are painted with it; our apparatus, also, and even the iron pipe we place in the ground is coated with it. I think if its advantages were fully known, it would be generally used throughout the United States. The government soak the bricks used in building the fort at Throg's Neck, in this tar, which renders them impervious to water, and posts painted with it are protected from rot when in the ground, as effectually as though they had been charred."

This tar is very cheap, can be had in all our cities, and is undoubtedly one of the best articles that can be had for protecting iron from rust, or wood from decay.

ON SUCKERS OF FRUIT TREES.

The season has arrived for setting out fruit trees. We regret to see a practice still persevered in, that always results in loss and disappointment. In the year 1845, we wrote the substance of the following article for the *Western Reserve Magazine of Agriculture and Horticulture*, and perhaps we cannot occupy our columns at this time better than by republishing it. During the last week we had occasion to dig up the last of the mazard stocks, alluded to as having been purchased in the county of Columbiana. The large roots remained in the condition they were when transplanted many years since, except they were more diseased. Very few small fibres had formed, and wherever any appeared, they were in connection with a cluster of suckers.

The employment of suckers as stocks for propagating fruit trees, should be considered as a species of malepractice among nurserymen. It is followed by so many evils, that it is discountenanced at this day by every judicious horticulturist, and we are happy to say that we believe it is discontinued by most, or all the practical nurserymen in this vicinity; though it is still a popular and common practice with the public generally.

The cherry, plum, pear, and apple tree, in a diseased condition, will often throw up numerous thrifty sprouts, that will offer to an unexperienced cultivator, inviting temptation to multiply his stock at a rapid rate, with little labor. If he be deceived by these appearances, and propagate his valuable kinds upon these diseased growths, his efforts will ultimately result in disappointment.

It is not denied that in a few instances trees thus propagated may have been tolerably healthy, fruitful, and long-lived; but we hesitate not to affirm, that in *nine* cases out of *ten* the experiment will prove a total failure. All the failures and disappointments incident to the cultivation of fruits, do not of course originate in this practice; but a long course of observation has confirmed us in the conclusion, that several forms of disease in the tree and in their fruits, attributed to other causes, have their origin in this practice.

The late black damison, the English horse plum, and the Kentish and Morello cherries have been propagated in this manner since the first settlement of Europeans in this country, and they have now all

become so much diseased as to be hardly worthy of cultivation.

The practice of grafting and budding pears upon this quality of stocks, has extended a diseased action, a kind of canker among our pear orchards, that has in some instances been mistaken for *blight*, a disease that has its origin in the depredations of a minute coleopterous insect, which has been satisfactorily described in all its stages of transformation, by Dr. Harris, and other Massachusetts entomologists. Vegetables as well as animals, are subject to morbid or diseased actions, which may be either functional or organic. Such diseased actions may be propagated from the parent tree to its sprouts. Sprouts are, indeed, almost sure to inherit all the defects of the original tree. The very circumstance that a tree is disposed to throw up suckers, is an evidence that its vitality has been impaired in some manner, either by mechanical injury, or the occurrence of a morbid action in its system.

Our attention was attracted to this subject more than thirty years since, by witnessing the different results of the labors of two old and experienced nurserymen in the state of Connecticut. Both of these men had gained a livelihood for many years, by following the nursery business. Each could point to many of the orchards in his respective vicinity, as the products of his labor. The difference in health, vigor, and fertility of the orchards originated by the one, compared with those of the other, was so apparent as to attract the attention of the most careless observer. One propagated exclusively upon suckers, the other upon young and healthy seedlings. Since that day, we have seen two extensive cherry orchards, and several pear orchards, propagated on sprouts, prematurely and suddenly die without any apparent cause. Instances of individual trees of this character thus dying have been so common as to escape attention. On the other hand, we were acquainted with an English cherry orchard budded upon healthy mazard seedling stocks, and transplanted from Prince's Nursery not many years subsequent to the revolutionary war, still healthy and vigorous as late as the year 1820; and we believe many of the trees remain so at the present day.

In the year 1840, we purchased a number of mazard stocks at a nursery in Columbiana county, supposing them to be seedling; subsequent information led us to suspect that we had been imposed upon. Last season our suspicions that they were worthless suckers, were confirmed by the circumstance that they were filling our grounds in all directions with sprouts, and several of the trees suddenly dying; others are taking the same course the present season. The remainder are destined to be dug up the ensuing autumn, and replaced by healthy and seedling stocks, though we shall lose by it the growth of several years.

Trees raised from suckers usually manifest some of the following tendencies, viz.: —

1st. *To send up annually from their roots a profusion of suckers.*

This tendency, of itself, diverts the sap from its legitimate channels, the body and limbs, and causes them to sicken from inanition, which also predisposes to attacks of other diseases, insects, and premature decay.

2d. *To the formation of excessive numbers of fruit buds.*

As this is a morbid action, the vigor of the tree is usually exhausted in the effort at forming the blow-buds, and no fruit in the end will be produced, or, if any, it will be of an inferior quality, insipid, knotty, and wormy.

3d. *To a stinted or dwarfish growth.*

The main stock may grow rapidly for a few years, but sooner or later, some side shoot will spring up, and divert the nutriment to itself, and leaves its predecessor to starve and decay, just as in these changing political times, one office-holder will flourish with an ephemeral growth from official patronage, till some more fortunate rival starts up to supplant him.

4th. *To decay, or sudden death, without any apparent cause.*

A rapid and strong growth for a few years may hold out the promise of a successful result, never to be realized. Portions of the bark and wood will soon decay, or be attacked with insects; the whole of the tree perhaps stops its growth, and assumes a sickly appearance, or dies suddenly in a few days. Some or all of these unfavorable changes will occur at an early age.

In conclusion, we would observe, that no honest nurseryman will impose a sucker on his customers, and no considerate horticulturist will encumber his grounds with such a nuisance. — *O. Family Visitor.*

TIME FOR TRANSPLANTING EVERGREENS.

The following observations on this subject we copy from the *Prairie Farmer;* and after various experiments which we have witnessed upon hundreds of transplanted evergreens, we have arrived, on nearly every point, at the same conclusion. It is true, the object of the writer has not been to give every essential requisite to success, such as keeping the roots wet from the very moment they are taken up, till they are plunged in mud, and replanted; or still better, cutting a large cake of earth with the spade, to be removed with the roots; but as far as the remarks go, they are undoubtedly founded on correct practice. — *Germantown Telegraph.*

"As to the best time for transplanting evergreens, there has been much said first and last; nor do we think the public mind clear on the subject yet. We do not pretend to understand as well which is, as which is not the best time. A class of writers have uniformly directed to move them in early summer, when they were in full growth, affirming that then the tree will best overcome the debility caused by a removal. We have learned this much, that such a time is probably the worst that could be selected. It is certainly very far from being the best. Evergreens removed at that season, will exhibit the wilting of the tender shoots, even on a wet, cloudy day; nor will a ball of earth removed with the roots, serve to mitigate the difficulty. Such trees can only be saved by the most unremitting care and labor.

"We are of opinion at this time, that evergreens are no exception to the rules which regulate the removal of deciduous trees; and that the best time to move them, will be found to be that in which other trees are moved. Transplanting may, perhaps, be continued later than with others, because they do not begin their growth quite as early. But as soon as the new shoots begin to appear, it is time to stop work among them.

"Another standing error regarding evergreens is, that they must not be pruned on removal. All the reason we have ever heard given, is, they exude gum. If any body should ask, 'What if they do exude gum?' we should only be able to give the answer made by the speaker of the legislature of Hull. The said speaker had found his fellow-legislators disposed to be unruly. His only mode of quelling the disturbers was to threaten 'to name them.' This was, for many a year, sufficiently potent. Finally, a member ventured to ask the speaker what would be the effect if he did 'name one.' 'Heaven only knows,' said his dignity, 'I don't.'

"We do not suppose evergreens any exception to other trees, in regard to the practice to be followed

with them, either as to the time of removal, or as to the fact of trimming. The mode of cutting should be somewhat different from that practised with deciduous trees. They do not push out shoots so easily from the trunk; and it would not be safe to cut them as close. The best mode of trimming would be that of shortening the branches; cutting off half or two thirds their length, as should be preferred. This is also the best mode of trimming small deciduous trees; but in removing larger ones, such as are taken from the forest for shade, it is necessary to practise cutting much more severely; unless they are taken from open ground, and dug up with extra care, so as to save as many roots as possible. If carelessly dug, such trees should be shortened from the top one third or more, and all the side limbs entirely removed, leaving them like bean poles.

"This mode of treatment would probably be improper for evergreens, though we have never made any experiments with a view of ascertaining how much cutting they would bear.

"In removing evergreens, or any other forest tree, it should be remembered that those which grow in open grounds, or near them, exposed to sun and air, will be supplied with many more small roots than those grown in the shade of other trees."

NATURE OF DIFFERENT SOILS.

Clay is the stiffest of all kinds of soils, and generally contains an unctuous quality. Some kinds of clay are richer than others, and will always produce much larger crops by cultivation than other kinds. Some are soft and slippery; but all of them retain water poured on their surfaces, where it stagnates and chills the plants, without sinking into the soil. The closeness and heaviness of clay prevent the roots and fibres of plants from spreading in search of nourishment. All kinds of clay are naturally unfavorable to vegetation, and are not worth any thing, till their texture is so loosened and opened by a mixture of other substances, as to admit the influence of the sun and air. Among substances recommended to be mixed with it, sand is, of all others, to be preferred. The sea sand is the best, where it can be obtained, for this most effectually breaks the cohesion. Also, it is not wholly formed of small stones, but contains a good deal of calcareous matter. The finer the sand is, the more easily it penetrates clay.

The next best sand is that washed down by rains from hills. Those which are dry and light, are not so good as the fine, pulverized sand, more of the nature of fine loam.

Ashes, and all kinds of vegetable and animal substances, are good for clay; but they are found to be far more beneficial when well mixed with sand, for this is almost the only substance that will separate the hard, caked clay, so as to admit the rays of the sun.

Low meadow land has somewhat the nature of clay. Although it may be very rich, formed perhaps entirely of decayed vegetable substances, yet it will produce but a very little of any thing, until it is changed from that hard, solid nature, so as to be acted upon by foreign influences. If the land is moist, let it be well ditched. If the ditches should be in the way, they can be filled up with small stones, within a foot or two of the surface, and then covered over with gravel. In this manner the meadow can be made nearly as dry as upland; the treatment of it, then, should be nearly the same as that given for clayey soils. Both ought to be well ploughed, and especially in the fall, in order that the frost may have a greater influence in pulverizing the soil during the winter.

There is another kind of light, poor land, which seldom produces any thing till well manured. It needs something that will give substance to the soil. Decayed vegetables are probably the best to effect this. In the spring, sow the field with buckwheat, or oats, after the rate of three or four bushels to the acre; when they are in bloom, roll them down, and then plough them in. They will soon ferment and rot in the ground. Often another crop can be sown and ploughed in the same year. In this manner the most sterile field can be made fruitful at a very little expense.

There is another kind of land, which is light and rich, being most easy to cultivate to advantage, and is the most productive. Concerning the nature of this, little need be said. Put on a sufficient quantity of any kind of manure, and if the season be favorable, there will be a rich harvest.

There is another kind of land, which is coarse and rough; often it is covered with bushes, or old stumps, which should all be taken out by the roots. It should be ploughed and cross-ploughed in the fall, and the same in the spring. The more it is pulverized, so much more productive it will be. The harrow and the roller may be very useful in tearing to pieces and beating down the sods. Ashes or lime are beneficial for such land; let them be mixed with some vegetable manure, and applied liberally, and the future crops of grain and grass will afford a rich reward for the labor and expense.

The nature of soils, of course, in various parts of the country, is very different, and the management for such should be different. Experiments on soils are the only sure means of ascertaining their true nature. Let every farmer be observant in experimental farming, and with the aid of philosophical thinkers, their profession will soon rise to the honorable position which its true dignity merits.

M. H. F.

Hanover, N. H., 1850.

—*Dollar Newspaper.*

APPLICATION OF BONES AS A MANURE.

Dr. Lee: As I have been a constant reader of various agricultural journals, for seven or eight years, my attention has been attracted by frequent notices of the great utility of bones, in different conditions, as fertilizers; and being now in a situation to procure them, I wish to inquire of you, what is the most economical and effective manner of applying them. It seems that the method of reducing them now generally used, is by means of sulphuric acid; and a Prof. Way, of England, I believe, recommends the addition of equal weights of acid and common salt. On this I should like to have your opinion, as well as on the following points, viz.: —

1. For corn, on a clay loam, would leached ashes, charcoal *waste*, or both, be best to dry the bones with, after solution? 2. What is the best mode of application for corn or root crops, — to drop it with the seed, or to cover the seed, and apply immediately over it, or wait until the corn, carrots, &c., appear above ground? 3. Will the mixture be injured by lying in a heap a month or more? And lastly, how much is required per acre for corn?

An answer to the above questions, in season for the coming spring, will be very thankfully received.

My father purchased the farm that we occupy, in the spring of 1848. It consists mostly of a clay loam, on a stiff clay subsoil, and is underlaid by a species of limestone. Some boulders of the same kind, also lie on the surface. The farm has been "skinned," pretty thoroughly; but we, being "book farmers," expect to increase its fertility somewhat before long, by means of deep ploughing, turning under clover

and buckwheat, by raising spring crops and manuring them well, to be followed by wheat; and, lastly, by keeping the ground always covered, as far as possible; the good effects of which mode of culture are apparent already. We are also trying to get up a "Farmers' Club," and to obtain some subscribers to your paper, which we get through your agent, Mr. Reed, at Lockport.

But as your time is precious, I will not tax you further at present. J. BREADING TREVOR.

Lockport, *Feb.*, 1850.

"Leached ashes and coal waste" will be useful on clay loam, for corn or any other crop. These fertilizers being mild in character, they should be applied to corn land in quantities sufficient to spread over the whole ground, and be incorporated with the soil by the plough, harrow, and hoe. This should be done, i. e., the ashes should be applied, before planting. Unleached ashes are most economically used by adding one bushel of salt, one half do. plaster, with two of ashes, and adding the mixture to the soil as a top-dressing for each hill, after the first hoeing or weeding; taking care not to have the salt and ashes come in contact with the young plants. One or two ounces, or such a matter, spread over the roots of each hill, will be of essential service to the crop.

Leached ashes and rotting manure, mixed in a compost heap, improve each other,—the carbonic acid eliminated from the dung, or decaying organic matter, will render the potash, soda, and lime salts (silicates) in the ashes soluble, while the alkalies named will aid in forming saltpetre. (See account of artificial nitre beds, in Johnston's Chemistry.)

The only objection to the use of sulphuric acid for dissolving bones is the expense of the article. To avoid this, we have preferred to break up bones with an old axe, pretty fine, and boil them to a powder in strong lye. To this compound we add a little salt and gypsum. It may then be mixed with a little fine dry loam, and distributed with a drilling machine over seeds of corn, carrots, beets, or other plants. The compound is too caustic to be placed in contact with tender germs. It is a powerful fertilizer. As to quantity per acre, every man's judgment, means, quantity of land, &c., must decide that question.—*Genesee Farmer.*

BENEFITS OF DEEP PLOUGHING.

Messrs. Editors: Some fifteen years since, being in the state of New York, I saw for the first time an agricultural paper — the *Genesee Farmer.* In that was an article relative to deep ploughing, which I perused carefully, and by it was induced to try an experiment. I had previously farmed it as others did, thinking that there was no way to increase the product but to increase the number of acres.

I had a field containing four acres and one hundred rods of ground, which had been cleared nine years, and had had a grain crop on it every year — wheat, corn, and oats — the three last were oats. The field was considered nearly worn out, and would not have produced more than fifteen bushels of wheat per acre. There were many large stumps and four green trees on the field. The soil was clay loam. I had only a single team — a powerful span of horses — and a single plough, (Wood's.) I raised the end of the beam three inches, and commenced ploughing in June, when the ground was wet, turning up about five inches that had never been stirred before, ploughing about three fourths of an acre per day. The ground was dug up with a spade around the stumps, harrowed and ploughed shallow twice afterwards, and sown the fifth day of October, with two bushels of velvet bearded wheat per acre. In the spring were sown one hundred and fifty pounds of plaster where the wheat looked the poorest. The result was, although much was wasted in gathering,— for it shelled badly,— I had by weight one hundred and ninety-six and one-half bushels, besides one large load not threshed at the time, which would have increased the product to at least two hundred and twelve bushels. Since that time I have ploughed deep, and the result has been invariably the same, or at least doubling the crop. Deep ploughing on a soil like mine will prevent the crop from suffering from wet or dry weather, and is a preventive of rust, or at least has been with me, and it will not turn to weeds, as much wheat does in Michigan. The editor of the Michigan Farmer thinks "it is almost a miracle," if a farmer here gets a good crop of wheat; yet none fail who cultivate their land properly. This we can prove by many farmers in this county.

The general system has been, ever since the first settlement of this country, to plough shallow, and grow wheat after wheat, without manure, or even seeding to grass, until all the food for the wheat plant is exhausted; and then we are told that the seasons are such we cannot grow wheat, and must turn our attention to raising sheep; but will sheep thrive if we serve them as we serve our wheat? Will they live without proper food? Or will they live in the water without turning to musk-rats?

Yours, &c., LINUS CONE.

Troy, Oakland Co., Michigan, *Feb.*, 1850.

— *Genesee Farmer.*

BUILDING AND BUILDING MATERIALS.

The materials used for the construction of houses are wood, brick, burnt and unburnt, iron, and stone. In the first place, I shall consider wood, that being in almost universal use throughout the country. The advantages claimed for it by its strong advocates are, its comparative cheapness, beauty, facility of obtaining it, and the readiness with which it can be repaired. The disadvantages are, liability to decay, also to fire, subject to heat in summer, and cold in winter, its continued expense for a series of years, for repairing, painting, &c.

Here the questions naturally arise — Can the advantages claimed be sustained? and do they more than counterbalance the disadvantages?

Let us weigh the matter and then decide. First, its *cheapness*, to my mind, is just as "clear as mud;" for it is my candid opinion that most farmers (those, I mean, who have their farms and buildings in decent condition) spend as much in repairing these wooden structures, for a term of years, as would pay the interest on good stone ones. When a man sells his farm with wooden buildings upon it, such as are generally found in New England, it brings no higher price per acre than if destitute of buildings altogether. Not so with those with stone buildings, which enhance the value at once, although they may not have cost more, in the aggregate, than the wooden ones. This shows conclusively that the farmers themselves have no confidence in their cheapness, nor in their excellence.

But, while I thus dwell at length on the merits of wood, I must not forget it has also corresponding demerits, as its liability to take fire, for instance. This is a very serious objection in the country, as it rarely happens that wooden buildings there once on fire are ever extinguished, owing to the scarcity of fire engines and the combustibility of the material; and, if they escape fire, the liability to decay adds a bill of expense.

Another material, unburnt bricks, has lately been made use of at the west; and a few buildings have been erected in New York. Still, the number is so

small as not to warrant a decided opinion, either for or against, if I may credit those who have built them, who consider them an excellent substitute for wood.

Bricks, for the construction of country houses, are rarely used, except in districts where they are manufactured. Furthermore, they have but few advantages over other materials. They are also objectionable on account of their readiness to absorb and retain moisture; and, without a coat of paint of some subdued shade outside, are, to my taste, decidedly bad, and quite out of place among the green fields of the country.

Let us next pass to iron as a material for building, which, no doubt, is first rate; but its expense will confine it for the present to the massive warehouses of our commercial cities, where great strength and solidity are required. But those who live to number this century with the past, may live to see iron farmhouses and iron barns — particularly if this branch of American industry is fostered as it should be.

Last, but not least, in our list comes stone. This is, to my mind, decidedly and emphatically *the* material for us at the north. Its solidity, durability, strength, beauty, imperviousness to moisture, its coolness in summer and warmth in winter, the facility with which it can be obtained, render it, take it all in all, the best; and, when once built, there it stands, to be transmitted to "the children, and the children's children, unto the third and fourth generations." The lamented Colman said, "We build too much for the present;" and, when agricultural commissioner for the state of Massachusetts, he gave a very favorable opinion in regard to stone over every other material for building purposes. A great many farmers labor under the mistake that they have no stone fit to build a house, and still have miles of stone wall on their farms. Think you these men would buy stone to lay even a cellar wall? Certainly not. Then the objection is answered, for stone fit to lay a cellar wall is fit for the outside walls of the house. Indeed, almost every farm in this rock-bound region has suitable stone, enough and to spare.

Connected with this subject is the matter of *roofing*. Shingles are in most general use here, but they are expensive, and not durable; though there is a great difference in them. Those that are split, instead of sawed, are preferable. Slate is used in our cities, also tin and zinc; but all these are too expensive for the country. *Mastic* has been tried, but with what success I know not. So also has paper, and an article called asphaltum, been used in England; and a sample has been imported, but by whom I cannot learn. Tiles are used a great deal in England, and are there considered cheap and good; and I see no reason why they might not be used, to some extent, in this country. Now, as Mr. Delafield has imported a tile machine, let some one try the experiment, and give us the results through the columns of the Agriculturist. Perhaps, after all, stone houses, with tile roofs, after the fashion of the mother country, (only Americanize them a little,) will be the thing needful.

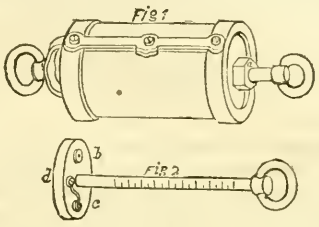
One great reason why modern covered roofs do not last as well as old ones, is the bad nails we use now-a-days. This cut nail business was set out in its true light by Lieutenant-Governor Reed, at the legislative agricultural meetings at Boston, in 1848, He said, "These nails are a little better than cast iron; that is, of cast iron run only once through the rollers. The nails are also small, five hundred to the pound. The proper size is only four hundred. These poor nails are sold at four and a half cents per pound; but the manufacturers would make good nails of refined iron, if ordered, at five and a half cents per pound. Manufacturers would make good nails, but the public have called for *cheap* nails, and they have got them, poor or worthless." Gov. Reed then showed the two kinds of nails spoken of above, and they were examined with a great deal of interest.

Inside finish, also, claims a passing remark. Let us strive to do away with so much paint. Rather finish with some of our beautiful native woods, and a much handsomer finish will be obtained than by painting.

J. B. D.

Boston, *Jan.* 1850.

— *Am. Agriculturist.*



EMERY'S CYLINDRICAL DYNAMOMETER.

Mr. H. L. Emery, of Albany, N. Y., the author of this invention, gives the following account of its peculiar advantages :—

"This instrument is intended to be used as a comparative test of the power required to overcome the resistance of bodies under draft and more particularly that of ploughs. The common spring instrument has many faults, among which the most important are its *vibration*, and its want of *self-determination* in pounds of the medium force constantly required to perform the work. This invention is not only free from these faults, but it also indicates the absolute relative quantity of force expended in performing a given quantity of work. It consists of a strong iron cylinder with piston ground steam-tight, the piston rod passing through a stuffing box, and terminating with a ring. The cylinder being filled with the proper fluid, and a small hole made through the piston, by applying the force to the ring, the piston is drawn out in a given time and by a given force. The State Agricultural Society, American Institute, and the Worcester Mechanics Association, each awarded the inventor a silver medal and the highest recommendation for its correctness and utility."

AMERICAN TEA.

The New York Journal of Commerce publishes a letter from Dr. Junius Smith, dated Golden Grove, Greenville, S. C., January 14, 1850, in which that gentleman thus describes the progress he has made in his experiment of tea culture : —

"You will be pleased to hear that the tea-plant, in strength and vigor, is in bud and blossom still, and promises to continue until greeted by the vernal breezes, and cheered by solar heat. I have one remarkable plant, a branch of which is so loaded with seed, now about the size of a pea, that it bends under its weight, and almost touches the ground. The tea-plant is a curious shrub, and to watch its development is an amusement deeply interesting. In answer to your inquiries respecting the probable time of my being able to dispose of tea-plants and seed, I beg to inform you that it is my intention to accommodate the public, so far as I can, with both plants and tea-nuts, the ensuing spring, most likely in March, and thus open the way to an extensive cultivation in the United States."

NOTICES OF PUBLICATIONS.

The Horticulturist for April is received, containing its usual interesting variety. Luther Tucker, Esq., Albany, publisher; J. Breck & Co., Boston, agents.

The Illustrated Self-Instructor in Phrenology and Physiology, with one hundred engravings, and a Phrenological Chart of Character; by O. S. & L. N. Fowler. New York, Fowlers and Wells. 138 pp., mailable form. Price 25 cts. — Besides the valuable information in the science of phrenology, this work contains a great deal of interesting and instructive matter, of practical utility in the science of life.

Phrenology and the Scriptures, by Rev. John Pierpont. Fowlers and Wells, publishers. Price 12½ cts. — The object of this work is to show, not only that the science of phrenology and the doctrine of Christ are in accordance with each other, but that they mutually explain, help, and prove each other. The name of the venerable and distinguished author of this work is a guaranty of his having accomplished it with ability and fidelity.

Farmer and Mechanic. — This work, by W. H. Star and J. Arburtis, New York, is among the most valuable of our exchanges. It is illustrated with numerous engravings, and every number brings something new and useful, in a plain and practical style. It ranks high as a work of public utility. In neat quarto form, weekly, at $2 00 per annum.

ACKNOWLEDGMENTS.

Of S. P. Fowler, Esq., Danvers New Mills, a bottle of currant wine, made from Ogden's Black Grape currants. It is a powerful astringent, mingled with a slight acid. It is a valuable remedial agent for sore throat and other affections.

We have received from Dr. Lee, superintendent of the agricultural department of the Patent Office, a variety of seeds, on which we shall make experiments.

POTATO DISEASE NOT CAUSED BY INSECTS.

Mr. Curtis, a distinguished English entomologist, has just published a volume in reference to insects which attack the potato. Speaking of the malady which has prevailed so extensively in potatoes for several years, he remarks — "Amongst the numerous causes which have been assigned for the appearance of this alarming and severe visitation, insects have been frequently taxed as the destructive agents; but I am convinced the calamity is not to be attributed to their presence." He admits that there are many species of insects which prey upon the potato in its various stages; but he thinks there is no evidence that their attacks are in any way connected with what is called the potato disease. — *Albany Cultivator.*

"HOUSE AND HOME."

What's a House? You may buy it, or build it, or rent;
It may be a mansion, a cottage, a tent;
Its furniture costly, or humble and mean;
High walls may surround it, or meadows of green.

Tall servants in livery stand in the hall,
Or but one little maiden may wait on you all;
The tables may groan with rich viands and rare,
Or potatoes and bread be its costliest fare.

The inmates may glitter in purple and gold,
Or the raiment be homely, and tattered, and old;
'Tis a house, and no more, which vile money may buy;
It may ring with a laugh, or but echo a sigh.

But a Home must be warmed with the embers of love,
Which none from its hearthstone may ever remove,
And be lightened at eve with a heart-kindled smile,
Which a breast, though in sorrow, of woe may beguile.

A home must be "Home," for no words can express it;
Unless you have known it, you never can guess it;
'Tis in vain to describe what it means to a heart
Which can live out its life on the bubbles of art.

It may be a palace, it may be a cot;
It matters not which, and it matters not what;
'Tis a dwelling perfumed with the incense of love,
From which to its owner 'tis death to remove.

THE OLIO.

Mental Infirmity. — We ought, in humanity, no more to despise a man for the misfortunes of the mind than those of the body, when they are such as he cannot help. Were this thoroughly considered, we should no more laugh at one for having his brains cracked than for having his head broken. — *Swift.*

The hypocrite is never so far from being a good Christian, as when he looks like one. — *Sir R. L'Estrange.*

The diseases of the body are better discovered when they increase; but the diseases of the soul grow more obscure, and the most sick are the least sensible. — *Seneca.*

Freedom may use her tongue, because speech is both her weapon and her spoils; but despotism is lost from the moment it attempts to vindicate its ways.

A cheerful manner commonly denotes a gentle nature; whereas a sour countenance is a manifest sign of a froward disposition.

The zeal which begins with hypocrisy must conclude in treachery; at first it deceives, at last it betrays.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, APRIL 27, 1850. NO. 9.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE PROPRIETOR.

DRAINING.

At the agricultural meeting, April 9, Hon. Mr. Daggett in the chair, the subject of *Draining* was discussed.

Mr. B. V. French, of Braintree, opened the discussion. He thought draining of great importance. Cedar swamps, that are worth no more than a dollar an acre, as it requires one hundred years for them to produce a new growth of cedar, may be made to bear good grass, and the vegetable matter in them is valuable manure for upland. The drains should generally be about twenty-five feet apart, and so constructed as to cut off the springs. When walls are made on wet land, drains may be made in a trench under the wall. Judge Buel used pine boughs in the bottom of drains, and he saw that they worked well fifteen years after they were constructed.

Mr. Felton, of Brookfield, had some experience in draining. He made wall drains by trenching and filling with small stones, which cost but a trifle. In under-draining, he digs two and a half feet deep, and fills one and a half feet with stones, which affords an opportunity to till above the stones. In draining flat lands, he cuts ditches at the margin, to cut off the water that runs in from the high land; and then makes ditches about four rods apart, and leaves them open. Sometimes, in under-draining, he sets flat stones together in the form of a roof, and then fills in small stones.

Mr. Buckminster, of the Ploughman, said that we had but little high land that needs draining. We have many bog meadows that require it, which may be made to produce merchantable hay. But on the borders of brooks we get very good fodder, without draining or manuring. On flat lands drains should not be covered, as this would be an injury.

Mr. French said that he had a great deal of land covered with hardhack, alders, &c., that required draining, in order to render them productive. In making drains, it was best to dig down into the hard pan.

Mr. Lathrop, of South Hadley, said that in relation to lands bordering on streams, he had improved a piece of land of this description, so that he now cut twenty tons of good hay for cows, where before he cut only fourteen tons of fowl meadow and other coarse grasses.

A gentleman, whose name we did not learn, said that he cleared a piece of land fourteen years ago. He cut ditches around it, but this was not sufficient; he then cut drains through, about three rods apart, spread the mud from the ditches over the land, and sowed grass seed. The land was rough; he took out the roots and burnt them, and now he gets good crops, without having used manure.

Mr. Brigham, of Westborough, said that the manner of draining depended on the situation of the land, and the materials at hand for filling the drains. He had land full of cold springs, which he had drained, and he found that it was greatly improved by manure. He found that draining his lands improved them very much, both for tillage and mowing.

Hon. Mr. Daggett remarked that he had been much interested in the subject, which was not a *dry*, though a *cold* one. He thought it was not expedient to drain some lands, and he named several cases in his region, where large crops of cranberries were obtained from wet lands. Where a manufactory was established, land was flowed, and the owner recovered damages nearly equal to the estimated value of the land; and in consequence of flowing, cranberries came in, and fine crops were obtained. The flowing of the land continued till the 20th or last of April.

GRAIN CROPS.

At the agricultural meeting, April 16, Hon. Mr. Daggett in the chair, the general subject of grain crops was discussed.

Mr. Cole, of the N. E. Farmer, said that the cheapest mode of improvement in raising grain or other crops, was in procuring superior varieties of seed, as it cost no more to cultivate valuable kinds than inferior sorts, and the produce is frequently much greater. We have other kinds of corn as valuable as the Parker, Dutton, or Brown, which are not generally known; and we ought to make experiments that will show what are the best kinds, and

their peculiar properties. In fruits we have more systems. We have varieties adapted to different purposes and seasons, and the cultivator can select such as suit his purpose. Improvements may be made by further experiments, in order to learn the best kinds of wheat, and other grain. A little seed of an improved variety will cost but a trifle, and it can soon be increased to an ample supply.

Mr. Felton, of Brookfield, said that he had planted five kinds of corn, in order to get the best kind. He planted one kind from Canada, which increased very much in size in four years. He alluded to a new kind of rye cultivated in his vicinity, called white rye, which was considered superior. He spoke of the Indian wheat, a kind of buckwheat, which in his region was preferred to the common buckwheat. It yielded more, but the grain was a little inferior, on account of a thick hull. He made inquiries as to the value of millet, and remarked that the seed was considered valuable for fowls.

Mr. Cole remarked that, as a grain crop, millet would not generally yield so much profit as some other kinds; and for fodder, corn is more profitable, as it produced a larger crop, and the fodder was excellent. The seed of millet is very good for fowls, and when they need exercise, as is often the case in winter, it may be covered in earth, and they will have to scratch well to get enough to support them.

Mr. Daggett spoke highly of the Indian corn crop. He thought a field of fine corn both valuable and beautiful. There were various ways of cultivating it. He ploughed, in the fall, lands not in sward, manured in the spring, and then ploughed deeply. He found a compost of barn manure mixed with the bed of coal-pits an excellent manure for corn. He planted deeper than farmers generally, and he found it a protection against drought. He cuts his stalks, dries them one day, and then cures them in the barn. He makes the husks palatable to cattle by sprinkling them with salt when mowed away. He thought that he covered his corn three inches deep.

Mr. Lathrop, of South Hadley, said that he ploughed his greensward in the spring, as late as it would answer, so as to plant in season; generally he ploughs about the 10th of May. The sod will decay the sooner if the ploughing be delayed till the grass has started, as it will decompose sooner than the sod that is turned over in the fall. After ploughing, he spreads the manure and harrows it in; and he would rather have two cords thus applied than three cords ploughed under. He plants deep, directs his workmen to cover three inches deep, and step both feet on the hill. He supposes that his men do not actually cover more than two inches deep, and after the earth is pressed down, it is probably from one to one and a half inches deep. When planted in this manner, the crows never pull up his corn, though he has no scarecrows; but they pass on and pull up his neighbors' corn, even when they have images to frighten them. When planted deep, the roots shoot down and become strong by the time the blades get above the surface, and if the crows attempt to pull it up, they only break it off, and after trying a little, they leave it. His soil is sandy loam, mixed with clay. Nearly all soils in this state will bear this deep planting, but it would not be proper on heavy soils. He ploughs eight or nine inches deep. He prefers cutting corn up at the root, when the crop is rather light; but it is inconvenient to harvest heavy crops in this way. Corn cut up at the ground is easily husked, by two men standing on either side of a table, on which a bundle is placed, and husked by both, and then one throws away the bundle of stalks, while the other places another bundle on the table. We should raise corn as late as will ripen in our climate. If one kind of corn ripens in three fourths the time of another kind, it will yield only three quarters as much. The later kind has an advantage from the decomposition of the sod. Mr. L. said that the white rye was thought much of in his region. The long bearded, red chaff winter wheat was the best. It was preferred to the white flint.

Mr. William J. Buckminster, of the Ploughman, said that millet was a valuable crop to sow when it was out of season for other crops. It would bear late sowing. A peck is sufficient seed for an acre, as it is fine. It needs good soil in fine tilth. He remarked that there was a variety of corn. In planting this grain, it is best to plant twice as much as should stand, as the insects may destroy a part; and if they do not, the largest plants may be selected, and the others removed with very little trouble.

A vote of thanks was passed to Mr. Calhoun, president, and to Mr. Daggett, vice-president, for their faithful attention to their duties. Adjourned to the second Tuesday after the meeting of the legislature in January next.

For the New England Farmer.

LARGE FOWLS.

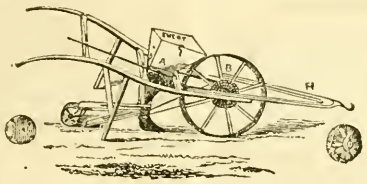
Mr. Editor: Allow me to say through your columns, in reference to the *size* of the "Royal Cochin China fowls" lately imported by me, that I never claimed any very extraordinary dimensions or weight for them, as some persons pretend to suppose. Gentlemen who have seen them, however, have admitted that they are full large enough for beauty, and all practical purposes. I have never attempted, either to compare my fowls with, or to compete with, any other gentleman's birds, nor shall I do so. *I* am satisfied with them, and that is one point gained.

For my *Chittagong* fowls, however, I *do* claim, that they are the largest birds in America, at this time, so far as I am acquainted. I have two hens of this breed now laying, which will weigh, one over eleven pounds, the other nearly ten and a half. I have three pullets, which will draw strong ten pounds each, and four more, that have *never yet laid an egg*, that approach nine pounds each. This is *size* enough for me!

As to comparing my stock with any other varieties, I have never done so. I think my Cochin Chinas very superior fowls, in plumage, size, and model; and I am sorry to learn that a wrong construction has been put upon my having lately sent my birds to Messrs. Ruggles, Nourse, & Mason's to be seen. The Cochin Chinas exhibited there a few days since, will now weigh about eighteen pounds per pair. They are eight months old, only.

Yours, &c., G. P. BURNHAM.

Roxbury, Mass., *April* 8.



EMERY'S SEED-SOWER AND CORN-PLANTER.

This seed-sower is adapted to hand or horse power; and the sowing apparatus can be so arranged as to adapt it to the sowing of large or small seeds. It drops the seed at any desirable distances, and the changes are made with the greatest ease and expedition. As the gearing is of cast iron, it is regular, uniform, and durable. Seeds may be dropped in hills, or strewed along in a drill.

The first premiums of the N. Y. State Agricultural Society, of the Mass. Charitable Mechanics' Association, and of the American Institute, have been awarded to this sower; also the first premiums of several county societies.

As the seed-sower is in use at the most busy season, it is of great value in point of economy, not only making a saving of labor by despatch, but aiding the farmer, in urgent cases, to do his work at the proper time, which is a very important matter. Besides the saving of labor and despatch, which this simple implement aids in accomplishing, it drops the seeds more uniformly than it can be done by hand, thereby saving seed, and giving a better chance for a good crop.

The great objection to root crops is the expense of cultivation; yet so much labor is saved by sowing with a machine, that this process is a mere trifle.

For the New England Farmer.

DISEASES OF ANIMALS.

Mr. Cole. Dear Sir: I observe, in the N. E. Farmer of March 30, a notice of a communication recommending "three grains of corrosive sublimate, and three grains of red precipitate, as a dose for a horse afflicted with horse-ail," stating that "a horse recovered after taking two doses."

Your own remarks, viz., that "there may be cases in which horses have a constitution sufficiently strong to withstand both disease and the effects of unfavorable medicines," are true, and it affords me much pleasure to welcome you into the ranks of the reformers. I have no doubt that the community will find it to their interest to sustain your valuable journal, in the event of your continuing to sustain the non-poison principles.

The blood-letting and poisonous systems of the allopaths have caused great destruction, as many of our farmers, from dear-bought experience, are ready to testify; they demand, and will have, a safer system of veterinary medicine — one that shall cure the ailments of their domestic animals, without entailing misery and degeneration, through the medium of the fleam, firing-iron, scalding mixtures, corrosive sublimate, red precipitate, and a host of other destructive agents. They (the allopaths) conclude that "*disease is an unnatural condition*," and must be met by an unnatural agent; that "corrosive sublimate will destroy life, therefore it must be used to cure." It appears to me that a man does not require more than an ordinary share of common sense to perceive that if "disease is an unnatural condition," it must be met by a natural remedy; one that shall not interrupt the harmony of the vital machinery, when it has free and universal action throughout the whole animal organization.

Again, red precipitate is a powerful depressor of the vital power; the chemico-vital action of the stomach can never assimilate it, except to act pathologically; it is still red precipitate, and always leaves unmistakable evidences of its encroachments on the mucous surfaces.

The theory of making one disease to cure another, as heretofore taught and practised, is just as absurd as knocking a horse's brains out to make him stand still, or bleeding him to death with the vain hope of saving life — a theory that cannot stand the test of common sense. This theory has led to the use of deadly agents, all of which occupy a high rank in the *materia medica* of the allopathic school.

If there is any necessity to do violence to the animal organization in curing disease, then there is some justifiable ground for using the above agents; but if there is not, let every man relinquish the use of agents that have hitherto proved destructive, and resort to those that coöperate with, and not war against, the vitality of the animal economy. The mistaken idea that fever and inflammation are disease, and that all diseases are under the control of the above, and other more or less destructive agents, has led to the universal use of "*scientific remedies;*" remedies that are calculated to kill, instead of cure.

Yours with respect,

GEO. H. DADD, M. D.

Boston, *April* 3, 1850.

TO CORRESPONDENTS.

We have a number of communications on hand, which will appear in our next. That of Mr. Holbrook was rather late for this number, but we have given it a place near the close, as it is on a subject which is now before the farmers for action. We would call particular attention to it, as it shows how a great saving may be made in the cultivation of the carrot crop, which is among the most valuable of roots; and an objection to its cultivation is, that it requires more labor than other root crops.

For the New England Farmer.

CULTIVATION OF THE POTATO.

Mr. Cole: I have been fully compensated for my communication on the potato in a previous number of your paper, by perusing the article which it called forth, from your valuable correspondent, F. Holbrook, of Brattleborough, Vt. With his views as there expressed, from my experience, I have no disposition to differ. That rather light, open, warm soils, inclined to sand or gravel, are the most favorable for the growth of some potatoes, I think no one can dispute. My remarks were made in regard to adapting the soil to the growth of the potato, without any reference to the rot.

You ask my opinion as to the effects of deep and shallow planting, derived from my experience, in regard to the rot. I have never discovered any difference as to the rot. The yield has generally been best, by furrowing the land, say four or five inches deep at planting, and then cultivating nearly level, or making no more hill than would naturally be produced by passing the cultivator between the rows.

As it respects the size of the seed, there is one error which is very common among farmers, and that is, the idea that if they plant below the medium sized, the number must be increased; if not very small, two will answer, but if very small, three or four must be put in the hill. A little examination and reflection will correct this. Small potatoes contain as many eyes as large ones; they are only of a smaller size, and come up with less vigor, and instead of having two, three, or four times as many sprouts crowded together in a hill, the small, feeble sprouts require more nursing, and a soil well fitted to their growth. I am satisfied that one medium-sized, or small potato is all that should be put in the hill provided the hills are of a suitable distance to insure the best crop.

Early planting and early digging have been my best safeguards against the rot, whether on dry or moist soils. Three years ago this spring, I planted a piece of ground with potatoes, well dressed with manure from the barn cellar, mixed with an equal quantity of mud, spread and ploughed in, and a mixture of ashes and plaster put in the hills. The land was sowed with buckwheat the year before, and was in fine condition. The main part was planted with the Carter variety; the crop was abundant, and of large size. A part of them were dug the last day of August, and put into the cellar dry, while the vines were green and thrifty, and were of the very best quality; the remainder were left until the last of September, and more than three quarters of them were affected with the rot. Several other instances have come within my knowledge, with similar results. Yours respectfully,

S. M. STANLEY.

West Attleborough, *April* 3, 1850.

For the New England Farmer.

AGRICULTURAL EDUCATION.

Mr. Cole: The subject of agricultural education has frequently invited my attention, since the first agricultural meetings of the present session of the Massachusetts legislature, when the establishment of an "Agricultural School" was considered, soliciting the aid of the state government. I was led to reflect upon the necessity of the enterprise as an auxiliary to the ordinary means of agricultural education; but I could not see its importance in so clear a light as some others were supposed to see it. Many probably think with me, who would not openly oppose such a school, because they feel that it can do no hurt. I should have been gratified to send you a communication at that time, stating the humble views of one, of its inutility, or, at least, superfluity; but feeling that I was in a very small minority, and not making a vocation of farming or horticulture, I forbore. As I have since noticed the expressions of doubt as to the propriety of establishing such a school, with your indulgence I venture to offer a few thoughts on the subject.

That agricultural education, or information, is not what it is desirable it should be, no one probably will deny; but may not the same be said of all other education, whether of trades or professions? Are not the sources of agricultural education more numerous and open to every one than any other means of education? Can an intelligent man possibly reside in the country without having more accurate ideas of farming than of any thing else, of which he does not take particular pains to investigate? Farmers' sons are *born and brought up* in an agricultural school; and hence, if they intend to become farmers, they are as well prepared for it as a medical student is prepared to practise medicine, after passing through a course of study, and receiving his diploma. If a young man were born and brought up in a medical or law school, and had there studied and *practised* either medicine or law as a vocation from his youth upward, we might safely conclude that his elementary education would be sufficient for the commencement of regular practice. It would be the very best of schooling. But as a knowledge of the professions is not easily obtained in this way, by early theory and practice, schools and academies are necessary. All farms are schools of farming; and are good schools just in proportion as they are extensive or well worked. We can hardly conceive why there should be specific schools for farmers, any more than there should be for carpenters, hatters, shoemakers, &c. If a man wishes his son to learn a trade, he puts him to some good establishment, where the trade is well carried on; and this is the best schooling he can have. If a man wishes his son to become a farmer, who is not one himself, (which is rare,) he puts him upon some good farm, where at least he can *support himself;* and this is as good schooling as the father would desire, or perhaps accept of, should there be less or no compensation offered from other sources.

Now, suppose an agricultural school were founded, largely endowed by the state, with all the necessary appurtenances for practising agriculture upon its most scientific and extended scale, — I am led to inquire, From what sources would it be supplied with students? Here is a farmer with half a dozen sons: one chooses to learn a trade, another to study a profession, another to become a merchant, and so on; one concludes to continue at farming, and keep his father's estate. But would he leave home, and subject himself to expense by attending an agricultural school, for the sake of learning a vocation which he has always studied and practised? Would he not say, "I can learn as much here, with the aid of a few books and agricultural papers, as I can any where else? Why should I leave home for study and the experience of others, when they can be had here for a trifle?" I think farmers and farmers' sons, with very few exceptions, would reason in this way; and this would be fatal to the general utility and self-preservation of an agricultural school. A man who owns no land, yet has sons to obtain a livelihood, would not think of teaching one of them agriculture, as he has no farm to cultivate. He would not put one or more of them to such a school with a view of their becoming overseers of farms, for few such persons are needed in this country, where land is so divided, and where there are so many owners and practical workers; besides, the compensation being

small, compared with what they would expect from other vocations. I never heard of a man, that did not own a farm, who was desirous that his sons should be educated farmers; and some only have consented to their working on farms as a means of their immediate support. If the sons of wealthy men only can, or are to patronize the institution in question, for the sake of acquiring the *theory* of agriculture, with a view of superintending their own estates, upon which they have never learned by experience, then the number will be very limited, its popular usefulness will be fatally held in check, and it will only be known as a failure. I cannot perceive, then, if the above views be correct, how such a school can procure students on the naked ground of agricultural education. 1st. Because farmers' sons profess to know enough already, or can supply their deficit cheaply by books or periodicals; and 2d. Because those who are not farmers' sons, and have no land to cultivate, do not think of becoming farmers, certainly not till late in life, when they may have the means so to do.

But if such an institution should be founded, and succeed in acquiring a sufficient number of students, could it do more for agriculture than is already doing by some of our "model farmers" and scientific nurserymen, who enjoy a well-earned reputation all over the state, and perhaps New England? Are not these enterprising agriculturists and horticulturists doing every thing that science can suggest to advance and improve the cultivation of the soil in all its branches? Are not their establishments the best schools of farming? And are not their instructions scattered, through periodicals, broadcast over the land, so that "he who runs may read"? Besides, if a farm school were established in the central part of the state, would its instructions be generally valuable to those of other localities — that of Cape Cod, of the western counties, &c.? In short, is it reasonable to suppose that its useful experiments would prove so elsewhere, or that those of other cultivators from all sections would not be more satisfactory?

In a word, as before hinted, I cannot conceive that a special agricultural school is more needed than a public state school to teach architecture, sculpture, painting, or any of the various trades of art; and in fact, hardly so much; for these callings make draughts upon the *whole* community, while an agricultural school could only claim the farmers, who, I believe, do not feel the necessity of such instruction in such a manner. The learned professions make great draughts upon the whole community; and young men designed for a profession, feel the necessity of leaving home to seek a fit education, (that which home cannot generally furnish,) in some institution, where they must pass an ordeal of severe study; but those who intend to be cultivators of the soil, having land, and being brought up to it, need no such foreign education, — or at least, it will be difficult to make them think so.

Now who, and whence, are our farmers? Farmers' sons, generally speaking, are averse to agriculture as a vocation, because it seems a drudgery, a mere slave's life. They are therefore eager for some other employment. But the homestead must be retained, and one of the sons generally takes possession of it on the death of the parents, by satisfaction to the heirs, who seek a place elsewhere. This is one source, an hereditary source, of farmers, and one very valuable and permanent. The other source is large — it is made up of retired merchants or mechanics, in advanced life; frequently wealthy, generally competent; sons coming back, perhaps, to purchase a part of the old homestead, and erecting a new cottage; and these are the men who need agricultural education. But will they attend a public institution to acquire this knowledge? No, that would be inconvenient; they purchase books, and subscribe liberally for periodicals; and if they do not become skilful cultivators it is their own fault. Such persons, however, generally exhibit a good deal of zeal; and in fact, they soon take the lead in agriculture, as the beautiful farms of many such gentlemen in the vicinity of Boston will well attest.

Your correspondent "W.," of Middlebury College, Vermont, in No. 7, Vol. II., N. E. Farmer, highly commends (but not too highly) good agricultural papers. In my limited association with farmers, I have heard of many useful facts which I have not seen in print; and hence it is plain to me, that if cultivators were more in the habit of giving their experience to the public, agricultural papers and magazines would be far more useful. The press, after all, is the mainspring of improvement, for it scatters to every part of civilization the experience of the world.

The views which I have given above may be novel and unsound; but they are submitted with deference to your columns, hoping that they may lead to a more general expression on the important topic of agricultural education. L.

Boston, *April* 4, 1850.

Remarks. — We give our correspondent's views, but we do not indorse them. If the practice of farming can be learned from good practical farmers, so can the practice of medicine be gained from an old lady well acquainted with the medical use of herbs, roots, and barks. And if medical schools are necessary for the purpose of giving the student a knowledge of those sciences that aid him in the healing art, so are agricultural schools necessary to instruct the young farmer in those sciences that appertain to his profession. We believe that no one can deny this proposition; for in no calling is a knowledge of so many natural sciences necessary as in that of the farmer, and to him may they be made available, as well as other sciences to other arts. At another time we may give our views more at length on this important subject. — Ed.

For the New England Farmer.

NATIVE TREES, SHRUBS, AND PLANTS.

[Continued from p. 109.]

CULTIVATION OF NATIVE TREES.

The first tree we shall notice is the White Elm, sometimes called the American Elm. This beautiful and magnificent tree is very generally known in New England, and has long been a favorite with all lovers of trees. It is of the most rapid growth, forming, in a few years, quite a tree, even from seed, and bears transplanting better than any other forest tree that I am acquainted with. It should be known by those about to transplant this tree, that as it advances in age, it presents three or four distinct forms of growth. The first is, when it rises tall and erect, and its head forms a flat-top, resembling a vase; the second, when it throws up two or more branches to a great height; the third, when it presents somewhat the form of a weeping willow, its branches growing downwards, and almost sweeping the ground; the fourth, when it assumes the form of the sturdy oak. The weeping form of the elm is better adapted to ornament the grounds around a dwelling-house, than to stand by the road-side, as its limbs frequently obstruct the street. The branches of the tall, vase-formed elm, when planted on the opposite sides of a street or avenue, generally meet at the height of

sixty or seventy feet, thus forming a perfect arch of great beauty.

The Red or Slippery Elm is rare in this vicinity: there are a few trees in Wenham Swamp, and some are found in the north part of Essex county. Many trees are destroyed, or greatly injured, by heedless persons, in stripping off their bark for medicinal purposes; and in consequence of their receiving these injuries, they have become rare; and but a few vigorous trees can now be found growing naturally, in this vicinity. This tree is smaller than the White Elm, more upright in its growth, and has a very thick, rough leaf. We have grafted the Slippery and the Cork-bark Elm on the White Elm with good success.

The Maples are all fine trees, and of easy cultivation. The Red Maple is a most beautiful tree, distinguished for its early, scarlet flowers, and the brilliant scarlet or crimson color of its leaves in autumn. It flourishes best under cultivation, in rich, moist land, where it makes a rapid growth. The Rock Maple, if found at all, is a rare tree in this vicinity, except under cultivation. It is an interesting and useful tree, and when planted by the roadside, very ornamental. Several European species of Maples are large, ornamental trees, of easy cultivation, particularly the Sycamore, or great European Maple, Norway Maple, and the Field Maple.

The Tulip-tree, although a native of Massachusetts, is not found in this vicinity, except under cultivation. It is every way very desirable, and should be possessed by every lover of native trees, and deserves general cultivation as an ornamental tree. It is distinguished for its flowers, which resemble the tulip, and its singular truncated leaves, presenting the uncommon appearance of having their ends cut off. We have found it of the most rapid growth, in a rich, moist soil, and readily and easily transplanted. It is a tree of the largest size in the Western States, and is there used for the finishing work of dwelling-houses. It is known by our joiners under the name of whitewood. It is usually to be found in the Boston nurseries, of a suitable size for transplanting.

The American Lime, Linden, or Basswood is sometimes found cultivated as an ornamental tree. It is distinguished for its large, deep green, heart-shaped leaves, its very fragrant flowers, peculiarly attractive to bees; and its rapid growth of white, soft wood. As it affords a deep shade, with a clean, bright green foliage, and fragrant flowers, and as its wood is soft, and possesses but little strength, it is in consequence very liable to have its branches broken by high winds: it appears to be better adapted for planting near and in the vicinity of buildings, thus affording it shelter and protection. Many fine species of the European-Linden trees are now cultivated, and can be obtained at the nurseries.

The most careless observer of trees, in passing through our moist woods, must have observed a rather singular tree, resembling somewhat a large pear-tree, particularly upon viewing its bark. This is the Tupelo, or Gum-tree, a species of the Ny'ssa, a class of trees belonging to the Sandal wood family. We have never seen it under cultivation, although it would no doubt succeed well in a moist soil. It is distinguished for its glossy green leaves, its bright blue twin-bearing fruit, and in autumn, by its leaves becoming an intensely deep scarlet or crimson.

The Scarlet Oak, cultivated upon a lawn, and permitted to stand alone, is a very ornamental tree, of easy culture and rapid growth. It is distinguished from other oaks by its thin, smooth, deeply cut, and polished leaves, which in autumn are changed to a deep crimson, of surpassing richness.

The Black Walnut, which is found in Massachusetts, is a handsome tree, of rapid growth, and of easy cultivation. Mr. Emerson, in his excellent and interesting report of the "Trees and Shrubs of Massachusetts," says, "The Black Walnut unites almost all the qualities desirable in a tree: beauty, gracefulness, and richness of foliage, in every period of its growth; bark and husks, which may be employed in an important art; fruit valuable as food; wood unsurpassed in durability for use, or in elegance for ornament."

The Nettle-tree and the Hackberry are both found in Massachusetts, but have not been seen, to my knowledge, in the county of Essex. We should think they might be successfully cultivated in a suitable soil, which we should judge should be moist and rich. Mr. Emerson says, that "the American Nettle-tree has a strong resemblance to an elm, and is often, by casual observers, mistaken for one. This tree," he says, "might be described to one who wished to be able to recognize it, as an elm, bearing purple, sweet cherries, which continued on the stem through the winter." It is rather a small tree, rising seldom above forty or fifty feet in height, and twenty or twenty-four inches in diameter. Michaux had found it in its greatest vigor on the Savannah, where, in a cool and shady situation, he had seen trees sixty or seventy feet high, and eighteen or twenty inches in diameter. D. J. Browne, who has published a very imperfect work on the trees of America, says, "There is a Celtis occidentalis [the botanical name of the Nettle-tree] in the United States, at Springfield, in Massachusetts, fourteen feet in circumference." This would make a tree about four feet nine inches in diameter. Many persons confound the Celtis occidentalis, or Nettle-tree, with the Celtis crassifolia or Hackberry, sometimes called Hoop Ash. Michaux, speaking of the last-mentioned tree, says, "This is one of the finest trees that compose the dusky forests on the upper part of the Ohio, and is certainly one of the most beautiful trees of its genus."

The Buttonwood, or American Sycamore, is every where well known in New England. It is a noble tree, of rapid growth, and we regret that it has suffered for several years past from a malady, the cause of which is not yet well known. Many trees have been cut down in consequence of being thus injured. The attention of the earlier settlers of New England was called to this tree by the Indians, as will be seen by the following extract from a book published in 1675, by John Josselyn, Gent., entitled a "Relation of Two Voyages to New England." Josselyn was the author of that singular and rare production, "New England's Rarities," being a description of the trees, shrubs, and plants of New England, with rude cuts. Josselyn says, "The Indians tell of a tree that grows far up in the land, that is as big as an oake, that will cure the falling sickness infallibly; what part thereof they use, bark, wood, leaves, or fruit, I could never learn; they promised often to bring of it to me, but did not. I have seen a stately tree, growing here and there in valleys, not like any trees in Europe, haveing a smooth bark, of a dark colour; the leaves like the great Maple in England, called Syeamor, but larger; it may be this is the tree they *brag of*."

S. P. FOWLER.

Danvers New Mills, *April* 6, 1850.

[to be continued.]

For the New England Farmer.

"BONE DISORDER IN COWS."

Mr. Editor: I must again ask the indulgence of the readers of your valuable journal, in attempting to reply to your correspondent, Allen W. Dodge, of Hamilton.

I was not aware before his last communication,

that it was the practice of the farmers in that town to feed out salt hay to their working oxen after they were turned out to pasture; but I knew that many of them fed it to their milch cows after they went to pasture.

I have known milch cows to eat it at that time with greediness, when they would not eat English hay, or lick salt. He asks if it also furnishes the bone material for our oxen. So far as the system of the ox requires the bone material, I think it may; and when the food contains more than the system requires, it passes off in the excrements. This may account for the remark I once heard one of his nearest neighbors make, that he thought the manure made when cattle were fed upon salt hay was better than that made from English hay.

My limited observation and superficial knowledge led me to think that the salt and lime daily deposited upon the marshes by the tide, would cause them to produce hay abounding in phosphate. His information and research led him to think that if the cold and inert soil did not abound in phosphate, the hay would not. I think the soils in many of our old fields where the corn grows, which he says contains so much phosphate of lime, do not abound in it, before the manure is applied.

But if we admit that salt hay does not contain any more phosphate of lime than English, yet the salt, as it passes through the various chemical changes in the stomach of the cow and in the soil, may there form phosphate of lime, so that the soil will not be so much exhausted as where nothing is brought on to the farm from a foreign source.

The expression, "well fed upon good English hay and Indian meal," I used in my first communication, to vindicate my neighbors from the implied reproach cast upon them for not feeding their cows well. When our correspondent said, if cows are well fed, who would ever dream of their bones being disordered.

He says that Indian corn contains seventeen per cent. of phosphate of lime, and then he asks how I will reconcile this fact with my theory.

I will thank him first to refer me to the analysis where it is stated that Indian corn contains so much phosphate of lime; if it is a fact that it contains so much, then I will give my views upon it.

In Dr. Dana's Muck Manual, page 51, it is stated that Indian corn contains one and a half per cent. of phosphate and sulphate of lime, about the same as marsh mud. In the same work, page 132, it says, "and one cow daily produces, in excrements, salts of lime sufficient for half a bushel of corn." If we add to this the phosphate of lime contained in eight quarts of milk, given daily by a cow, we shall see how she may dispose of the phosphate in four quarts of Indian meal per day, which is a good allowance, even if it does contain as much as he says.

In his first communication, Mr. Dodge says, that the soil in one place may be as much exhausted as another, judging from the length of time it has been cultivated. It was my object to show that it did not depend so much upon the time that it had been cultivated as upon the course pursued, in exhausting the animal matter from the soil. I stated that I thought the practice of selling calves to the butcher, would exhaust the soil more of this ingredient than it would to raise cattle as they do in some parts of the country. I did not confine my remark to the county; I admitted the practice was the same in other parts of the country.

I do not understand what he intends by saying "nine tenths of the calves in this part of the country are sold to the butcher. If this exhaust the soil of phosphate of lime in our part of the country, why should it not exhaust it in another?"

Several years ago, I was in the habit of visiting an aged farmer, who resided in the northern part of Middlesex county. He prided himself much upon the good appearance of his cows. I was there in May of 1846. Speaking of his cows, he said that for two or three years past, they had not done so well as formerly after they calved; and this year they are worse than ever; "they are sick, but I do not know what ails them." His daughter said, "Perhaps your hay is not so good as it used to be." He said it could not be that, for his oxen were fed upon the same kind of hay, and they did well. He said he was ashamed of his cows, they were so poor, but he could not help it; it was not because he did not feed them well; he gave them as much meal as he did his oxen — four quarts of Indian meal each per day. His oxen were good beef, the cows so poor that they could scarcely get up alone: their appearance was the same as that described in the American Veterinarian, page 224. He showed me the hay. It was what is generally considered hearty hay, such as grows upon bound out land. For many years there had not been any hay, grain, or manure brought on to the farm. The principal crops sold were hops, oats, and the produce of the dairy. I will not draw any inference.

Absurd and visionary as your correspondent thinks this whole theory to be, it is not the language of exaggeration to say, that the information published in the Massachusetts Ploughman, which led to the use of bone meal for this disorder, has been of more practical advantage to several farmers in this neighborhood than all the other agricultural information published for the last twenty-five years.

There are some things connected with this theory which we cannot now fully explain; but it is founded upon a very simple principle — that a milch cow requires more phosphate of lime than a dry one. If it can be shown that she does not, then I will reject it.

If he will tell us how the fat and muscle waste away when an animal does not receive sufficient food, then, perhaps, we shall be able to tell him how the bones waste away when they do not receive proper nourishment.

So long as we find this disorder confined to those farms where there has been a course of cultivation pursued that would most exhaust the phosphate of lime, and the oxen and dry cows do well, the milch cows become diseased, and when bone meal is given to them, they recover, the natural inference is, that the disorder is caused by the want of phosphate of lime. I may not draw any inference so legitimately as to command the assent of your correspondent upon this subject.

WILLIAM P. PUTNAM.

North Danvers, *April 5*, 1850.

Remarks. — We believe, as our correspondent has shown, that on old farms, where cows are kept for the dairy, the land becomes exhausted of bone earth, or phosphate of lime, so that it does not supply fodder having a usual quantity of this ingredient. The consequence is, that there is a want of phosphate of lime to supply the milk with one ounce of this material to every twenty gallons, according to chemical analysis, and that a further supply is necessary to support the bones and system generally.

In some cases farmers have changed their dairy business to that of raising stock, in consequence of the bone disorder among their cows; and instead of sick cows, they have had healthy animals.

Now, it seems, that we have found the cause and cure of this disease, and the symptoms also; and the only question is, whether the disease is rightly named. If not, will some pathologist explain the subject and assign the proper name? — Ed.

RED SHANGHAE FOWLS.

For the New England Farmer.

Mr. Editor: The Red Shanghae fowls have, within the last three years, been introduced into the New England States, from Shanghae, a port in China, but recently opened to the commercial world, situated on the River Moosong, north-east from Canton: the climate corresponds with that of Baltimore or Philadelphia.

In the year 1848, Capt. A. S. Palmer, of Rhode Island, imported direct from Shanghae the red and white varieties, and in the same year, Capt. Daniel S. Fuller imported the Red Shanghae, which resembled those imported by Capt. Palmer, so nearly as not to be easily distinguished, when placed together in the same yard. In 1849, a gentleman of this city, Daniel G. Bacon, Esq., imported, in the ship Vancouver, some Red Shanghaes for his own yard.

The portraits, which head this article, were engraved from a drawing made by Mr. S. E. Brown, of this city, of a pair of the imported fowls last mentioned. The cock has a large, upright, single comb, deeply indented; the wattles are large; the neck is long, and is covered with hackles of a dark golden color, extending to the upper part of the back; the hackles on the rump are of a dark reddish yellow color, and are long and drooping. The feathers of the tail are black, shaded with a dark and glossy green; those on the under part of the body are of a pale yellow color, intermingled with black feathers; the breast is covered with dark red and black feathers, and the legs of the cock, which are stout and short, are covered to the toes with downy feathers, of a light buff color. The voice of the cock is coarse and harsh, resembling more a croak than the clear ringing notes of fowls of other breeds.

The form of the hen is correctly shown by the engraving; the neck is covered with dark brown hackles, and the feathers on all other parts of the body are of a dark brown color, tipped with the most glossy black. The comb and wattles are small, and the tail is short and small. In the background are introduced the head and neck of a young cock but four months old, the progeny of the imported cock and hen, which now weighs eight and a half pounds. These fowls are now in the possession of Mr. John Fussell, of Jamaica Plain, Mass.

Among the first importations, and prior to those of Captains Palmer and Fuller, was that of Capt. Forbes in 1848. Of the Captain Forbes stock, a writer in the Massachusetts Ploughman, Dr. J. C. Bennet, of Plymouth, Mass., says, "Capt. Forbes imported sixteen pairs, and a great proportion of them were of mixed blood. *With the exception of one lot*, none of the pullets of this breed which have been forwarded to me as full bloods have proved to be more than three quarters blooded, and some of them only half bloods! This probably arises from the fact, that a part of the original importation were impure." Most of the hens of Capt. Forbes's importation have dark chestnut-colored hackles on the neck; the body is covered with feathers of a light buff color.

The following is an extract from a letter written by Mr. Christopher B. Marsh, of West Roxbury, Mass., giving an account of the Red Shanghaes imported by Capt. Fuller.

Mr. Marsh says, "I have one rooster and two hens, which Capt. Daniel S. Fuller brought out from Shanghae in May, 1848.

"The rooster and one of the hens, with some of their progeny, were exhibited at the Norfolk Agricultural Fair in Dedham, Oct. 1849, and obtained the highest premium. They were also presented at the exhibition of fowls at the Public Garden, Boston, Nov. 1849. The rooster was admitted to be the largest among the great numbers and varieties shown on the occasion. Probably there is not his equal in this country. The hens have thus far done themselves great credit as layers; they are very domestic

and peaceable. The chickens have been noted for health, and also an *ability*, as well as a disposition, to take care of themselves, for while young they are active and 'self-helping little things;' and as proof that they well know how to take care of themselves, I will instance, that though I have taken them from the mother when only two or three weeks old, they have uniformly done well, and throve finely; as well as any chickens I have ever kept.

"The hens, very soon after their chickens are taken away, resume laying. In one instance, one of the imported hens laid the fourth day after her chickens were taken from her, (the chicks being two weeks old;) and she laid between forty and fifty eggs before showing a disposition to sit: not being allowed to sit, she resumed laying again in about a week.

"I have now five chickens, five weeks old; and notwithstanding the season, December, January, have never known chickens hatched at any season of the year do better than these have.

"The rooster weighs to-day, Jan. 17, 1850, *twelve and a half pounds;* the hen that was imported with him, weighs eight and a half pounds; one of her chickens, seven months old, weighs seven and a half pounds, and is probably as fine a specimen of the Shanghae hen as can be found.

"Of the first chickens raised from those imported, four pullets were wintered over; they began to lay the first of February, and they have been either laying or sitting almost continually from that time to this. One has chickens now, five weeks old, two are sitting, and the other still laying.

"Three of them laid forty-four eggs from December 24, 1849, to January 10, 1850. I have but two pullets of last summer chickens; one of them has laid her third egg to-day, and will be eight months old to-morrow, January 18, and weighs seven pounds. The other will probably lay soon; she is seven months old, and weighs seven and a half pounds, as mentioned above."

These fowls, so far as they have been bred from the stock of Capt. Palmer's and Fuller's importation, have not fallen off in size or weight. Capt. Francis Alden, of Dedham, Mass., has some thirty Shanghaes, descendants from Capt. Fuller's importation, of great uniformity of size, form, and plumage; the cocks weighing at eight months old eleven pounds, and pullets of the same age of eight pounds weight. Mr. B. W. Balch, of Dedham, Mass., has a large stock of Red Shanghaes; several of his pullets weigh nine pounds each. Messrs. Alden and Balch give accounts of the prolificness of this breed similar to that of Mr. Marsh. The appearance of these fowls when young is awkward and ungainly in the extreme, not being covered with feathers until nearly six months old. One peculiarity of these fowls is, that the cocks do not show even the rudiments of the feathers of the tail until they are more than half grown.

The flesh of the Shanghae is rich and juicy, well intermixed with fat of a most agreeable flavor; and for making capons, they are quite equal to any other breed known in the New England States. It is very much to be regretted any fowls of impure blood should have been imported, as it has the tendency to cause many persons to condemn the pure bred fowl, which, all accounts agree, is possessed of many desirable qualities, and are prolific to an extraordinary degree.

It is stated in the Massachusetts Ploughman, that Mr. Phillips, of Marshfield, Mass., had a pullet of this breed, which laid one hundred and twenty eggs in one hundred and twenty-five days; then stopped laying for six days; then laid sixteen eggs; ceased laying four days, commenced again, and continued to lay regularly; showing that this breed is more prolific than any other known in this country.

In 1847, Capt. Lockwood, of the ship Tartar, of Philadelphia, brought from Shanghae a smaller variety of fowls, which are now in the possession of a gentleman residing at Kensington, Philadelphia, to whom the writer is indebted for the following description: —

"You are innocently in error with regard to the Shanghaes and Cochins which I have. The small boned, and but slightly feathered on the legs, were brought from the city of Shanghae, by Capt. Lockwood, commanding the ship Tartar, of this port, in the summer of 1847. They are pure, or have all the characteristics of a pure and distinct breed; weigh from fifteen to sixteen pounds per pair; lay well, and are easily raised."

He describes the other variety as follows: —

"The other fowls are in some respects different. They were imported in the ship Huntress, of New York, by Mr. Taylor, in May, 1847, and cost, in Shanghae, ten dollars per pair; quite too much for fowls to *that manor born*, which induces me to believe that they belong *farther south;* hence, I call them Cochin Chinas. They were landed in the early part of May, were rather sickly in consequence of having been so long from the ground; and yet, from that time till the following October, the hen laid forty-eight eggs, and hatched out two broods. The last, brought out in October, consisted of twelve chicks, of which ten were raised through the winter. They are therefore prolific and hardy; think you not so?

"How far poultry may be *crossed* in the *East, previous to importation*, I have no means of knowing. If they are there preserved pure and unmixed, then I have *two* distinct *breeds;* viz., the importation (small boned, and comparatively smooth legged, answering very much, in most respects, to some of the thousand and one discording descriptions of the Queen's Cochin Chinas,) per ship Tartar, in 1847, Capt. Lockwood; and the *larger* fowl, *heavily* feathered on the legs, and weighing, per pair, from eighteen to twenty-two pounds, imported per ship Huntress, in 1847. Of this latter breed, about one half of the number of *cocks* come a *peculiar Dominique*, the rest *red*, with some black mixed; the hens always either a light or dark *bay* color. Of the two importations, the laying and breeding qualities are about equal, the chief difference being in plumage, weight, and feathers on the legs." Yours, &c.,

S. BRADFORD MORSE, Jr.

TO WOOL-GROWERS.

It is my intention to attend the great Industrial Fair at London, in the summer of 1851. I wish to contribute, on my part, samples of American wool, and shall do so, whether I go or not. I should like a few fleeces from some of the best flocks in the Union, so that I can make up about 100 lbs. of each sample. The fine wool I want washed as clean as possible on the sheep, and put up in the best manner. It must be of this clip, as the next will be too late. It will be sorted at the Depot, and duplicates of the sorts kept, so that a proper estimate can be formed, after we have received a report from the committee who may examine it there. It will afford an excellent opportunity to compare our wool with German and other foreign wools, and cannot but be favorable to the growers.

Editors of agricultural and other papers are respectfully requested to copy this notice.

T. C. PETERS.

Buffalo Wool Depot, *April* 1, 1850.

— *Wool-Grower.*

Sheep abhor rains and wet in winter. These injure them more than cold or dry snow.

Domestic Department.

Country Girls. — Mrs. Swisshelm, of the Pittsburg Visitor, has written some very fine things. We extract the following from her *Letters to Country Girls*: —

"Well, girls, I know that, let others do as they will, you have to work; for if you do not, you would not be worthy the name of country girls. The drawling concerns, who lounge round reading novels, lisping about the fashions and gentility, thumping some poor hired piano until it groans again, and putting on airs to catch husbands, while their mothers are toiling and boiling in the kitchen, are not often met in the country. This class of girls are generally confined to cities; and you would be surprised to know how many of them are here. There are hundreds of girls in every large city who parade the streets in feathers, flowers, silks, and laces, whose hands are soft and white as uselessness can make them, whose mothers keep boarders to get a living for their idle daughters. These mothers will cook, sweep, wait on table, carry loads of marketing, do the most menial drudgery, toil late and early, with very little more clothing than would be allowed to a southern slave, while their hopeful daughters spend their mornings lounging in bed, reading some silly book, taking lessons in music and French, fixing finery, and the like. The evenings are devoted to dressing, displaying their charms and accomplishments to the best advantage, for the wonderment and admiration of knights of the yardstick, and young aspirants for professional honors — doctors without patients, lawyers without clients — who are as brainless and soulless as themselves. After a while, the piano-pounding simpleton captivates a tape-measuring, law-expounding, or pill-making simpleton. The two ninnies spend every cent that can be raised by hook or by crook — get all that can be got on credit, in broadcloth, satin, flowers, lace, carriage, attendance, &c., hang their empty pockets on somebody's chair, lay their empty heads on somebody's pillow, and commence their empty life with no other prospect than living at somebody's expense — with no other purpose than living genteelly, and spiting their neighbors. This is a synopsis of the lives of thousands of street and ball-room belles, perhaps some of whose shining costumes you have envied from a passing glance. Thousands of women in cities dress elegantly on the streets, who have not a sufficiency of wholesome food, a comfortable bed, or fire enough to warm their rooms."

To preserve Milk. — If milk be introduced into bottles, then well corked and put into cold water, and gradually raised to the boiling point, and after being allowed to cool, be taken out and put away in a cool place, the milk may be kept perfectly sweet for half a year; or it may be evaporated to dryness, by a gentle heat and under constant stirring. A dry mass will thus be obtained, which, when dissolved in hot water, is said to possess all the qualities of the best milk.

Nutritious Bread. — Boil half a pound of rice in three pints of water, till the whole becomes thick and pulpy. With this and yeast, and six pounds of flour, make your dough. In this way, it is said as much bread will be made, as if eight pounds of flour, without the rice, had been used. — *Am. Agriculturist.*

Science strengthens and enlarges the mind.

Youth's Department.

Few of the youth in the country, we fear, appreciate or improve the advantages they enjoy — particularly those afforded by the long winter evenings. The youth in our cities, at most trades, have to labor as long, and longer, in the winter than at any other season. The evenings are not their own, but their employers'. In the country the winter is a season of leisure. The farmer's son and daughter employ the evenings as best suit their inclination. What an opportunity this affords for mental improvement! — a rare chance to gain that knowledge which shall prepare them for respectability and usefulness in the world. A young man, by the assistance of such books as all can procure, in three or four winters can lay up a stock of knowledge that shall prepare him to act well his part as a farmer and citizen — a knowledge that will give him an influence over less intelligent neighbors, and if rightly used, will advance the best interest of the country, and the good of all.

It is for every young man and every young woman to decide whether this golden opportunity shall be improved — these evenings well spent; or whether they shall be wasted, or worse than wasted, in idleness and frivolity. We would not detract from your pleasures — far from it; the pleasures of knowledge surpass any pleasure afforded by the too common amusement of the young. The fields of science afford solid pleasure — they furnish new sources of delight at every onward movement — they are strewn with flowers at every step. The pleasure of science is, perhaps, the only earthly exception to the words of the poet, that,

"Each pleasure has its poison, too."

In the pages of the Farmer we can only hope to arrest the attention of the *youth*, and then bid them go on, furnishing them facilities, as far as possible, to help them search for knowledge — ever holding up the encouragement that *industry* and *perseverance* in a right cause insure success. — *Genesee Farmer.*

Health Department.

Causes of Diseases of Children. — It appears from the annual registers of the dead, that about one half the children born, die under twelve years of age. To many, indeed, this may appear a natural evil; but on due examination, it will be found to be one of our creating. Were the deaths of infants a natural evil, other animals would be as liable to die young as man; but this, we find, is by no means the case.

It may seem strange that man, notwithstanding his superior reason, should fall so far short of other animals in the management of his young. But our surprise will soon cease, if we consider that brutes, guided by instinct, never err in this respect; while man, trusting solely to art, is seldom right. Were a catalogue of those children who perish annually by art alone, exhibited to public view, it would astonish most people.

If parents are above taking care of their children, others must be employed for that purpose. These will always endeavor to recommend themselves by the appearance of extraordinary skill and address. By this means, such a number of unnecessary and destructive articles have been introduced into the diet, clothing, &c., of infants, that it is no wonder so many of them perish.

Nothing can be more preposterous than a mother who thinks it below her to take care of her own child; or who is so ignorant as not to know what is proper to be done for it. If we search nature throughout, we cannot find a parallel to this. Every other creature is the nurse of its own young, and they thrive accordingly. Were the brutes to bring up their young by proxy, they would share the same fate with those of the human species.

It is indeed to be regretted, that more care is not bestowed in teaching the proper management of children to those whom nature has designed for mothers. This, instead of being made a principle, is seldom considered as any part of female education. Is it any wonder, when females so educated come to be mothers, that they should be quite ignorant of the duties belonging to that character? However strange it may appear, it is certainly true, that many mothers, and those of fashion too, are as ignorant, when they bring a child into the world, what to do for it, as the infant itself. Indeed, the most ignorant of the sex are generally reckoned most knowing in the business of nursing. Hence sensible people become dupes of ignorance and superstition, and the nursing of children, instead of being conducted by reason, is the result of whim and caprice.

Were the time that is generally spent by females in the acquisition of trifling accomplishments, employed in learning how to bring up their children; how to dress them so as not to hurt, cramp, or confine their motions; how to feed them with wholesome and nourishing food; how to exercise their tender bodies, so as best to promote their growth and strength; — were these made the objects of female instruction, mankind would derive the greatest advantages from it. But while the education of females implies little more than what relates to dress and public show, we have nothing to expect from them but ignorance, even in the most important concerns.

Did mothers reflect on their own importance, and lay it to heart, they would embrace every opportunity of informing themselves of the duties which they owe to their infant offspring. It is their province, not only to form the body, but also to give the mind its most early bias. They have it very much in their power to make men healthy or valetudinary, useful in life, or the pests of society.

But the mother is not the only person concerned in the management of children. The father has an equal interest in their welfare, and ought to assist in every thing that respects either the improvement of the body or mind.

It is a pity that men should pay so little regard to this matter. Their negligence is one reason why females know so little of it. Woman will ever be desirous to excel in such accomplishments as recommend them to the other sex. But men generally keep at such a distance from even the smallest acquaintance with the affairs of the nursery, that many think it is an affront, were they supposed to know any thing of them. Not so, however, with the kennel or the stables: a gentleman of the first rank is not ashamed to give directions concerning the management of his dogs or horses, yet would blush were he surprised in performing the same office for that being who derived its existence from himself, who is the heir of his fortunes, and the future hope of his country.

It is really astonishing that so little attention should in general be paid to the preservation of infants. What labor and expense are daily bestowed to prop an old tottering carcass for a few years, while thousands of those who might be useful in life, perish without being regarded! Mankind are too apt to value things according to their present, not their future usefulness. Though this be of all others the most erroneous method of estimation, yet upon no other principle is it possible to account for the general indifference with respect to the death of infants. — *Selected.*

Mechanics' Department, Arts, &c.

Superior Red Ink. — Take a small quantity of the best carmine, about the size of a pea, and put it into a small phial with a little spirit of hartshorn to dissolve it. When dissolved, put as much pure water in it as will give it the desired shade, and then let the bottle not be corked for some time, to allow the hartshorn to evaporate, when it is ready for use. This ink is very permanent, and does not change its color.

The common red ink is made by boiling brazil wood, taking the strong solution and adding to it a small quantity of dissolved alum. It looks all the better to have a few drops of the muriate of tin added to the liquor; not too much, however, or it will injure the pen. A quill is the only pen to use red ink with. If a small quantity of sumac and quercitron bark be boiled along with the brazil wood, it makes the ink still better — of a scarlet shade. Brazil wood itself is rather on the blue shade. For common purposes, we advise those who use much red ink, and make it themselves, not to forget the sumac at least; but a very small quantity will suffice. The liquor should be strained through a cloth as soon as it is boiled, and when cold, bottled and kept well closed in the bottle. — *Scientific American.*

Repulsions. — Steel and Water. — Dr. Dalton, in his philosophical experiments, says, "If a blade of a well-polished knife be dipped into a basin of cold water, the particles of each of those two bodies do not seem to come in contact with each other; for when the blade is taken out, the water slides off, leaving the blade quite dry, as if it had previously been smeared with any greasy substance.

"In the same way, if a common sewing needle be laid horizontally on a glass of water, it will not sink, but form a kind of trench on the surface, on which it lies and floats about. This proceeds from the little attraction which exists between the cold water and the polished steel. It is necessary that both the knife, in the last experiment, and also the needle, should be dry and clean; otherwise the effect will not be produced."

Useful Hints. — I annex a few items of information for my brother farmers, which may be of some use to them, having satisfied myself of their value upon my own farm.

A Beautiful Fire-proof Cement. — The French use a cement to protect the roofs and walls of their outbuildings from taking fire, composed of the following materials: —

Lime sufficient for a bucketful of whitewash; mix with a pailful of water, and add two and a half pounds of brown sugar, and three pounds of salt; stir them well together, and the "cement" is completed. Coloring matters, such as lampblack, yellow ochre, or any other paint which will resist the action of the lime, may be added to suit the fancy of those who use it. This cement is said to afford perfect security against sparks. It is very durable, and does not require to be renewed oftener than once in four or five years. It is also ornamental. By mixing lampblack with a little Spanish brown, a hue is given to the roofs very nearly resembling slate.

LABOR A NECESSITY AND DUTY.

BY NELSON SIZER.

Man is by nature a being of labor. His mental and physical constitution is wisely adapted to labor, and he never fulfils his destiny, and obeys the laws of his being, without it. Almost as soon as the child can raise its head, it begins to shadow forth this inherent element — he labors. That which in the child we call play, is his labor; and most earnestly and faithfully does he perform it. Nothing would change the habits of the child as he advances in life, but the unsound public sentiment which writes disgrace on the perspiring brow of labor.

As well might we shut out the light of day from the young as to deprive them of labor — they will work. If taught that useful labor is disreputable, they will seek sports of questionable moral tendency, on which to work off their surplus vitality and muscular energy; and the world as well as themselves are deprived of all the usefulness which so much wasted labor might have produced.

Labor is an effort of the mind and body exercised to produce some useful result. It is valuable wholly for its benefit to sentient beings, particularly to the human race. Nearly all that is produced by labor is the result of the industrious toil of about one half of the race; the balance are mere consumers, drone-bees in the hive of human society, who prey upon the products of industry, lessen the aggregate of human comfort, and do little or nothing to compensate society for their sustenance. It is therefore not only unnatural and dishonorable to live a life of useless, unproductive existence, but it is mean in the extreme; it is social robbery; piracy upon the products of the industrious world. No person has a right to live without a valuable contribution to the general stock of mind, morals, or money. The world supports him, and he owes it, in return, the efforts of his mind or muscles in the production of the useful and the true. To refuse to do this, in a moral point of view, is robbery. The idiotic, the insane, and the imbecile, are excusable — none others.

If man would take lessons of industry from the whole world of organic and inorganic matter, and carry out, as he should do, the indication thus written in the practical language of action, useful, laborious, universal action, the race of idlers and non-producers would, by reformation, cease to burden and disgrace the earth. Nature is one great workshop. The tides and winds, electricity and magnetism, chemical and geological combinations and changes, the formation and developments of organic life, are all specimens of incessant industry, evolving results of omnipotent importance. Shall a part of the noblest of God's work, man, be the only exception to this great law of industry? Shall earth, air, and sea, be instinct of life, action, unmitigated action; and every species of animal, from the animalcule to the elephant, exert an earnest industry, and man, having more wants than any animal in existence, be either too proud or too indolent to labor? It is wrong and unnatural to be idle, or uselessly employed; it is a libel on existence. It should, therefore, be regarded, as it truly is, disgraceful. — *Farmer and Mechanic.*

PLANT THE BEST.

Mr. Editor: My motto is, and my advice to every farmer is, Always propagate from the best. The effects of this rule, and of care in cultivation, are wonderfully exemplified in the history of almost every production of value at present to be found either in the garden or upon the farm. Indeed, scarcely a single vegetable known either to the gardener or farmer at this day, can be found in its pristine state.

Wheat is a factitious production; and so are barley, rye, and hemp. Rice and oats are also never found wild; they are, together with the afore-mentioned grains, the result of careful culture, graduated upon principles of science and enlightened effort. The potato — one of our most valuable, and, perhaps, salutary of all our edible esculents — is a native of Chili and Monte Video, and is there a small, bitter, and disgustingly nauseating root. Cabbage, celery, and asparagus, likewise owe their present reputation and consequence in the vegetable world simply to the efforts of enlightened art. In their natural and unameliorated state, they are wholly worthless for purposes of food, either for man or beast.

The pear, the peach, the apple, plum, and apricot equally attest the effects of artistic skill and effort in improving the wild, insipid fruits of nature. In the floral kingdom, the results are even more remarkable. Not only have the various species of flowers been greatly improved, in numberless instances, by scientific cultivation, but there are cases in which individuals may almost be said to have been created. That they are susceptible of wonderful and almost endless improvement, no one who has witnessed the magical influences of art, can for a moment doubt. Nor is this all. In the animal kingdom, we have witnessed results which, in the days of the old Cotton Mather, would have condemned the person who had been instrumental in their consummation to the dungeon, or, more probably, to the stocks! An individual in Massachusetts recently announced through the public journals, that he was prepared to breed to order any color or form of animals that might be desired. If animals purely white were desired, he could produce them. Any peculiarity of formation, or physiological development named, he would guaranty to secure, or ask nothing for his toil.

By selecting the best animals for breeders, and reserving them to propagate from, a farmer may exalt the character and consequently the value of his flocks and herds, to almost any extent desired. But this, unfortunately, is not the practice pursued by most breeders. The superior price which good animals always command in the markets of this country, and that short-sighted policy, originating oftentimes in the most sordid avariciousness of mind, which leads men to sacrifice future rewards to present gains, induces the owner to sell his best stock, and retain the meaner and less excellent animals on his farm.

The same policy, also, is often blindly adopted in reference to grains. The fullest wheat is often sold, instead of being reserved for seed; and what is the legitimate result? Any one can answer. It is too obvious to every person, to require a reply.

A PRACTICAL FARMER.

Bald Eagle Farm, *April* 1, 1850.

— *Germantown Telegraph.*

CHARRING BUTS OF POSTS.

We take occasion, says the American Farmer, as the spring is now upon us, and fences will have to be constructed and repaired, to commend to the favor of our agricultural friends the practice of *charring* the *but-ends* of posts, before inserting them in the ground. We advise that the but-ends of posts be charred sufficiently far to leave about *four* inches of a part so treated above ground. That the durability of posts thus prepared will be greatly prolonged, we have not the slightest doubt — nay, we believe that it will make one post last as long as three would, that had been planted without such previous preparation, and that *any wood* susceptible of being wrought

into posts, can by this process be rendered comparatively durable. Our reasons for this opinion are these: 1. Charcoal, being indestructible, is not liable to be acted upon disadvantageously by heat and moisture, those active agents in the process of decay; 2. Charcoal, though possessing great affinity for moisture, is a bad conductor of heat; and therefore it is not to be presumed that it would, in this connection, exert an injurious office upon the interior of the wood beyond the charred part, because the necessary degree of heat and moisture, to excite and carry on decomposition, would not be present; and 3. Because the very process of charring the but-end would expel a considerable quantity of water and sap in the body of the posts, and thus relieve them, in a great degree, of the presence of the agent by which rottenness, when operated upon by heat, is most generally brought about. Therefore, if you deprive the post of the cause of decay, as a consequence you must assure its preservation through a very great length of time.

LARGE VS. SMALL CHEESES.

The Ashtabula Telegraph, speaking of the great decline in the price of cheese in the northern part of Ohio, the last season, attributes it to the large size of the cheeses.

"It is stated by one of our most intelligent and cautious merchants, that his experience of New York prices of cheese, acquired during his fall visit to make purchases, settled in his mind, conclusively, the form and weight of cheese intended for export or for city use. He found, on inquiry at the highest sources, that while five and a half cents was the top price for our large-sized cheese, the small sizes, say from ten to twenty pounds, were quick of sale at nine and nine and a half cents. This, he declared, was a fact worth knowing by a country merchant in the habit of buying cheese, and it is a fact worth knowing by those who make cheese. Large cheeses, however skilfully and carefully made and kept, are bad travellers. The principle of decomposition is inherent in every cheese, and nothing but dryness can arrest it; but in large dairies this degree of dryness is difficult of attainment — is seldom attained. What is called *heaving* in cheese is simply fermentation; and this is the first step to decomposition, which is inevitable, after the *heaving* has once occurred. The great losses heretofore sustained by foreign merchants — purchasers of large cheese — have made them shy of the article, and their loss of character has led to their fall in value. — *Exchange.*

Remarks. — Although the above facts may be true commercially, which we can hardly believe, yet we can never subscribe to the doctrine, that small cheeses are better and worth more than large ones. *There never was nor ever will be a good cheese made, of only ten or twelve pounds weight* — a position that every connoisseur and real judge of a good article will at once endorse.

It cannot in fact be otherwise, for it is self-evident, that the entire value of cheese depends upon a secondary fermentation, a stage approaching to putrefaction — a ripening and thorough conversion, from the tasteless pulp of the first curdy matter, to that peculiar state that causes cheese to be *cheese.*

The small cheeses dry, and never reach the stage of proper ripening; while large ones possess the bulk, moisture, and heat consequent on fermentation, to carry out the chemical decomposition necessary to perfect the true article.

It may be true that small cheeses sell best, and are the safer articles to transport, and more convenient and within the means of the majority of purchasers; but that ever a small cheese was as good as a large one, say those of forty pounds, and within the ability of proper handling in the making, must be set down as utterly heterodox.

The only possible excuse for forming such an opinion, must be predicated on the fact that we use our large cheeses at least one year too soon; they are not ripe, and passed through the fermenting stages, and arrived at the age of perfection — while the small ones become as good as they ever can be in a few months. — *Rural New-Yorker.*

THE OSWEGO BEURRE PEAR.

Mr. P. Barry: In accordance with a promise made to you last fall, when I presented you specimens of the Oswego Beurre, I will give some further history of this pear, the result of three years' experience, since it was described by Mr. Downing, in the January number of the Horticulturist for 1847. I ate my last specimen the 19th of February inst. They were kept till this late period of winter, by packing in boxes with shorts. Every week, during the winter, previous to this date, I have eaten them, either baked or raw. Last fall a portion of the crop was kept on the tree much later than on any former year. My specimens were sound during December and January. The last, eaten the 19th of this month, was about one third decayed on one side, sound at the core, and retained the peculiar flavor of the variety well. If the Oswego Beurre be allowed to remain on the tree till a sufficiently late period in the fall, I believe it may be relied upon in this latitude, both for the table and for cooking, from the middle of October to the last of January.

From the fact that nearly all of the specimens heretofore tested by pomologists have been picked before fully grown, it has been pronounced an acid pear. Mr. J. J. Thomas, in the last edition of the Fruit Culturist, has very honestly, no doubt, said of the Oswego Beurre, it is "regarded as fully first-rate by those who like the vinous flavor of the Brown Beurre or Beurre d'Aremberg." I ate a specimen of the Oswego Beurre with a Beurre d'Aremberg, on the first of January last, and found them nearly as far apart in flavor as the Lady Sweeting and Rhode Island Greening apples, tested at the same time.

Mr. N. Goodsell, the pioneer promologist, of Western New York, who ate specimens with me last Christmas, pronounced it one of the most saccharine pears he ever tasted. From the early and profuse bearing of this saccharine pear, I believe it would be the most profitable article to cultivate, (whether pomonal or vegetable,) for the purpose of manufacturing sugar.

Although a handsome pear, and uniformly fair, it has less of beauty than its parent, the White Doyenne. It has the red cheek occasionally of the latter, and approaches it nearer, in general form, than Mr. Downing's cut would indicate. Beauty excepted, it has been pronounced by the Fruit Committee of our Horticultural Society here, superior to that "ne plus ultra of perfection in flavor and beauty," the White Doyenne, or Virgalieu.

J. W. P. ALLEN.

Oswego, *Feb.* 27, 1850.

We may add, that, from our own experience, the Oswego Beurre proves a vigorous and beautiful grower, and an early and prolific bearer, both on pear and quince. — Ed. — *Genesee Farmer.*

THE PASTURAGE OF BEES.

Next to the situation of the bee-hive is the consideration of the bees' pasturage. When there is plenty of the white Dutch clover — sometimes called

honeysuckle — it is sure to be a good honey year. The red clover is too deep for the proboscis of the common bee, and is, therefore, not so useful to them as is generally supposed. Many lists have been made of bee-flowers, and of such as should be planted round the apiary. Mignonette, and borage, and rosemary, and burgloss, and lavender, the crocus for the early spring, and the ivy flowers for the late autumn, might help to furnish a very pretty bee garden; and the lime and the liquid amber, the horse-chestnut and the sallow, would be the best trees to plant around. Dr. Bevan makes a very good suggestion, that lemon-thyme should be used as an edging for garden walks and flower-beds, instead of box, thrift, or daisies. That any material good, however, can be done to a large colony by the few plants, that, under the most favorable circumstances, can be sown around a bee-house, is, of course, out of the question. The bee is too much of a roamer to take pleasure in trim gardens. It is the wild tracts of heath and furze, the broad acres of bean fields and buckwheat, the lime avenues, the hedgerow flowers, and the clover meadows, that furnish his haunts and fill his cell. Still it may be useful for the young and weak bees to have food as near as possible to their home; and to those who wish to watch their habits, a plat of bee flowers is indispensable. — *Am. Traveller.*

PROFITABLE COWS.

Mrs. Hines gives the following account, which shows her superior skill both in managing cows and the dairy. We copy from the Greenfield Gazette, to which Mrs. H. has been a subscriber twenty years, and has always paid her subscription promptly, which is another commendable trait.

I have five cows, and have sold, the past season, 1300 lbs. of butter, besides milk, cream, and butter for the family use. Our family will average eight. I raised seven calves last spring; some of them quite early calves, and some late; two of them I got of my neighbors. I have fatted 768 lbs. of pork, mostly on the sour milk. Now, let us leave out one of the cows for the family use, and set the credit to the other four — say 1300 divided by 4 makes 325 lbs. to each cow; the butter sold averaging 16½ cents; 325 lbs. at 16½ cents makes $53 62 to each cow. The seven calves were worth $30, say $25 to the four cows; and five hundred of the pork, at $6, will be $30; and the $25 for the calves, makes $55, divided by 4, leaves $13 75 to each cow; this added to $53 62, will make $67 37 to each cow.

My cows are about middling sized, and of the native breed. They have a good pasture in summer, and good hay in winter, and that is all; except in winter, I sometimes give Old Brindle a few small apples and potatoes, parings, and the like, to make her hold out her milk till some of the others come in. When I see any thing in the butter line in your paper that beats the above, I will try again.

MIRANDA HINES.

Munroe, *Feb.* 18, 1850.

Industry. — Excellence is never granted to man, but as the reward of labor. It argues, indeed, no small strength of mind to persevere in the habits of industry without the pleasure of perceiving those advantages, which, like the hand of a clock, whilst they make hourly approaches to their point, yet proceed so slowly as to escape observation.

RED RUSSET APPLE.

A few years ago we received specimens of this apple in April; they were in fine condition, and very promising. The next year we received a few, and kept them into summer. The next year (1848) we obtained a barrel of this fruit to give it a fair test, and placed it by the side of a barrel of fine Roxbury Russets. Both kept equally well, extending into summer. But the Red Russet was the better, both for table and cooking, being intermediate, in its quality, between the Baldwin and Roxbury Russet. It resembled the Baldwin on one side, being of a bright red, and on the other side it was like the Roxbury Russet. We had already tried it in the nursery, and found it as great a grower as the Baldwin; but the wood was different, being very red, with numerous light specks, and it was much harder than the wood of the Baldwin, and evidently more hardy. The young shoots were as large in length as those of the Baldwin, but less in diameter.

In fruit and wood it seemed to be a distinct variety, and very desirable, as it was so late, hardy, and vigorous. We were informed that it originated on the farm of Mr. Aaron Sanborn, Hampton Falls, N. H. Some time last winter, a friend, who is an extensive fruit-grower, gave us a specimen of apple, which he said answered our description of the Red Russet, and ranked high as a valuable fruit for late keeping, and he told its origin, as it was considered. The fruit appeared precisely like the Red Russet, as far as we could judge from a single specimen.

This led us to inquire of Mr. Sanborn particularly as to his variety, and he thinks that he grafted many trees of the Baldwin, and one of them produced the Red Russet. He says that it is popular in that region, and the neighbors are propagating it. We have thus given all we know about this fruit, and we regret that there should be any confusion about it, or any doubts as to this promising variety being entirely distinct. We hold that the stock has an effect in modifying both fruit and wood, but we hardly think that it would modify the fruit so as to appear very different, and keep three months longer than usual, and so affect the wood that it would appear very different indeed, both in color and texture.

We would still recommend the Red Russet for trial. We shall examine further into the subject of this fruit, and that of our friend's, which resembles it, and give information on it by-and-by. We have ever been cautious about recommending new fruits, generally preferring several years' experience before introducing a new fruit for general culture. The great want of a fruit like the Red Russet induced us to bring it forward rather early, and we still hope that it will prove a valuable acquisition.

Improve the Mind. — No man who improves his leisure hours in useful reading and study, can fail in becoming distinguished in his profession, while he who spends his time in idleness or self-indulgence is sure to occupy an inferior position in life.

For the New England Farmer.

CULTIVATION OF CARROTS.

Mr. Cole: When the time arrives for tying up my cattle for the night, in expectation of a mess of carrots, they rush for the stalls with a perfect looseness; all eyes are intently directed towards the place from whence the favorite meal is to come; and then ensues such a craunching of roots, and such a smacking of chops, that the observer, even though a sick man, soon becomes hungry, and would talk to you of the gusto of a full repast. It certainly is a pleasure to the humane farmer to be able, by the growing of carrots, so fully to gratify the taste, as well as to promote the health and sleek condition, of his agricultural animals.

The carrot gives a better return than almost any thing the farmer raises; if the land is well chosen and prepared, the work of tending it is easy and pleasant; as winter feed, it highly promotes the health and growth of calves, colts, and store swine; cows fed upon it almost invariably do well at calving time, and afterwards give a full flow of milk, yielding the best of butter; and a daily allowance of it to the old horse causes him to forget his infirmities, and almost to renew his youth. I am, therefore, surprised that the carrot is not more generally grown by our farmers. Hoping to attract attention somewhat to the importance and value of this root, I will now tell you what I know about cultivating it.

In raising the carrot, the largest crop will be obtained, and the least labor will be required, by selecting a piece of old grass-ground, of deep fertile soil. Twenty loads per acre of partly fermented manure should be spread upon the grass, and the sod and manure turned under to the depth of eight or ten inches, in the very nicest style of the art. If the top soil will not admit of so deep a furrow by reason of a subsoil of hard pan near the surface, or if the sole of the plough, and the treading of the team, have formed a hard crust by long use in shallow furrows, the subsoil plough should be used, loosening and pulverizing the earth to such a depth as may give full range to the tap-root of the carrot. But if the surface furrow can be taken nine inches deep, that will answer. Twenty loads of fine manure per acre (compost is the best) should be spread on the inverted furrows, three or four inches deep of the surface made perfectly fine and mellow, and well mixed with manure by the harrow, and the seed immediately sown. The rows should be two feet apart rather than nearer, because the after-culture can be more easily performed. There are various cheap machines for sowing carrots and other root seeds, with which a man can sow an acre in two or three hours, and do the work better too than it can be done by hand-sowing.

It is a great advantage gained, to manure, plough, harrow, and sow at just the right time, one operation following the other in quick succession; for the ground being thus fresh, moist, and mellow, and the surface perfectly clear of weeds, the young carrots come on considerably ahead of other vegetation, and the first hoeing — the most laborious part of the whole business — is done with comparatively little labor. The latter part of May, or first of June, is early enough to sow. For the same reason, the right time to hoe should at all hazards be seized upon. Every good cultivator knows that by attending to weeds as soon as they appear above ground, a victory over them is easily gained; while a week's delay may cost a severe struggle to accomplish the same object. If for any reason, therefore, the weeds should come up ahead of the carrots, the ground between the rows should be hoed over, which can readily be done, for the wheel of the seed-sower will leave its track so distinctly as to point out where the young carrots are. A light, iron-toothed rake is a capital tool to clean a carrot crop with, provided the weeds are young and tender. I have raised some crops with no other weeding than the frequent raking of the ground. It gives a very fine mellow surface, and the work can be rapidly done. I do not spend as much time as some cultivators do in thinning out carrots, and no doubt the crop is thereby somewhat smaller; but by regulating the sowing so as not to get on a very great quantity of seed, I can grow a good enough crop to satisfy me without the labor of thinning the rows.

The advantages arising from the choice of an old greensward for the growing of carrots on, are these: by ploughing it so nicely as to shut all the grass under to the depth of eight or nine inches, the vegetation of the then surface is not only put out of the way, but a new surface, free of weed seeds, is brought up, upon which the carrots can be grown with one third the expense they could be on old cultivated ground; the decomposing sod beneath keeps the land light and mellow, is easily penetrated by the tap-roots of the carrots, forms a sort of reservoir for moisture, and, together with the manure turned under, furnishes abundant sustenance for the crop, in its latter and largest growth. The fine manure on top stimulates the young plants in the outset.

In harvesting the crop, a light plough may be run near each row, and then, by pressing into the ground, on the side of the row opposite the furrow made by the plough, a broad, eight or ten tined manure-fork, and by gently prying up with it, the carrots may be taken out rapidly, without injury. The tops may be cut off with a sharp caseknife, or twisted off with the fingers.

In storing the crop, a root-cellar at the barn is just the thing; and if one is not already provided, it had better be immediately. But if this is not thought convenient or best, a portion of the crop, for early feeding, can be put into the house-cellar, and the remainder stored in a hole or in holes in the ground, in the field, and covered temporarily with boards and earth, so that they can be removed any time when wanted. The expense of securing in this way is trifling.

In preparing carrots for feeding, they may be emptied on to the barn-floor, and a good steel shovel, ground to a sharp edge, will, in vigorous hands, cut them up rapidly. But a Vegetable Cutter is better, and such a machine can now be had, at the agricultural warehouses, at small cost.

Five or six nice large carrots can be set out, in the spring, in a warm, sunny spot in the garden, and they will furnish seed enough for the next year's sowing. The tops will grow high and rank, and a temporary frame will need to be placed around them to keep them from falling to the ground and spoiling the seed. When the seed is ripe, it should be gathered in a dry state, and then, if well preserved, it can be depended upon the next year as sure to come up well.

An acre of ground, well chosen, well manured, nicely ploughed and prepared, sowed to carrots, and properly tended, will yield eight or ten hundred bushels, at an expense, according to circumstances, of four to eight cents per bushel. Any farmer, having stock to winter, and wishing to carry them through in high health and condition, who is not satisfied with such a result, must grow some other crop, unknown to me, to suit his fastidious taste.

F. HOLBROOK.

Brattleboro', Vt., *April* 18, 1850.

Does not the echo of the sea-shell tell of the worm that once inhabited it? and shall not man's good deeds live after him and sing his praise?

NOTICES OF PUBLICATIONS.

Dadd's Reformed Veterinary Art, and Dictionary. — This work contains Outlines of the Anatomy and Physiology of the Horse; also, Practical Observations on Feeding, Watering, Shoeing, &c., written with a View of reforming the Veterinary Science; containing, also, a Veterinary Dictionary, from the Works of R. White, V. S., adapted to the Present State of Reformed Practice in the United States; with Remarks on Bloodletting, and the Use of Poisons, showing their Destructive Tendency. The author of this work, George H. Dadd, M. D., Veterinary Surgeon in this city, is favorably known to the public by his horse and cattle medicines, which have been used extensively; and by his reformed practice in the use of mild medicines, and restorative means, instead of the harsh means, and powerful and dangerous medicines, used by practitioners of the *old school*. We commend the work as a valuable contribution to veterinary science, containing a large amount of useful matter. Something may be gathered of Dr. Dadd's views by his communication on another page of this number. This book is handsomely executed, in paper, typography, engravings, and binding. Octavo, pp. 308. Published by the author, Nos. 1 and 2 Haymarket Square.

The Boston Melodeon. — The recent edition of this excellent and popular work contains some pieces never before published in this country; others are presented in a new dress, and a few are original. Boston: Elias Howe, No. 11 Cornhill.

Hovey's Magazine of Horticulture. — The last number, as usual, contains much interesting and instructive matter.

Principles of the Human Mind, with a Lecture on Electro-Biology, by Alfred Smee, F. R. S. The philosophy of the mind, and the voltaic mechanism of man, are the subjects illustrated in this little work. New York: Fowlers & Wells.

THE STUDY OF NATURE.

The sneers of superficial men upon the weakness which has appeared in the conduct of some inquirers into nature, ought to have no influence to discourage us from those researches. If some few have spent too much time in the study of insects, to the neglect of the nobler parts of creation, their error ought to suggest to us, not a total neglect of those inferior parts of nature, but only to avoid the mistake of giving ourselves wholly to them. There is no species which Infinite Wisdom has thought worth making and preserving for ages, that is not supremely worthy of our inquiring into its nature. And it is certain there is more of curious workmanship in the structure of the body of the meanest reptile, than in the most complicated and most delicate machine that ever was, or will be, constructed by human hands.

Russia. — The cold in this country has been more intense than it has been before within the memory of man.

A STICK OF TYPE.

C. D. STUART.

A Stick of Type! What shot or shell
From war's grim camp hath half the power?
A Stick of Type! with this one thought,
That *Freedom's man's God-given dower!*

That Stick of Type hath more of might
Than warrior hosts or fortress walls,
And it shall batter towers to dust
That laugh at siege or cannon balls.

That Stick of Type! I see it break
The eldest of the blood-built thrones,
And lift the yoke from millions, bowed
O'er dead slave-millions' bleaching bones.

That Stick of Type! Careering fleets
Before it idly flap their wings,
And bannered armies pass like chaff,
Grown hideous 'mong remembered things.

That Stick of Type! God bless the Faust,
Who wrought it in his conquering brain;
That Stick of Type! God bless the Hoe,
Who scatters it abroad like rain.

The Type! the Press! the living thought!
By steam and lightning sped abroad,
Shall conquer yet, and bring to man
The Freedom, Love, and Truth of God!

THE OLIO.

As many as are the difficulties which virtue has to encounter in this world, her force is yet superior. — *Earl of Shaftesbury.*

The total loss of reason is less deplorable than the total deprivation of it. — *Cowley.*

He that arms his intent with virtue is invincible.

Human frailty is no excuse for criminal immorality.

Leisure is a very pleasant garment to look at, but it is a very bad one to wear. The ruin of millions may be traced to it.

Great talent renders a man famous; great merit procures respect; great learning gains esteem; good breeding alone insures love and affection.

The humblest author must embalm some flowers of thought; write often, then, that they may blossom over your tomb.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

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Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, MAY 11, 1850. NO. 10.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

NATIVE AND FOREIGN FRUITS.

GENERALLY our native fruits are superior to foreign, both in vigor of tree and hardiness; and in many cases, our native fruits are equal to the foreign in quality. We have but very few foreign apples that are worth cultivating; nearly all our best standard kinds are natives.

The greater part of the foreign pears cultivated in this country are only adapted to the garden, or other sheltered locations, and the trees are generally of a dwarfish habit. They will not flourish under common orchard management and exposure. They often dwindle away under the rigor of our cold winters and hot summers. But our native pears are generally vigorous, long-lived, hardy, and productive; and many of them are first-rate fruits. Some of them, that have endured the storms of one or two hundred winters, are still standing as firm monuments of the hardiness of our native pears.

Some of our native pear-trees have borne ten or twelve barrels of fruit in one season, and a few have produced far more. We have seen a Harvard pear-tree that yielded nine barrels of fruit in one year, which was sold at $5 00 per barrel. We have an old tree, from which we gathered eleven bushels of fruit, after cutting off its top very liberally for two years, for the purpose of grafting. None of the fine varieties that have been imported, will compare in size with these venerable standards of the past and present age. Generally, in New England, we must rely mostly on our native pears, or do as we now are under the necessity of doing, after spending a great deal of time and money on pears—go without them. As this is unpleasant, we get neither profit nor pleasure for this fancy work.

We have native peaches equal in quality to the best imported kinds, and they are far more hardy for northern culture. When our horticulturists learn the importance of cultivating not only native kinds, but natives of the north, they will not complain so much of the failure of this crop.

A good share of our finest cherries and plums are natives, and the natives are forming our largest and longer-lived trees. They are becoming stately ornaments to rural scenery, while many of the foreign varieties, though frequently vigorous for a few years, are comparative dwarfs.

Nearly all our valuable strawberries are natives. Houghton's gooseberry not only far excels any foreign variety, but some cultivators consider it so much better, that they have excluded all other kinds from their grounds. We feel the want of more native small fruits, that we may have varieties adapted to our climate; and the enterprising spirit that now prevails will soon produce them.

Too much attention has been given to foreign fruits, to the neglect of our native varieties. Some horticulturists have ransacked all Europe for new fruits, while native kinds have sprung up, flourished for many years within half an hour's walk of their dwellings, yielding fruits equal, and trees far superior in hardiness, to the foreign kinds that have been imported and sold at high prices. This zeal for foreign kinds of fruit would have a good effect, if there was a corresponding attention given to our natives, that they might be brought to public notice, and duly compared with exotics. Or if new foreign fruits, of high pretensions, were introduced merely for experiment, and not for speculation, attention to the subject would be commendable. But the sale of trees at enormous prices, which on trial prove worthless, has a very discouraging effect, especially on beginners in fruit culture.

DEPTH OF COVERING SEEDS.

As to the proper depth which seeds should be covered, much depends on circumstances. Hard seeds, such as onion, carrot, beet, parsnip, &c., that vegetate slowly, should be covered deeper than turnip, cabbage, mustard seed, and other kinds that vegetate quickly. If hard seeds are sown late in the season, on dry soil, and the covering is shallow, there is danger of the earth drying down to the seed before it starts.

But besides the differences in the peculiar nature of seeds, there are other circumstances that have a great effect, and require that the same species of

seeds should be covered at different depths. Soils vary so much in texture, that in some, half an inch is a sufficient depth, while two inches are necessary in others. We have observed in our garden, that while some moist soils remain damp at the surface several days after a rain, other soils would dry down one or two inches deep in the same time. On the wet land, half an inch depth would be sufficient covering; but on the dry soil, two inches would be little enough; and then rolling or pressing the earth closely on the seed is indispensable to insure vegetation. Seeds sowed early in spring require less depth of covering than those planted late in spring or early in summer, even on the same soil; for as it is usually cool early in the season, the earth dries slowly, and if the seed is covered deeply it will not vegetate so soon, and it will be more liable to decay.

In many cases, carrot seed is sown in dry soils, the last of May, and early in June, and it fails from the drying effects of a hot sun. The better way to guard against this loss, is to soak the seed in a warm place two or three days, and then drain off the water, and let it remain a few days longer in the moist state, until it is about ready to sprout. If it be more convenient, the seed may be sown after soaking a day or two. There is no danger in soaking hard seeds several days. In sowing soaked seed in a seed-sower, spread thinly, and dry off the moisture from the surface of the seed, or apply dry sand or plaster to dry them.

We are induced to make these remarks from seeing, occasionally, arbitrary rules prescribing the depth for covering different kinds of seeds, without any regard to the important circumstances of soil, season, &c.

TO MAKE PLUM-TREES BEAR.

Mr. R. O. Stoddard, Waitsfield, Vt., inquires how he shall make his plum-trees bear. He has trees that have blossomed for ten years, but they have borne no fruit.

In many cases, plum trees which had perfected no fruit were rendered productive by putting salt around them. Salt is an excellent manure for plums, and it sometimes renders barren trees prolific.

But the failure of plums is usually owing to their being stung by the curculio, (see Vol. I. p. 137,) from a short time after blossoming until the plums are half grown, or larger. This work is done so suddenly and completely, and when the plums are so small, that many cultivators think that no fruit has set. The little beetle makes her crescent-shaped marks on the plum, lays an egg in the slight wound, the egg soon hatches, and the larva eats towards the centre of the fruit, which soon falls, and the insect disappears in the ground.

The application of salt late in fall, or early in spring, and sometimes any time before the blossoming of the trees, will frequently prevent the effects of the curculio; but it is not always sure, and some persons resort to the sure remedy of jarring the insects off on to cloths, and gathering and destroying. This is much labor. Some save their fruit from the depredations of this insect by smoking the trees.

Apply the salt to the surface, and dig it in lightly. Spread it over the ground as far as the branches of the tree extend. Apply from a pint to two or three quarts to a tree, according to its size. One or two quarts to trees of medial size, or about half a peck to a square rod of land.

We have prescribed this condiment for unproductive trees, and have seen excellent effects from its use for several years in succession. A gardener had some fine plum-trees in a piece of asparagus, but he had no fruit, though the trees were large enough to bear. To improve his asparagus, he manured it liberally with dock mud, and after that time he had fine plums; which was doubtless owing to the salt in the mud. But our readers will consider that we do not recommend salt as an infallible remedy for unproductive plum-trees, but as an agent that is often effective.

EARLY VIRGINIA AND LARGE EARLY SCARLET STRAWBERRY.

Ever since we saw a notice of the Large Early Scarlet Strawberry, in Downing's Fruit-Book, we thought it was identical with the Early Virginia, and as we could get no definite information on this subject, from numerous inquiries of horticulturists, we sent to Charles Downing, Esq., Newburg, N. Y., and procured the Large Early Scarlet for experiment. We planted them in the same lot with the Early Virginia, in 1848, and last year we had fruit from them. In flower, and the whole plant, and in time of ripening, we could perceive no difference.

This is one of the most valuable varieties of strawberries in the country, and those who claim that seedlings recently introduced will displace this, will, we think, be much disappointed. It is very early; the plants remarkably vigorous, hardy, and very productive. It has produced some of the largest crops ever raised in the country, and larger than any other variety that is so early. The fruit is very handsome, and of excellent flavor. The principal object of this article is to show the probable identity of those cultivated under the two names that we have mentioned. We shall make further experiments, and see the effect of new locations and different seasons.

It is estimated that five thousand head of cattle, chiefly cows, will cross from Canada this spring at Cape Vincent, and that not less than fifteen thousand will be sold this season to farmers in the States. The price varies from $9 to $15.

The safest and most reliable business a young man can enter, is agriculture. A good farm, well attended, is an inexhaustible store, an endless mine of wealth, from which the riches of the earth can be profusely drawn, if the owner will remember that this can only be done by the "sweat of his brow," by honest, diligent labor.

WHITE SHANGHAE FOWLS.

For the New England Farmer.

Mr. Cole: In describing these fowls, and giving the history of the importation of them, I shall be obliged to make statements which will conflict with those put forth in the work on poultry edited by Dr. J. C. Bennett, and published by Phillips, Sampson, & Co.

The White Shanghaes were first introduced into the New England States, in the year 1848, by Capt. A. S. Palmer, of Westerly, R. I. Capt. Palmer, while at Shanghae, made inquiries respecting the different kinds of poultry bred in its vicinity, and learned that the white breed was most highly prized, on account of the size; amount and quality of the eggs produced by it; the quietness of the race; the small amount of offal, compared with the other breeds; and the early age at which these fowls came to maturity.

Capt. Palmer put on board of his ship a large number of choice specimens of the White Shanghaes, as well as those of the Red Shanghaes, and on his arrival in the United States, presented his selections to the Hon. Nathan F. Dixon, of Westerly, R. I.

This importation, by Capt. Palmer, of White Shanghaes, is the only one ever made until the present year, when a merchant of this city, Daniel C. Bacon, Esq., received from Shanghae three specimens of these fowls, by the ship Vancouver, which arrived in March last. Mr. Bacon presented these fowls to Mr. Eben Wight, of Dedham, Mass., who now has them, and to whom I am indebted for the following letter containing a description of the fowls imported by Mr. Bacon.: —

S. B. Morse, Jr., Esq. Sir: Your note of yesterday, asking of me information in relation to the White Shanghaes, recently imported in the ship Vancouver, is received.

The fowls, consisting of one cock and two pullets, arrived here during the last month, March, 1850, and were in poor condition when coming from on shipboard, as all fowls suffer more or less when kept so long without coming to the earth. When the ship left Shanghae, there were two cocks and four pullets, and with great care they were enabled to save one cock and two pullets.

The fowls were selected with care, *expressly* for the owner of the ship, and no pains were spared to obtain the *purest* and *best* that could be had in that quarter; and I think they do credit to the person who selected them.

Immediately on their arrival here, the owner, a friend of mine, having no conveniences for them, handed over the entire lot to me; and I sent them at once to Dedham, where they are doing well, having throve finely since coming to the earth.

The pullets commenced laying at once, and have continued to give each their egg every day since their arrival.

Their eggs are of a fawn or pearl color, being in this respect different from the thousand and one White Shanghaes, (so called,) which I take it are *merely* a cross between our *common* white fowl and the Red Shanghae.

Whether their eggs will come darker or not as they grow older, must remain to be seen; at present the eggs are of the color of the eggs laid by Mr. Burnham's Royal Cochin Chinas, and yet his birds are entirely different from both the Red and White Shanghaes, and very superior fowls too.

Since their arrival, the feathers have come out fully on the leg, and the portrait gives a very correct likeness.

This must prove a valuable fowl, from their naturally quiet disposition, early maturity, and the great size which they can be made to attain to; and since

all Shanghae fowls are so prolific, I make no doubt these will make good the early indications given.

Very respectfully, E. WIGHT.

Boston, *April* 30, 1850.

The White Shanghaes imported by Capt. Palmer were pearl white in color; the feathers were soft and downy, resembling more those of the Bremen goose than the feathers of our ordinary domestic poultry. The tail in this breed is much shorter than in the red variety. The combs and wattles in both sexes are small, the combs not being serrated or indented, as are those of the Red Shanghae. The legs were feathered to the toes, and were short and stout, and of a pale nankeen color, approaching nearly to white. The eggs were much larger than those of the Red Shanghae, and of a yellowish flesh color.

It is much to be regretted that so good a breed of fowls as were the White Shanghaes imported by Capt. Palmer, should have been lost for want of care and attention. But such is the case. The disposition of the White Shanghae being non-combatant, and that of the Red Shanghae being quite the reverse, the stock of Mr. Dixon became but a mongrel race of Red and White Shanghaes.

The White Shanghaes, of which every huckster has a plenty for sale, and warranted pure, are the progeny of the Red Shanghae crossed on white fowls of other breeds, as the persons breeding from such White Shanghaes will find to their sorrow.

The White Shanghae described in Dr. Bennett's work on poultry, is one of this description, having the large serrated comb of the Red Shanghae, with the white plumage of some other fowl; having a full and flowing tail, which belongs not to the White Shanghae.

Notwithstanding the elaborate description therein given, setting forth the fact, that this same fowl has been selected by his owner, an *experienced* breeder, (I wonder how, when, and where he obtained his experience,) for the purpose of propagating the fine White Shanghaes imported (*from where?*) by his "friend Osborne."

I may, at some time hereafter, refer to the book of Dr. Bennett, when writing descriptions of other breeds of fowls. Yours, &c.,

S. BRADFORD MORSE, Jr.

For the New England Farmer.

MANAGEMENT OF SHEEP.

Mr. Editor: There has been but little contributed to your paper upon sheep husbandry; and knowing this subject must be one of interest to many of your readers, I send you the following sketch upon the general management of sheep.

It is not advisable to turn sheep out to grass in the spring until there is a fair bite of feed, and we should then continue to feed a little hay and grain in order to keep up their strength, and prevent the scours. It is bad economy to allow the feed in our pastures to become very high or short: in the former case, it is less sweet, tender, and palatable; in the latter, the sheep will not get a full supply of food; besides, it is injurious to the land to feed pastures very close, especially in time of a drought. A frequent change of pastures is highly desirable; this gives a greater variety of food, and thereby adds to the general health and thrift of sheep. In the latter part of the pasturing season the grass is less nutritious, and many kinds of herbage become dry, hard, and unpalatable; consequently a change of pasture is more important than early in the season; and for the same reasons, sheep should be allowed a proportional increase of territory. Hilly lands are much to be preferred for sheep pastures; yet a small proportion of low, wet land is rather desirable than otherwise, notwithstanding it is of little use to sheep when there is a good supply of fresh feed on the upland; but in the time of a drought, one acre of the former may be worth as much as ten or twenty of the latter.

While at pasture, sheep should be salted at frequent and regular intervals. It is a good plan to mix sulphur or tar with the salt, in a trough. These substances promote the general health of sheep, and keep off the fly which produces the maggot in the head.

The washing and shearing of sheep should be performed by thorough and skilful workmen. The Merino wool should be well soaked upon the sheep, and then let them out into a close yard, and in a short time they get up a heat and steam, which serves to dissolve the yolk, so that when taken in to wash, the oily matter, as well as the dirt, will be much easier separated from the fleece. The German method of soaking sheep in vats strikes me favorably, and I intend to try it. If the weather is warm and dry, sheep should be shorn in five to eight days after washing. The shearers should not work any faster than they can cut the wool close and smooth, and without hacking the skin. By shearing close we obtain more wool, and of greater length, which is an important quality. When wool is unevenly shorn, it not only makes a bad appearance, but renders the staple of the present and succeeding fleece of unequal length, and thereby lessening their value.

It is highly beneficial to both lambs and ewes, to have lambs weaned by the twentieth of August or first of September; the lambs will grow faster, especially if they are allowed a more inviting growth of feed, which should always be the case, and it gives the ewes a chance to recruit their condition, and it renders them more ardent at the approaching season for breeding. It is natural for the lambs to be quite wild when first separated from the ewes, and as a matter of convenience, and for the purpose of taming them, a few old sheep should run with them. Late in the fall, lambs should occasionally be brought into the yard and fed with a little sweet hay, roots, and grain. If this is not practised, they will eat so sparingly of these substances when first brought into winter quarters, as to lose flesh.

It is very essential that sheep should come up to the barn in good condition; they are easier wintered, and less subject to disease and mortality. But in order to keep them in this condition, it will be necessary to bring them into the yards as soon as they fail of obtaining a good supply of food in the pastures; or if allowed to run later, they should be fed with a small quantity of hay or grain. When first confined to the yard, they need extra care for one or two weeks. Their hay should be sweet, and early cut, and they should receive daily a few roots, to counteract, in a measure, the sudden change from green to dry food. Until the approach of spring, old sheep need no feed but roots once or twice a week, (which serve to keep the digestive organs in healthy tone, and promote the growth of wool,) and a good supply of dry fodder, early cut and well cured, the bulk of which should be hay composed of a good variety of the cultivated grasses. Hay should be fed at morn and night, and the coarser forage, such as straw, briers, and many kinds of herbage grown in waste places, at noon. All of these, with the exception of straw, should be cut when green, and full of leaves. Three or four weeks before the yeaning season, breeding ewes should have extra keep of grain and roots. It is preferable to have the grain fed in meal, and I think corn ground with the cob, and scalded, the best for the formation of milk; and potatoes and carrots the best of the root kind. Well cured rowen is excellent feed for lambs at the com-

mencement of winter; and in addition to the best of hay, the daily and alternate feeding of roots and wheat bran through the winter is the best keep. Fed in this way, and provided with warm yards and sheds, they will attain as much growth in the winter as in the following summer. Sheep kept for the object of wool-growing should never be made fat in the winter for the purpose of increasing the size of the fleece or carcass, as it does not pay the cost; besides, it injures the quality of the wool, and they will not thrive as well in the pasture the following summer. It is always a matter of economy to have sheep improve their condition on summer keep.

All animals manifest a fondness for a change and variety of food, and their health, growth, and condition are much improved by the gratification of this instinctive desire. Sheep manifest the greatest fondness for change and variety of any domestic animals, and derive the most benefit from it; which may probably be attributed to the peculiar composition, structure, and abundance of the outward covering, which nature does not demand of other farm stock. I am aware that many wool-growers pay little or no attention to change of food and pastures, feeding of roots, and several other matters alluded to in this article; and the consequence is, they make a losing business of wool-growing. There is no doubt in my mind that the income of seventy sheep, well managed and cared for, would be more than one hundred sheep of a like quality indifferently treated.

EBENEZER BRIDGE.

Pomfret, Vt., *April*, 1850.

For the New England Farmer.

CHEMISTRY IN AGRICULTURE.

Mr. Cole: Much is said of the aid chemical science is giving to the farmer. It is true that chemistry in the last half century has done wonders; but at the risk of the charge of heresy, and of being behind the age in this day of progress and light, permit me to express my doubts whether the revelations of chemistry can settle decisively what kind of food is best, or contains the greatest amount of material for the growth and production of the various animals fed and used by man. So far as I can judge from observation of what has been done, chemical analysis is of but little value, compared with the experience of practical men. The laboratory of the living stomach, with its solvents, shows different results from the baths and crucibles of the chemist. The hidden delicate operations of nature are not confined to the gauged mechanical operations in scientific experiments. The result of the analysis of Indian corn, for instance, in any number of chemical experiments, would show the same component parts; but subject the same corn to the use of different animals, and the result would be as various as the different living laboratories employed. The flesh of the chicken made by this corn, though differing in flavor, fineness, or coarseness, according to the different breeds used, would not be pork made from the same material. The same corn would produce muscle or lean meat in the Berkshire hog, and fat in the Suffolk or Newbury White, and milk and beef in the cow.

The disciples of Graham bring chemistry to their aid, to show that wheat contains more nutriment than beef. This would be found true fed to grain-eating animals, but not so fed to carnivorous animals. Wheat would fat a horse, but would hardly raise to maturity a young tiger or lion. The moose will live and thrive on browse, — sticks as large as your finger, — but would languish on the best fine hay; the calf would thrive on such hay, but would starve on sticks. Considering these facts, and recurring to my own observations, I cannot believe in the hypothesis drawn from late chemical analysis, that wheat bran, or hull, is more nutritious as food, than wheat flour. Whether pure flour, when eaten as food, is as healthful as when used unbolted, is another question, and, in my opinion, depends upon other principles than the proportion of nutriment, as disclosed by the chemist. It may be that bread of bolted flour is too concentrated and close, and does its office better mixed with its hull, in greater volume, even if the hull afford but little nutriment in itself, as chopped straw is mixed with provender for horses; or it may act mechanically, as a stimulant, by friction, and also a cathartic, as the late eccentric Dr. Ramsay supposed the rind or peeling of apples, potatoes, and other vegetables do, and insisted should be eaten with the finer parts.

Chemistry will doubtless tend to explain, in some degree, the facts disclosed by experience, and will give light and aid in pursuing experiments, in substituting one aliment for another, but, I apprehend, will not afford a very safe guide to discover the most economical and best food for each species of domestic animal, for the various purposes for which we keep them. Most men of experience, in feeding companies of laboring men, know the value of white beans as *hearty* food, which the crucibles of the chemist have not revealed. Nor has chemistry yet explained all the operations of the earth and soils on vegetation. We see the sugar maple and pine side by side, drawing their nutriment, substance, and juices from the same source; the one yields sap, the other rosin — very dissimilar substances. Experience shows the sap in different years is yielded in very unequal quantities, and quite as unequal in sweetness. On the same soil we have our corn years, our wheat years, our fruit years. Chemistry and meteorology both afford but imperfect explanations of these phenomena, and little or no aid to the farmer, to direct his operations from year to year. The practice or art of agriculture, in all its branches, is dependent on too many circumstances and contingencies to be subjected to the fixed rules of science, like mechanics. But enough of this side of the picture.

RUFUS M'INTIRE.

Parsonsfield, *March* 20, 1850.

For the New England Farmer.

FARMING NEAR LARGE MARKETS.

S. W. Cole, Esq.: Would not the assertion be generally subscribed to, that little or no stock of any kind (fancy excepted) should be raised in the neighborhood of a good market for milk, fresh butter, fresh provisions of all kinds, and where there is a demand for team work?

Is it not a fact, that in all the seaports in New England, grain is cheaper than it is in the interior?

Is it not also a fact, that the price of hay and pasturage in the interior, range from one half to one third of the price on the seaboard, near great markets?

These facts, if admitted, would they not justify the following conclusions? —

That horses and oxen should be reared and trained, to the age of four or five years, where hay and pasturage are cheap: after that age, the purchaser can make them earn their living.

That select heifers two years old, that will come in in the spring, should be purchased in October and November, as they could be obtained for half what it would cost to raise them near a city market.

That full-grown wethers, (South Downs, if they can be had,) purchased from the back country in the

fall, may be stall fed for the market, in February, March, and April, and sold at remunerating prices.

That lean cattle, obtained in the spring and fed on grass, green fodder, and an allowance of grain, would come into market profitably before the grass-fed cattle would arrive from the north.

That shotes purchased in the fall, for butcher's meat in the spring, then to weigh short of two hundred pounds, and let them be replaced in the spring for the fall market, would be a profitable operation.

That poultry can be reared to the most advantage near our seaports.

That near our great markets, persons who keep teams, cows for milk, stall-fed cattle and sheep, fatten swine and poultry, enrich their farms by the consumption of grain, that exhausted the land on which it grew, to the south and west.

Query. Will fifty bushels of corn given to twenty dollars' worth of lean hogs, make more meat or manure, than if fed to twenty dollars' worth of wethers, attentively stall fed? Does not fat mutton generally sell higher than pork, exclusive of the pelt?

Will not some of your subscribers experiment upon the subject, by occasionally weighing the live animals, and give the result to the public, through your paper?

Is there no way by which June butter can be kept sweet till October? May it not be done by laying it down in small, strong white oak kegs, from twenty-five to fifty pounds each; place these kegs in a tight cask, and fill round them either salt or a strong brine, and if possible, place the cask in an ice-house?

Whoever succeeds in placing June butter, in all its *freshness of flavor*, into the Boston, Providence, and New York markets in the months of October and November, may be assured that it will readily command twenty-five cents and upwards, a pound, for any quantity.

If any of the above suggestions meet your views, and are considered worth publication, they are at your service for that purpose.

A SUBSCRIBER.

For the New England Farmer.

THE POTATO DISEASE.

Mr. Editor: I perceive by a late number of the Farmer, that "Dr. Richardson, of Maryland, flatters himself that he has discovered the cause of the potato rot." He says, "The rot is produced by the deposition of the egg, and the destruction of the pith or heart of the vine, (by consequence of the circulating capillaries,) by the larvæ of an insect. This insect is of the curculio or weevil genus."

This may be the case, and it may not. If this is really the cause of the disease in the potato, why, I would ask, is not the disease as prevalent and fatal on dry, sandy land, as on loamy, moist land? I have observed of late years, that potatoes grown on moist lands were affected earlier, and the disease was more fatal, than among those grown on dry land. I have proved this from experience on my own premises. Last year, for instance, I broke up a piece of worn-out pasture land, on the highest part of my farm, and spread on the surface, before ploughing, a light coat of winter manure, a good share of which was horse manure. I planted my potatoes about the middle of May, on this piece of ground. I also planted a small piece of ground with the same kind of potatoes, which was a deep, sandy loam, rather moist, without any manure, (although there was a light coat the year previous.) This piece was planted four or five days later, and received the same care as the other. In the fall the vines on the first planted piece decayed earlier, and still there were but little signs of disease among the potatoes; while the vines on the moist land retained their greenness much later, and on harvesting them, pretty much all the potatoes were diseased; by actual measurement, not one fifth part were fit to put into the cellar. Those on the dry ground were but little affected; not one bushel in twenty but that were sound. I do not ground my experience on this last year alone, but previous years have shown similar results; thus proving, so far as my knowledge and observation go, that Dr. Richardson's "cause" is incorrect, especially in growing potatoes on my premises. It looks evident to me, that if the disease in the potato is caused by this insect in question, all fields would be alike affected, especially when joining each other.

Many farmers lose a good share of their potatoes after having cellared them in the fall. To me it seems this might be avoided. If potatoes are perfectly sound and dry when carried into the cellar, (say the last of October) little danger need be apprehended from the rot. If potatoes are the least diseased when put into bins or barrels in the cellar, rotten potatoes sooner or later may be expected. Rot oftentimes proceeds from bruises received while digging. It needs a great deal of caution, in digging potatoes, to preserve them sound. Careless boys ought not to be allowed to dig potatoes intended for winter use.

A lady at my elbow wishes to know if there is any remedy to destroy lice on snow-ball bushes. They completely cover the bushes just before blossoming.

A. TODD.

Smithfield, R. I., *April*, 1850.

For the New England Farmer.

MAHOGANY.

Mr. Editor: Though the mahogany is a native of too warm a climate to allow of its cultivation as a timber-tree in this country, yet it is applied to so many uses, and is so well adapted for most of them, that some notice of it is required.

There are three species of mahogany: common mahogany, (*Swietenia mahogani,*) *Swietenia febrifuga*, and *Swietenia chloroxylon*; the first being a native of the West India Islands and the central parts of America, and the second and third, natives of the East Indies. They all grow to be trees of considerable magnitude, the first and second being among the largest trees known. They are all excellent timber.

Swietenia mahogani is, perhaps, the most majestic of trees; for though some rise to a greater height, this tree, like the oak and cedar, impresses the spectator with the strongest feelings of its firmness and duration. In the rich valleys among the mountains of Cuba, and those that open upon the Bay of Honduras, the mahogany expands to so giant a trunk, divides into so many massive arms, the shade of its shining green leaves, spotted with tufts of pearly flowers, over so vast an extent of surface, that it is difficult to imagine a vegetable production, combining, in such a degree, the qualities of elegance and strength, of beauty and sublimity. The precise period of its growth is not accurately known; but, as when large, it changes but little during the life of a man, the time of its arriving at maturity is probably not less than two hundred years. Some idea of its size, and also of its commercial value, may be formed from the fact, that a single log weighed nearly seven tons, was, in the first instance, sold in Trinidad de Cuba, for $1512, and resold for $2100.

Mahogany of remarkable fineness is the most costly of fancy woods. As is the case with much other timber, the finest mahogany-trees, both for size

and quality, are not in the most accessible situations; and as it is always exported in large masses, the transportation of it for any distance over land is so difficult, that the very best trees, both on the island and the main land — those that grow in the rich inland valleys — defy the means of removal possessed by the Creoles. Masses of from six to eight tons are not very easily moved in any country; and in a mountainous and rocky one, where much attention is not paid to mechanical power, to move them is impossible. In Cuba, the inhabitants have neither enterprise nor skill adequate to felling the mahogany trees, and transporting them to the shore; and thus the finest timber remains unused.

The discovery of this beautiful timber was accidental, and its introduction into notice was slow. The first mention that was made of it, is, that it was used in the repair of some ships at Cienfuegos, in 1579. Its finely variegated tints were admired, but in that age the dream of El Dorado caused matters of more value to be neglected. The mahogany-tree is found in great quantities on the low and woody lands, and even upon the rocks, in the countries on the western shores of the Caribbean Sea, about Honduras and Campeachy. It is also abundant in the Islands of Cuba and Hayti, and it used to be plentiful in Jamaica, where it was of excellent quality; but most of the larger trees have been cut down there. It was formerly abundant on the Bahamas, where it grew on the rocks to a great height, and four feet in diameter. In the earliest periods, it was much used by the Spaniards in ship-building. When first introduced by them, it was very dark and hard, and without much of that beautiful variety of color which now renders it superior to all other lumber for cabinet works; but it was more durable, and took a higher polish with less labor. At that time it was called Maderia wood, though it appears to have come from St. Domingo (Hayti) and the Bahamas; of course it was wholly unknown to the ancients.

The mahogany is a graceful tree, with many branches, that form a handsome head. The leaflets are in pairs, mostly four, and sometimes three, but very rarely five; the pair opposite, and without any odd leaflet at the point; they are smooth and shining, lance-shaped, entire at the edges, like those of the laurel, and bent back; each leaflet is about two inches and a half long, and the whole leaf is about eight inches. The flowers are small and whitish, and the seed vessel has some resemblance to that of the Barbadoes cedar; hence some botanists have given the name of *cedar* to the tree. This tree so far corresponds with the pine tribe, that the timber is best upon the coldest soils, and the most exposed situations. When it grows upon the moist soils and warm lands, it is soft, coarse, spongy, and contains sapwood, into which some worms will eat. That which is most accessible at Honduras is of this description, and therefore it is only used for coarser works, or for a ground on which to lay veneers of the choicer sort. For the latter purpose it is well adapted, as it holds glue better than deal, and when properly seasoned, is not so apt to warp, or to be eaten by insects. When it grows in favorable situations, where it has room to spread, it is of much better quality, and puts out large branches, the junctions of which with the stem furnish those beautifully curled pieces, of which the choicest veneers are made. When among rocks, and much exposed, the size is inferior, and there is not so much breadth or variety of shading, but the timber is far superior, and the color is richer. The last description is by far the strongest, and is therefore the best adapted for chairs, the legs of tables, and other purposes, in which a moderate size has to bear a considerable strain. Since the produce of Jamaica has been exhausted, there are only two kinds known: bay-wood, or that of the continent of America, and Spanish-wood, or the produce of the Islands chiefly of Cuba and Hayti. Though the bay-wood be inferior to the other, both in value and in price, it is often very beautiful, and may be obtained in logs as large as six feet square. It is, however, not nearly so compact as the other; the grain is apt to rise in polishing, and if it be not covered by a water-proof varnish, it is very easily stained. It also gives to the tool in carving, and is not well adapted for ornament. Spanish-wood cuts well, takes a fine polish, resists scratches, stains, and fractures much better, and is generally the only sort upon which much, or delicate, workmanship should be expended. The colors of mahogany do not come well without the application of oil or varnish; and if the best sort be often washed with water, or long macerated in it, they lose their beauty, and become of a dingy brown. The red is deepened by alkaline applications, especially lime-water; but strong acids destroy the colors. When the surface is covered by a colorless varnish, which displays the natural tint without altering any of them, good mahogany appears to the greatest advantage.

The *S. febrifuga*, or East India mahogany, is a very large tree; it grows in the mountainous part of Central Hindostan, rises to a great height, with a straight trunk, which, towards the upper part, throws out many branches. The head is spreading, and the leaves have some resemblance to those of the American species. The wood is of a dull red color, not so beautiful as common mahogany, but much harder, heavier, and more durable. The natives of India account it the most lasting timber that their country produces, and therefore they employ it in their sacred edifices, and upon every occasion where they wish to combine strength with durability and elegance.

The *S. chloroxylon* is chiefly found in the mountains of the Sicars, that run parallel to the Bay of Bengal, to the north-east of the mouth of the River Godovery. The tree does not attain the same size as either of the former, and the appearance of the wood is different. It is of a deep yellow, nearly of the same color as box, from which it does not differ much in durability, and could be applied to the same purposes.

BERNARD REYNOSO.

April, 1850.

For the New England Farmer.

THE WILD CHERRY FOR STOCKS—PEARS ON THE SHAD BUSH.

Mr. Cole: I would inquire whether the English cherry can be grafted or budded on the wild black cherry with success. This is a common tree with us, and it is a very thrifty, hardy tree, grows to a large size, and lives to a great age. If the English cherry can be worked on this tree with success, it would become a source of great profit to us, in this cold climate. I have for the last five years, grafted and budded the above-named tree, but without success in every case.

I have seen very thrifty, healthy-looking cherry-trees budded on the wild red, or pigeon cherry. Some of them are three years from the bud, and are eight feet high, with a very beautiful top. I took some good fruit from them last season. The wild red, or pigeon cherry, is also a very common tree with us. It grows well in poor soils, or even in gravel, where pears had been grafted; and I noticed in the N. E. Farmer, grew remarkably well on the shad bush or sugar pear, and also on the white thorn.

I will communicate one experiment to you. In the spring of 1847, one of my neighbors took from the forest some small mountain ash, or round-wood, as it is sometimes called; he set them in his front yard for ornamental trees. Soon after they were set, he saw it recommended in some agricultural paper,

to graft the pear on that stock; he concluded to try the experiment, and called on me to do the work. I cut his trees about one foot from the ground, and set in the Bartlett pear; they united, and grew remarkably well. I have this morning measured one of the grafts, and find it nine feet high; branches spread six feet; the trunk or body, five inches in circumference one foot above the stock on which it was grafted.

In trying experiments, if we do not succeed well in every case, there may be some good result from it.

Respectfully yours, M. L. HAYES.

FARMINGTON, *March*, 1850.

REMARKS. — Many experiments have been made in grafting and budding the common wild black cherry with our cultivated varieties, but we have heard of none that have succeeded. We think that no cherry that produces its fruit in strings, will be a good stock for those varieties whose fruit grows in bunches, or singly. The wild black cherry, in the texture of its wood and bark, in the quality of its fruit, and time of ripening, is widely different from our cultivated kinds.

The small, red wild cherry, often called the *pigeon* cherry, in its wood, and manner of growth, very much resembles some of our cultivated varieties. The fruit resembles our soft-fleshed, acid cherries, and ripens about the same time. This may be valuable as a stock for budding or grafting. — ED.

For the New England Farmer.

THE BLIGHT UPON GRAIN.

MR. COLE: We have frequently noticed, in agricultural papers, the various causes attributed to blast upon grain, and thus far we have never seen any decisive or conclusive evidence given; but of the many causes or reasons, the barberry seems to receive rather more than an equal share of denunciation. We think the cedar has a bad effect upon grain. Some kinds of grain were scarcely ever known to blast; for instance, the Bedford oats were once thought to be entirely free from blight, but they have been visited, and that too, it is presumed, by some fell destroyer yet unknown.

A friend of ours, who was accustomed to raising these oats annually, attributed the blight to the cedar, as there was no barberry near, but the cedars were numerous, and sometimes bordering upon his grain field. He went to work and cut them down, and afterwards purchased new seed, which he sowed and cultivated as he had previously been accustomed to do, and no blight appeared. Whether it was the cedar that caused the blight, we are unable to say; we therefore leave for the reader to judge. We think that the cedar is equally as injurious as the barberry; we therefore recommend the extirpation of both, when bordering or standing near grain fields. Neither of them is of intrinsic value.

A VOICE FROM "THE HILLS."

WOBURN, *April* 2, 1850.

For the New England Farmer.

TRANSPLANTING EVERGREENS.

MR. EDITOR: There are many different opinions in relation to the time and method most favorable for transplanting evergreens. My friend S. relates the following incident in his experience, which seems *truthful*, practical, and suggestive of good and useful results. He says, being warmed by the singing of birds, and the genial influences of spring, (as we all are, or ought to be,) into the true spirit of *tree-planting*, he went with some friends to a forest for evergreens. They were nearly supplied, and had nearly finished the taking up of a pretty large tree, when the approach of a shower drove them home. The tree remained till the next year, and was then taken up, and transplanted with others from the same location; and is now, after a lapse of four or five years, almost the only one of some fifteen or twenty, alive or worth preserving.

He says, that the roots cut off the previous spring had been partially covered with earth, and had sent out such quantities of *new* roots, feelers, &c., that its growth seemed hardly to be checked; nor was the diminution of its freshness and vigor at all apparent. Many valuable fruit and ornamental trees are sacrificed every year, for the want of care, skill, and patience, in planting. Yours truly, S.

ANDOVER, *April* 16, 1850.

For the New England Farmer.

EFFECTS OF THE WINTER ON FRUIT TREES.

FRIEND COLE: The past winter was very favorable for fruit trees in this region. Snow came on early, before the ground was much frozen, and remained over four months, effectually protecting trees and shrubs in the nursery and elsewhere. A few warm days, of late, carried the snow nearly off; and as there was but little frost in the ground, the sap soon commenced flowing, and the buds began to swell; but on the night of the 12th, we were greeted with a severe north-east snow-storm, followed by piercing, cold north-west winds. This produced a sudden contraction of the bark, and expansion of the sap, causing the bark to burst badly. In cutting scions yesterday, I noticed many trees in the nursery, which were nearly spoiled from this cause. The injury has been greater on low or moist ground; the bark cracks from three to six inches above the ground.

Respectfully, S. N. TABER.

VASSALBOROUGH, ME., *4th mo.* 17, 1850.

GRAFTING COMPOSITION.

It is rather late in the season to offer new receipts for grafting cement, but it is a suitable time to make trial of new modes of making it, preparatory to correct action another season.

Mr. E. W. Osborne, of South Weare, N. H., makes grafting composition in the following manner, and he says that it is excellent, and very conveniently worked by wetting the hands: —

1 pound best bar or brown soap,

1 do. beeswax, of good quality,

2 pounds good rosin. Rosin of a very dark or black color is not so good as the light-colored.

Melt all together, and work thoroughly, as shoemaker's wax.

The following composition is used by some nurserymen, and preferred to that in which there is tallow: —

1 pint linseed oil,

1 pound beeswax,

6 pounds rosin. Melt, and work thoroughly.

SMITH'S ORLEANS PLUM.

Synonymes. — *Cooper's Red;* by some, incorrectly, *Red Magnum Bonum*, or *Violet Perdrigon.*

This is among the most valuable plums. Though it may not hardly equal in flavor some of the most luscious kinds, yet it has a mingling of the vinous with the saccharine flavor, that to some palates is equal to the very best. But the peculiar advantages in this plum are its good size, large growth, and great production; and its generally being sure to produce a good crop, while many delicate kinds fail; and it seems to be well adapted to different climates, soils, and locations, but, like most varieties of plums, it succeeds best on a strong, moist soil.

All things considered, Smith's Orleans ranks among our most valuable plums, especially for the market. It is a native variety, raised from the seed of the old Orleans about twenty-five years ago, by a Mr. Smith, of Gowanus, Long Island.

The fruit is large, or very large; oval, or roundish-oval; a distinct suture on one side; reddish purple, covered with an azure bloom; stem rather slender, in a deep and narrow cavity; flesh yellow, rather firm, very juicy, and of a sprightly vinous flavor. Clingstone. Sept. 1 to 20. The young shoots are straight, reddish-purple, and glossy. The fruit, like that of many varieties of plums, is rather inclined to rot when it hangs very thick.

Nature, in her silent ministrations, often speaketh in tones louder than the thunder.

THE PROSPECT FOR FRUIT.

Probably there never was a more promising prospect for fruit, in New England, than there is at present. In some sections of the south and west, the fruit buds or blossoms have been injured by frost, but we trust that out of New England the prospect is generally good.

As the crops of fruit were very light last year, and the season was favorable for the production of wood, the trees made a great growth, and they indicate a most bountiful blowth. As the winter has been mild, the blossom buds have generally escaped injury from the cold, and the present cold, backward season is very propitious in retarding the blossoming of trees until late in the season, which gives them a much better chance to escape injury from spring frosts.

Another cheering consideration to the lovers of fruit, is the great increase of fruit trees, and the increased attention in the management of them. If the season should continue favorable, we shall doubtless have the largest crop of fruit ever raised in this country. Our readers will please consider that this is an even year, and that we always have a good crop of apples in even years, if the season be favorable. All who are nice observers will find, every year, a confirmation of our views on this subject, as we have expressed them at various times.

Domestic Department.

A Mother's Love. — There are few objects of contemplation more melancholy than the waste of human love which the aspect of this world presents; of deep, tender, untiring, disinterested love, bestowed in such a manner as meets no adequate return; and what must be the harvest gathered in, to a mother's faithful bosom, when she finds that she has reared up children who are too refined to share her humble cares, too learned and too clever to waste their talent on a sphere of thought and action like her own, and too much engaged in the pursuits of intellectual attainments ever to think of her! Yet to whom do we look for consolation when the blight of sickness or sorrow falls upon our earthly peace, but to a mother? And who but a mother is invited to take our afflictions or trials? If the stigma of worldly degradation falls upon us, we fly to a mother's love for that mantle of charity which is denied elsewhere. With more honored and distinguished associates we may have joy, but the bitter tears of experience are wept upon a mother's bosom. We keep for our summer friends the amusing story, the brilliant witticism, or the intellectual discourse; but we tell to a mother's ear the tale of our distress, and the history of our wrongs. For all that belongs to the weakness of humanity, a mother's affection is sorely taxed: why then should not daughters have the noble feeling to say before the world, and to let their actions speak the same language, — "This is my earliest and best friend"?

Jellies for the Sick. — *To make Panada, or Bread Jelly.* — Cut a wheaten roll or loaf into slices, toast them on both sides, and boil in a quart of water, until the whole forms a jelly, adding more water if required; then strain, and flavor with one pound of white sugar, four ounces of red wine, and one ounce of cinnamon. Very nutritious. It may also be made with broth from which the fat has been skimmed, instead of water.

Biscuit Jelly. — Take of white biscuit, crushed beneath the rolling-pin, four ounces; cold water, two quarts; soak for some hours, boil to one half, strain, evaporate to one pint, and flavor as above. Given in weakness of the stomach, dysentery, and diarrhœa.

Rice Jelly. — Take of rice three spoonfuls; boil in water, add ten sweet and five bitter almonds, and sugar to your liking; make into an emulsion, and flavor with cinnamon or orange-flower water to your taste.

Arrow-Root Jelly. — Take of arrow-root one ounce; rub to a smooth paste with a spoonful or two of cold water; then gradually add of boiling water half a pint, stirring all the while. It may be thinned with more water, if desired, and flavored with milk, wine, sugar, and spices, according to the palate of the patient.

Sago Jelly. — Soak sago in cold water from an hour to an hour and a half; strain, and boil in fresh water till it becomes transparent; then add wine, sugar, clear broth, milk, prunes, or spices to flavor. One ounce of sago will make a pint of jelly.

Tapioca Jelly. — First, soak, strain, and boil the tapioca, as directed above for sago; then flavor with lemon juice and peel, wine, prunes, raisins, or spices. One ounce of tapioca will make a pint of jelly.

Note. — The flavoring of any of the above-named jellies may be omitted or varied, with the advice of a physician. — *Am. Agriculturist.*

Youth's Department.

Labor and Amusement. — This is a delightful season, and boys can make themselves useful by labor, and at the same time enjoy the highest degree of pleasure within the range of the human mind. What wonders are performed where even the little boy deposits in the earth a few seeds, of small size, and a young shoot starts up, and finally becomes a perfect plant or tree; which no artist can imitate, and of which, with his skill from the experience of many toilsome years, he could only make a sorry counterfeit! The youth, acting in accordance with the science of nature, which is established and controlled by the Supreme Ruler, the kind Father of us all, can perform wonders:

"Tall oaks from little acorns grow."

By allowing boys a small spot for their own domain, to cultivate a variety of useful plants, such as are congenial to their taste, they will take an additional interest in the art of cultivation. It inspires them with independence, in regard to their fellow-beings, and with a consciousness of their dependence on that Power to whom they are indebted for the genial rain and sunshine. Without his aid they can do nothing, — not even start one seed into life. Without their works, no plants which they desire for a crop would spring into existence. "The sluggard will not plough by reason of the cold; therefore he shall beg in harvest, and have nothing." How exalted the station, then, of those who are co-workers with the Ruler of the universe! And while the youth is engaged in the most honorable and pleasant of all employments, — in the cultivation of the earth, — let him cultivate the mind, as well as the soil, and plant good seed in his heart, and carefully nourish and train the plants of virtue, and eradicate from that fruitful soil every weed of evil, however humble or specious its appearance.

One clock strikes when there is a change from hour to hour, but no hammer in the horologe of time peals through the universe when there is a change from one era to another.

Health Department.

Rise and Disappearance of Diseases. — Some diseases have arisen and have since disappeared. Of this description are the leprosy and the sweating sickness. The leprosy appears to have committed the most extensive ravages, and to have had hospitals erected solely for its relief. It became general throughout Europe in the twelfth century, and is supposed to have been imported by the crusaders. It has not been known in Europe since the beginning of the sixteenth century. The sweating sickness is supposed to have been introduced into England by the army which invaded it under Henry the Seventh. It prevailed from 1485 to 1551, and in some years, during one month in autumn, was equal in fatality to the plague. The diseases which have

arisen, but have not disappeared, are the small-pox, the measles, perhaps all other specific contagions, and syphilis. Though the exact period cannot be ascertained, there was a time when none of these were known here. The diseases which have prevailed with various degrees of frequency and fatality at different periods, are plague, dysentery, internal fever, typhus fever, small-pox, syphilis, scurvy, and rickets. The first plague was in 430, the last in which it was epidemic here, was in 1665. It was named in the bills of mortality as late as 1769. Internal fever, scurvy, dysentery, and rickets have declined of late years. Scarlet fever, consumption, gout, dropsy, palsy, and all nervous diseases, have increased. — *Duncan's Essays and Miscellanea.*

Mechanics' Department, Arts, &c.

Acoustic Apparatus to enable the Deaf to hear in Church. — At the Elder Street Chapel, Edinburgh, Scotland, there is erected a contrivance for deaf persons to hear, which is well worthy attention. In front of the book-board, and projecting semicircularly from it to the extent of about nine inches, is a deep, tapering cup or horn of gutta percha, the upper edges of which are in the plan of a book-board, the longest diameter of its orifice being about eighteen inches. This is covered with cloth uniform with the pulpit, the drapery of which is arranged around it, so that the eye detects nothing but an elegantly curved outline, in place of a straight and box-looking front to the pulpit. The lower end of this corniform cup tapers into a gutta percha tube of about two inches in diameter, which is carried down within the pulpit frame; and to that main trunk are attached smaller pipes, which are laid out to the required pews, where a flexible tube with an ear-piece is connected, by means of which the deaf spectator becomes a hearer, even the very deaf, who did not hear one word, or the echo of one sound, before, and is enabled to follow the speaker through his whole discourse, as plain as if he spoke into the conversational trumpet. — *Scientific American.*

Fire Arms differently charged. — Balls which fit accurately the bore of a piece, have the greatest effect, as they do not come out so readily, but give time for the greater quantity of powder to ignite.

When the powder is rammed violently down, its effect is no greater, but somewhat less, than when barely pressed down with the ball upon it.

Gunpowder around a ball diminishes its effect, as it expands in all directions, and when it is upon the top of a ball it must in some measure act counter to its progress.

By taking a ball and putting a little powder under, and considerable before it, its effects may be almost nullified, and yet there will be considerable noise when the gun is discharged.

Mahogany Stain. — 1. Pure Socotrine aloes, one ounce; dragon's blood, one half ounce; rectified spirit, one pint; dissolve, and apply two or three coats to the surface of the wood; finish off with oil or wax tinged with alkanet.

2. Wash over the wood with strong aquafortis, and when dry apply a coat of the above varnish; polish at last.

3. Logwood, two ounces; madder, eight ounces; fustic, one ounce; water, one gallon; boil two hours, and apply it to the wood several times, boiling hot; when dry, slightly brush it over with a solution of pearlash one ounce, in water one quart; dry and polish as before.

LEACHED ASHES AS A MANURE.

The value of leached ashes on dry soils, and in dry seasons, as a manure for grain and grass lands, has been conclusively shown, in this and other countries, by carefully conducted experiments. Yet, as it seems useful and necessary to "keep before the people" such facts as are not fully understood and considered, we give some observations drawn from experiments heretofore published, for fear that this subject, in the hurry of the season, might otherwise be neglected and forgotten.

The German agriculturist, Albert, of Roszlan, gives a circumstantial account of an experiment commenced in 1827, and continued for five years. A dry, sandy soil, which had lain in grass for eight years, was dressed with leached ashes, at the rate of sixty-six bushels per acre. The sod was first carefully turned under, then the ashes hauled on and spread, and covered with a plough about two inches deep; remaining in this condition six or seven weeks it was again ploughed three inches deep, so as to bring up the ashes, and sowed to buckwheat. A portion of the field, to which no ashes were applied, was treated in the same manner, so that the difference might be noted.

The cost of the application was $6 25 per acre. The increased product of the first year was at the rate of five and a half bushels of buckwheat, with four hundred and seventy pounds of straw, estimated at $1 05. The increased product of the second year, when sown with rye, was six bushels per acre, with six hundred pounds of straw, estimated at $5 25. The increased product of the third year, when in oats, was ten and a half bushels, with five hundred and fifty pounds of straw, estimated at $3 62½. The fourth year, the increased product, when in pasturage, was estimated at $3 00 per acre. The fifth year it was again sown to rye, and the increased product was four and a half bushels, with four hundred and seventy pounds straw, estimated at $1 06 per acre. The value of the increased product is $20 00; and we have no reason to suppose their effects were exhausted when the experiments were concluded. The estimates were made by Mr. Wagner, the translator, from the prices paid at the time in this country, as also was the cost of the ashes and labor.

Unleached ashes produce a more powerful effect, and hence a less quantity is required. In the Albany Cultivator for 1842, the result of an experiment is given, on an old meadow, mowed nearly half a century — of clay soil, stocked with all kinds of grass, where strong ashes were applied, at the rate of thirty-two bushels per acre, producing an increased product of nearly one fourth of a ton, while the same quantity of air-slaked lime produced no beneficial result; and two bushels of clear, dry cowdung increased the product only one hundred and four pounds, and the same quantity of horse manure but sixteen pounds per acre.

In the first of these experiments, four thousand four hundred and twenty-two pounds of leached ashes were applied, producing, in five years, an increase of four thousand three hundred and forty-one pounds of grain and straw, besides pasturage equivalent to at least a ton of hay. In the second, about one ton of ashes increased the product, in one year, one fourth that amount of hay; and in favorable seasons, we cannot doubt but that its effect would

continue at the same rate for four years longer. So the action of ashes must be chemical in its nature, giving a capacity to appropriate other fertilizers, which it does, perhaps, by imparting to the soil its potash, which dissolves the *silica* or flint of the soil, producing *silicate of potash*, which, according to Liebig, is required by all plants of the grass kind, in large quantities.

On wet ground, it should be borne in mind that ashes produce no effect; and in wet seasons, the benefit is much less than in dry. — *Rural New-Yorker.*

THE PEACH-TREE.

Many years ago, in viewing the fruit garden of a New England friend, I noticed the bodies of his young peach-trees were securely bandaged with straw. The straw was tall, straight, standing upon the ground around the body of the tree, being wound around with a cord. It was so thick as to prevent any insect from having access to the bark. Where the buts rested on the ground, earth was placed around them, two or three inches high, and rendered compact and firm by the pressure of the foot. Inquiring the object of this fixture, he replied, it was to prevent the grub at the roots. He said a certain kind of fly pierced the bark at the surface of the ground, or, if the ground was light, a little below the surface, and deposited a nit, which produced the grub. That from the smallest beginning it often attained a large size, and sometimes girdled the whole stock below the soil, thus wholly preventing the ascent of the sap, and causing the death of the tree. He remarked that the fly rarely injured the body at any considerable distance from the ground, its instincts leading it to the root, at or near the surface. He took me, however, to two trees, where the fly had made its perforations at the top of the straw, about three feet from the ground. The punctures were small, but distinct and visible, and on one tree were several in number. Most of them were enlarged, by cutting out with a small penknife the little deposits, but with no damage to the tree. It was not frequent, however, that the fly ascended so high. But at any rate, if the damage must be sustained, it was better to have it in plain sight, where it might be speedily remedied, than below the surface, where it might destroy the tree.

I intend to examine all my young trees this spring, cutting out the grub whenever found, and filling the wound with grafting wax, to prevent the escape of the sap, and to incase the bodies with straw, as above; persuaded that, as a precautionary measure, it will be wise and profitable. E. D.
— *Rural New-Yorker.*

THE ROLLER.

Mr. Editor: I am anxious to call the attention of your agricultural readers to this valuable implement, as, in my humble opinion, it is one no farmer should ever be without. On almost all farms there are sections where small stones exist in variable quantities; sometimes the number is so great, and the size so small, that the labor of "picking," always a tedious and irksome one, is either neglected, or but imperfectly performed; and when even all the stones are removed, the soil is not so well adapted, constitutionally, for the production of most crops, as they are where a portion of the stones are left near the surface — especially the smaller ones. By removing those of large size, say all down to the size of a man's fist, unless the number "is legion," and applying a cylindrical roller, of suitable size and weight, the residue will be pressed down even with the surface, and as effectually removed from the reach of the scythe, as though they had been picked and removed to the lines, or deposited in heaps. Experience during a course of many years has satisfied me that light, loamy soils are deteriorated to a great extent, by the removal of *all* the stones they contain, although their presence on or near the surface is a serious obstacle to successful cultivation, and one which most farmers, who study ease and efficiency, are anxious to avoid. The roller, however, is important for other purposes. Sandy soils can never be properly cultivated without its aid, as there is requisite a degree of compression which no other implement known in modern husbandry will confer. The extreme lightness and excessive porosity of such lands, while it renders them light and easy to work, prevents the retention of moisture; without a liberal and equable supply of which, no soil, however affluent in *humus*, or the elements of vegetable nutrition, can be made to exert its *maximum* force. Manure, applied to such soils, becomes, in dry season, but little better than so much wood; it cannot ferment, but dries up, and lies entirely inactive, an injury rather than a benefit to the soil. The consolidating action of the roller, therefore, is indispensably necessary to induce fermentation, and produce that compactness in the arrangements of its constituent particles, which enables the roots to assume and preserve a strong and reliable hold for the maintenance of the peculiar position nature has assigned, and the securement and appropriation of their specific food. The cost of the roller is a mere trifle, compared with the advantages resulting from its application. Stubble lands, which from the unevenness of the surface, often broken by slight inequalities, the presence of stones or turfs, which no action of the plough can effectually inhume or cover up, cannot be laid down with that degree of smoothness so desirable and important when contemplated in connection with subsequent agrestic details and operations, may, by the application of this instrument, be rendered perfectly even, and so smooth that the scythe will easily be carried sufficiently near the surface to take all the grass, without extra trouble to the mower, or injury to his scythe. B.

Bensalem, *April* 2, 1850.
— *Germantown Telegraph.*

FRUIT TREES.

As the season for setting out fruit trees has arrived, we wish to throw out a few hints, by the way of caution, against the folly of purchasing southern trees. It is a well-established fact that trees brought from the south will not succeed in New England, and the reason why they will not succeed must be obvious to every rational mind; for being raised in a more congenial clime than ours, they are forced into an over-luxuriant growth, and the consequence is, that when they are removed to a colder clime, the change will as sensibly affect them, as it would to transport an inhabitant of Africa to the northern regions of Russia. For proof of these statements, we would refer to orchards in this vicinity, which have been set thirty years, and now present no better prospect of rewarding the possessor for his trouble, than when planted. Whereas, if northern trees had been set, they would now pay the owners one hundred per cent. on the capital invested.

Thousands of southern trees are yearly brought to our cities, and sold under the assumed name of western trees; and thousands are deceived in this way. I am aware that it is hard to make many believe that these are facts; but the time is not far distant when they will be acknowledged by every one, and

those who have purchased southern trees will find to their sorrow that they have been deceived. But there is a vast difference in northern trees; some are far better worth fifty cents each than others are twenty. Be careful, then, and select good trees; but select young, thrifty, if quite small, for they are far better than old, stouter ones.

These things are facts, as far as our knowledge extends; but we should be glad to have the views of others who have had experience in this matter. — *Exeter (N. H.) News-Letter.*

THE COMPOSITION OF MILK.

Modern chemistry has thrown much light upon this very important branch of rural economy. Of all agricultural products, none is more valuable, more widely diffused, or more difficult to dispense with, than *milk*, and the *butter* and *cheese* manufactured from it. Many elaborate and careful experiments have been made by Boussingault in France, Prof. Thompson and others in England, with the view to test the quantity and quality of milk produced by animals fed upon different kinds of food. These experiments have elicited many important facts of great value to the dairy farmer; but much remains yet to be done before this subject can be fully cleared up. The economical production of milk by means of the machinery which Nature has provided, must be carefully studied, and reduced to a science. This article, which constitutes so large a proportion of human food, will then be regarded as a *legitimate manufacture*, and improvements in the *machinery*, or the animals which elaborate it, will add millions to the agricultural wealth of the country.

The component parts of milk in all animals, both herbivorous and carnivorous, is the same. It differs only in the proportion of its principal ingredients. Substances are, however, occasionally found in milk, arising from the peculiar food of the animal, which render it medicinal, or even poisonous. The following table exhibits the composition of the milk of different animals, in its ordinary state, as found by Profs. Henry and Chevallier: —

	Woman.	Cow.	Ass.	Goat.
Casein, (cheese,)..	1.52	4.48	1.82	4.08
Butter, ...	3.55	3.13	0.11	3.32
Milk sugar, ...	6.50	4.77	6.08	5.28
Saline matter,....	0.45	0.60	0.34	0.58
Water, ...	87.98	87.02	91.65	86.80
	100.00	100.00	100.00	100.00

From the above it will be seen that asses' milk contains much less butter and cheesey matter than that of the cow. It is probably this circumstance, and its similarity to that of the human species, which, from the most remote times, have recommended it to invalids as a light and easily digested drink.

The richness, or proportion of butter and cheese, contained in cows' milk is well known to depend upon the food of the animal, the period of gestation, and the time of her giving the milk. That taken last from the cow during the same milking usually contains much the larger proportion of butter. Its temperature is from 65° to 75°. To the naked eye it seems a pure, white liquid; but when viewed through the microscope, an infinite number of minute globules appear, which contain the oily part, or the butter. When the milk is set away in the dairy, these oily particles, being the lightest, gradually rise to the surface and form the cream. But when milk is exposed to the atmosphere, the sugar it contains slowly changes into an acid called *lactic acid*. This causes the casein, or curd, to coagulate, prevents the separation of the cream, and the milk becomes *sour*. As this acid is usually formed before all the buttery globules have risen to the surface, the curd always contains more or less butter; sometimes as much as two per cent., or one half the whole quantity contained in the milk. Hence, the longer we can keep the milk sweet, the more cream we can obtain. Now, it is impossible to prevent the change of the sugar into lactic acid; but we can in some measure counteract its effects by adding to the milk a substance that will absorb the acid as it is formed. *Carbonate of soda*, or the common soda of the shops, is the substance which experience has proved best for this purpose. Less than a teaspoonful of soda dissolved in water, and well mixed with four quarts of milk, will often keep it sweet for four or five days; thus allowing all the buttery particles to rise, and doubling the quantity of cream. In very warm weather, more than the above proportion of soda is required. — Another advantage from this process is, that it matters little what kind of vessels are used to contain the milk, whether of stone-ware, wood, or metal. In France large wooden tubs are often used, with a faucet at the bottom, though which the liquid can be drawn off from beneath the cream. In this way the labor of the dairy is made much more simple and easy.

In order that the butter may have no bad taste, the soda must be pure, and especially free from *sulphate of sodium*, (glauber salts,) which it often contains. To test its purity, dissolve a little in water, and then add sufficient vinegar to make it effervesce. Now put into this a piece of silver, as a teaspoon, for instance, and if, after remaining a short time, it retains its bright appearance, you may depend upon the soda as pure; for if it contains the least particle of *sulphur*, the silver will become tarnished. After the soda has been dissolved in water, it should be strained through a piece of linen before mixing it with the milk.

From forty-eight to seventy-two hours are required completely to separate the cream. When this has been done, the liquid loses its white color, and acquires that *bluish* appearance well known to be the characteristic of *skimmed milk*.

The souring of the cream is caused by the acid formed in that portion of the milk that adheres to the oily particles, and can be prevented, or rather retarded, by the process above described. The *carbonate of magnesia*, or twenty drops of *ammonia*, will be found to answer the same purpose as soda. F.

Washington, *Feb*,, 1850.

— *Genesee Farmer.*

THE WOOL PROSPECT.

The prospect of the wool business, in Maine, is not very flattering, even if wool should rise in price; because there have been so many flocks wholly exterminated, and all of them thinned off, that it cannot compare with what it once was, put it in the best shape you please. Still there are many who feel much interest and anxiety in the business. A writer in the Wool-Grower does not agree with us in the *causes* of this depression. We think experience says to us, that we are right in the reasons which we give, why this business is not so good with us as formerly, viz.: The operations and changes in the tariff. There is no mistake about this, and every man who ever had any experience in wool-growing, knows full well that the fate of the business is to a greater or less extent held in the hands of certain men who are found a part of every year at Washington. Let that pass now. What are the prospects of the next clip? We must refer to friend Peters, of the Wool-Grower, as the most reliable source of information on this subject. After

giving a view of the present state of the market, he observes, "We cannot see any reason to believe that the early prices this season will materially exceed those of last spring. There are several reasons why the farmers will not get any advance. One is the short crop of wheat at the west. The farmers in that region will sell their wool early — it must be sold at any prices they can obtain, because that is the only product which will command cash. Speculators and manufacturers will avail themselves of this opportunity to supply their early stock. The result will be, that if the farmers in this state and Ohio sell their wool early, it must be sold at prices which will be established by the necessities of their western brethren. But it is equally certain that wool held till late will bring prices equal to those which were obtained at the auction sales, for the manufacturer will be compelled to pay those figures. Sorted wool will bring good prices during the season, as the system is becoming more and more popular with the manufacturers."

Well, what was the price at the auction sales? This was the auction in New York, on the 13th of February. We have given the general results of this auction in a former number. The following table will give a more minute detail of prices.

The amount offered was three hundred thousand pounds, and was sold in lots, as follows: —

13,000 lbs.	common and quarter blood,	33	
20,000 "	½ blood Merino,	34	@ 35
44,000 "	¾ and full blood Merino,	37	
35,000 "	Saxony and Merino, (Pa.)	38½	
35,000 "	" " (N. Y.)	40	
25,000 "	extra fine do	43	
30,000 "	ex. fine Saxony (Wash. Co., Pa.)	46	
15,000 "	¾ full blood Merino (Pa. and O.)	38	
15,000 "	½ blood Merino,	35½	
30,000 "	⅜ Merino,	36½	
19,000 "	¾ to full blood Merino,	38½	
20,000 "	full blood Merino and Saxony,	45	
1,500 "	black fleece,	34	
8,000 "	unwashed fleece,	24½	@ 27

It was all American fleece wool.

The above is the best information we can give of the *woollen* prospect. The prospect of prices seems to be based upon the *necessities* of the western woolgrowers rather than upon a *fair valuation* of the article, as regulated by cost of production, supply, and demand. —*Maine Farmer.*

POROUS SOIL FOR POTATOES.

It has been remarked by moralists that "blessings brighten as they take their flight." The good, old-fashioned potato used to be raised so easily, and were so abundant that we never realized their worth until the potato rot came; and then the blessings began to brighten, after they had taken their flight beyond our reach. Some remarks in regard to the culture of them we think would not be amiss, even if not quite in season to apply them in the act of planting.

We have always noticed that the best crops of potatoes are raised in what may be called porous soil; for instance, new grounds that have been burnt over, and are full of half-burnt leaves and sticks, and ashes and coal, — and greenswards that have been turned over by the plough, and are not compact.

From these facts we have supposed that although the vine of the potato requires some source to obtain potash, which enters into its substance largely, yet it requires a chance where the atmosphere can have access to its tubers, and that while it is necessary that they should not be exposed to the scorching sun or drowning water, yet air is a very important element in its successful cultivation, and this it obtains in such situations as we have described above.

In looking over some of the writers who have ventured to suggest any thing on this subject, we find one quoted in the New York Farmer and Mechanic, who seems to think that the atmosphere affords the principal part of the nourishment to this crop. It is true that we do not yet, after the researches in the chemical action of the elements, know how they are always assimilated, nor what peculiar changes and affinities are effected during the growth of plants. It is not impossible that decomposition and recompositions, which are silently going on in the plant, may be such as to form substances from the ingredients of the atmosphere, and the aëriform substances and vapors with which it is filled, that we supposed must have come from the soil alone. That the potato, for instance, can derive, in some mysterious or hitherto unknown process, potash, and lime, and soda, and the other mineral matters it contains, from the atmosphere; and hence the reason why it thrives best in such a porous soil as we have mentioned.

Among the many plans devised to cultivate the potato, if you have not a piece of burnt ground, or turf, the breaking up of sward-land, and manuring with coarse, strawy manure, if you are sure of sufficient moisture, is the best.

The writer, to whom we alluded above, says that the following is the most successful plan that he has found in the cultivation of this vegetable, and that he speaks from experience.

Select a piece of hard trampled ground, the harder the better. A lot on which stock of any kind, but particularly hogs, have been kept and fed, will be found to be the best. Break it up well, thoroughly and deeply one way, no matter how cloddy; and do not harrow it any, but let the clods remain unbroken. The ground being thus broken one way, lay it off into rows the other way, or across the ploughing, two and a half or three feet apart. Open these with a plough, running it back in the same furrow, so as to open the trench as widely and deeply as possible; cut all the large seed potatoes so as to have a sufficiency of eyes on each piece. Then drop them in about six inches apart. Now fill the trench with straw or, chaff, or, if neither of these can be obtained, with leaves from the woods, or trash of some sort. This is very important to a successful cultivation of the potato, not, as is generally supposed, because it gives the potato room to grow and expand in, (though this is of some importance,) but because, as we have shown, it furnishes it with a kind of bed or nursery to grow in. We do not deny that it may receive some nutriment from the decomposing straw; but then it must be entirely different from that afforded by soil, as the straw must be entirely decomposed before it can enter into the composition of soil. The trenches thus filled may be covered with the plough, and the "middles" entirely broken by the plough to the ridges, so as to leave a furrow only between each. Two workings, a weeding, and then afterwards, at the proper time, a hilling up, each aided by the plough, about twice between each row, will generally complete the cultivation. — *Maine Farmer.*

EFFORTS TO EXTEND FLAX CULTURE IN IRELAND.

As we have repeatedly stated, the Irish linen manufacturers are making every exertion to extend and encourage the business. They find the United States a capital market for them. Hadn't we better raise our own flax, and make our own linens? The following scrap will show a little of their exertions in this business: —

Flax. Prof. J. Hodges, Belfast, Ireland, in forwarding a prize essay for the culture of flax, says, "I would recommend you to bring the subject of flax culture before the members of your important society, as at the present time it would be found well worthy of their notice. In Ireland, great efforts have been made to promote it, but the supply is not by any means equal to the demand for our own manufactures. At present, in Belfast, flaxseed of good quality can be procured with difficulty. Now, America might supply us with great advantage, and without injury to our interests, as the crop is one which cannot be cultivated beyond a certain extent. Having devoted considerable attention to the subject, I shall be happy to give you any information you may consider necessary for your direction. I send you below correct returns of the average yearly amount of flaxseed exported from Riga to Ireland, which will serve to show you our consumption: —

1843, about	54,000 barrels.
1844,	18,000
1845,	47,000
1846,	30,000
1847,	11,000
1848,	29,000
1849,	16,700."

— *Maine Farmer.*

CULTIVATING DWARF PEARS.

Every intelligent fruit-raiser is aware of the necessity of cultivating and manuring the soil well, for dwarf pear-trees. S. B. Parsons states that he has seventeen hundred trees on four acres; that he applied to this orchard, last spring, $150 worth of manure, and gathered, in the autumn, two hundred and seventy-five bushels of potatoes, thirty tons sugar-beets, and a large quantity of turnips and cabbages — paying the expenses of manure and cultivation, and giving the pear-trees a vigorous impulse.

DURABILITY OF BONE MANURE.

At the last meeting of the Probus (Eng.) Farmers' Club, a paper on the analysis of the soils of Carnwinick farm, the property and in the occupation of C. A. T. Hawkins, Esq., was read by Mr. Karkeek. Its object was to show the durability of bone manure for a period of ten years.

It appears that, in 1835, a piece of waste ground was taken from the common, and prepared for turnips, the larger part of which was manured with bone dust, at the rate of three quarters (twenty-four bushels) to the acre. (The whole of the turnip plants were destroyed by the fly; consequently, little or none of the bone dust was used in that crop.) In the two following years it was successively cropped with oats, and with the last crop, laid down to permanent pasture, in which state it has remained ever since. At the present period, the effect of the bone dust can be plainly distinguished — the land having a rich greensward, while the adjoining part, where no bone dust has been applied, has a coarse, sterile appearance. This, and a great many other experiments of the same character, made by the manager of the farm, in all of which the effect of the bone was equally visible, induced the Club to send a sample of the soil from each part of the field on which the first named experiment was made, to Mr. Hunt, now curator of the Museum of Economic Geology, to be analyzed, in order to ascertain if the bone could be detected at the present time. It should be observed that Mr. Hunt was kept altogether ignorant of the object of the Club, and that the result was perfectly satisfactory, inasmuch as he readily detected the bone in that portion of the field on which it had been applied ten years before. The following are the analyses: —

	No. 1.	No. 2
Water, evaporated by stove-drying,	14.06	14.18
Vegetable and animal matters burnt off,	12.01	12.05
Silica and silicious grit,	49.54	49.50
Oxide of iron,	7.03	7.00
Carbonate of lime,	1.05	1.06
Carbonate of magnesia,	0.25	0.35
Sulphate of lime,	1.05	1.04
Muriates,	0.54	0.54
Alumina,	7.10	6.04
Phosphate of lime,	0.10	0.75
Phosphate of magnesia,	0.00	0.05
Potash,	1.00	1.27
Humus and soluble alkalies,	6.00	6.17

Mr. Karkeek contended, from these analyses, that the experiment went to prove an important fact, which had been a disputed question among agriculturists, viz., that the principal manuring properties of bone existed in the *earthy* matters, which constitute about two thirds of bone, and *not* in the oily and glutinous parts, constituting the remaining third.

An interesting discussion ensued on the subject of the analyses, the Club being of opinion that the organic parts of bone evidently had a powerful effect as manure, but that it was next to an impossibility that any other than the earthy matter could have remained so long in the land, — the whole of the animal matter having probably been consumed by the two crops of oats — and they agreed with Mr. Karkeek, that the principal manuring properties of bone exist in the earthy phosphates. — *London Agricultural Gazette.*

The above instructive article calls forcibly to mind an incident in our chemical experience in Georgia, something over a year ago. Two parcels of minerals, having precisely the same appearance, were sent for analyses, with the implied understanding that they were fertilizers, like marl, from a common bed at different depths; when, in ruth, one was from the Cherokee country and the other from Nova Scotia. The analyses were entirely satisfactory, although we had not the remotest suspicion at the time, that the substances had been prepared to test the skill of the analyst. We have found soils so poor that 5000 grains would give but one of sulphate of lime, or gypsum. — *Genesee Farmer.*

High Price of Hay. — The prolongation of winter has greatly enhanced the price of hay in this vicinity. It has been selling, for a week past at our market, for thirteen and fourteen dollars per ton. This is a higher price for hay than we have known it to bring here for a number of years. — *Syracuse Journal.*

Paular Sheep. — A flock of one hundred Paular sheep, of the Messrs. Bingham's selection, in Vermont, were recently sold to some enterprising woolgrowers and breeders, in Lafayette, Onondaga Co., for the sum of $1400.

Cleaning Trees. Trees and vines which are kept the cleanest bear the best; like the human body, the pores of their skin become clogged with dirt, and retain gases which should escape. Trees, the bark of which has been scraped and scrubbed, become more thriving and more vigorous.

NOTICES OF PUBLICATIONS.

Transactions of the Agricultural Societies in Massachusetts, for the Year 1849; collated from the Original Returns, by Wm. B. Calhoun, Secretary of State. — This volume or number is considerably larger than the preceding volumes of this work. It contains 422 pages. This work embraces the most important doings of the Massachusetts State Agricultural Society, and those of the counties. It is well compiled and arranged, and it contains a large amount of instructive matter.

The Farmer's Guide to Scientific and Practical Agriculture, by Henry Stephens, F. R. S. E., Author of the Book of the Farm, assisted by John P. Norton, A. M., Professor of Scientific Agriculture in Yale College, New Haven. — This work will be issued in numbers, of 64 pages each. The whole will consist of about 22 numbers, embellished with 18 or 20 steel engravings, and illustrated with more than 600 wood engravings. It will be completed in about one year. Twenty-five cents per number, or $5 00 for the whole work. Leonard Scott & Co., publishers, 79 Fulton St., N. Y. The first number contains a variety of interesting matter, and gives promise that the work will be highly instructive. Mr. Stephens is one of the best and most practical agricultural writers in Europe; and Professor Norton is distinguished for his attention to agricultural science.

ACKNOWLEDGMENTS.

From Charles Downing, Newburg, N. Y., a nurseryman and distinguished pomologist, a variety of trees and scions, of new and promising kinds of fruit, which we trust will be a valuable acquisition to our nursery. Among this lot is the Dana pear, which originated in Western New York. This will doubtless claim priority, and, of course, a preference as to name, to the Dana pear recently originated in this vicinity, but not yet disseminated.

From Isaac Southgate, Leicester, a tree and scions of what he calls the Cloth of Gold plum; which he recommends (and we depend much on his opinion) as one of the finest varieties. It may prove identical with some valuable kind already before the public; which we intend to settle by experiment and comparison.

From N. P. Morrison, Somerville, scions and fruit of Medfield apple. Mr. M. speaks of this as a fine keeper, and as great a grower as the Baldwin, which is indicated by the size of the scion. The fruit is medial size; rather flat; yellow ground, partially covered with dull red; flesh firm, fresh, and of tolerably good quality.

From W. N. Andrews, Dover, N. H., specimen of a new seedling apple, which recently originated in that town. This fruit is large; roundish-obovate, somewhat irregular or angular; nearly covered with bright red; flesh firm, tolerably juicy, of a mild, pleasant quality, and, considering the lateness of the season, remarkably fresh.

From Capt. Silas Allen, Shrewsbury, scions of Rockport Sweeting. Capt. Allen regards this as one of the very best late, sweet apples; and so high a commendation, from so reliable a source, induces us to request him to favor us with a specimen of the fruit next fall.

From Nathan Norton, nurseryman, Greenland, N. H., trees and scions of Marston's Red Winter apple. We have had some acquaintance with this fruit. It is large, fair, handsome, and of excellent quality. In Greenland, and that region, it is cultivated by many fruit-growers, in preference to the Baldwin.

LINES TO A ROBIN THAT FLEW IN AT A WINDOW.

From snowy plains, and icy sprays,
From moonless nights, and sunless days,
Welcome, *poor bird!* I'll cherish thee;
I love thee, for thou *trustest* me.
Thou needst not dread a *captive's* doom;
No! freely flutter round my room:
Perch on my lute's remaining string,
And sweetly of the summer sing.
That note, that summer note, I know;
It wakes at once, and soothes my woe.
I see the woods, I see the stream,
I see — ah, still prolong the dream;
Still with thy song those scenes renew,
Though through my tears they reach my view,
Thus heedless of the raging blast,
Thou'lt dwell with me till winter's past;
And when the primrose tells 'tis spring,
And when the thrush begins to sing,
Soon as I hear the woodland song,
I'll set thee free, to join the throng!"

"The most extraordinary man I know of, now living," remarked a friend of ours the other day, "is Mr. ———; he never interferes with any man's business, but goes straight forward and attends to his own."

There are three companions with whom a man should always keep on good terms—his wife, his stomach, and his conscience.

The term "newspaper carriers" is now modernized, and stands thus: "Gentlemanly disseminators of early intelligence."

Our prayer and God's mercy are like two buckets in a well — while the one ascends, the other descends. — *Bishop Hopkins.*

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

☞ The Postage ☜

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STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, MAY 25, 1850. NO. 11.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

WORK FOR THE SEASON.

AT this busy season farmers have more work before them than they can perform in due time, and they may hardly need any suggestions on the subject. In some sections the sowing of grain is not completed, though it ought to have been attended to last month, had the season been favorable. Wheat, rye, oats, and barley generally succeed best with early sowing, as they are less liable to rust. Yet some sow wheat late, at the risk of the rust, in order to scape the ravages of the grain worm; and often this appears to be a judicious course. Millet and buckwheat succeed best when sowed late.

Since the rot has prevailed, it is better to plant potatoes early; yet it will answer to plant late. We planted some last year as late as the middle of June, and on very moist land; yet they succeeded well, as they rotted but very little. So in regard to this subject, "Better late than never." It is impossible for a farmer to do every thing at the most suitable time, especially in a backward spring.

The sooner the seed is sowed for root crops the better, after the 20th or 25th of May, excepting for turnip, which may be sowed from the middle of June to the first of August, according to the variety. This crop is admirably adapted to late sowing, when it is too late for beets, carrots, or parsnips. This is the month for planting Indian corn; and when it is planted the last of the month, or early in June, it is better to plant rather early kinds, especially on frosty lands. In very warm summers this precaution may not be necessary, but it is well to prepare for seasons as they usually occur.

In destroying weeds, and loosening and pulverizing the soil around plants, a great deal of labor is necessary, and frequently before planting is completed. When this labor is delayed, the expense of hoeing is much increased, and the growth of tender plants very much retarded.

Newly transplanted trees should have the earth around them formed into a basin to hold the water; and it is important to see that a part of the top of the trees is cut off. In some cases trees seem to start so reluctantly, that it is necessary to cut off half the top; and when they have been removed under very unfavorable circumstances, it is sometimes necessary to cut off all the top, to save them.

In pruning fruit trees, we prefer cutting off large limbs in August or September, or later in the fall, as the wounded part will remain sound. But at this season it is necessary to remove dead limbs, and those that interfere, to thin out tops that are too dense, and cut off sprouts and small branches that are giving the tree a wrong direction.

Most farmers, in the hurry of business which almost always occurs at this season, neglect to have a good variety of vegetables and small fruits for their family use. Every one should have a good supply of early and late sweet corn, early potatoes, early beans, both for shell and string; a variety of peas for different seasons, early and late cucumbers and melons, both musk and water; early and late squashes, cabbages, and turnips; early and late parsnips; also, rhubarb, asparagus, lettuce, radish, spinach, cress, and various other things, too numerous to mention. There is still time to attend to most of these vegetables. Small fruits, especially those that are early, should by no means be neglected. Strawberries, raspberries, thimbleberries, gooseberries, currants, blackberries, cranberries, and other small fruits should receive attention, as well as the larger kinds. They come into bearing very early, and yield large crops of fruit, which is very acceptable in hot weather, and saves much expense for meat, butter, &c., which are far less palatable and wholesome. These small plants may be moved at this season, by taking up much soil with the roots.

BONE MANURE.

In reply to the inquiries of "S. P." in regard to the prices of ground bone, and where it is to be obtained, we would remark that what is commonly called ground bone, is really only crushed bone; a part of it is fine, but the greater part is in small pieces, not readily available to the plant; hence it has been a practice in England, and by a few cultivators in this country, to use sulphuric acid, and other

agents, in decomposing the bone, and rendering it readily available to the growing plant, by which a much less quantity is required. If it be not decomposed, the large pieces will remain many years, serving the purposes of a manure for a longer time, but in a less degree. See previous articles in this paper on the decomposition of bone.

As we have not had an opportunity to make experiments in decomposing bones, and the cost of doing it with sulphuric acid is considerable, we use what is called wet bone, which is very fine, as it is composed of sawdust, made by a rotary saw driven with great velocity. This costs but little more per barrel than crushed bone. The wet bone is generally kept for sale by Messrs. Nourse, Mason, & Co. It may doubtless be obtained in other sections, where bones are used as a raw material in manufacture. The price of wet bone is $2 25 per barrel. Dry bone dust is a nice, pure article, which is given to cows for the *bone disorder*. On this subject, see American Veterinarian; also, the first volume, and past numbers of N. E. Farmer.

Old lands usually become exhausted of bone earth or phosphate of lime, and for such, bone manure is valuable. It is usually the most valuable on dry soils, and particularly for the turnip crop, and for grape vines. But it is generally beneficial to most crops that the farmer or gardener cultivates. As to its profit, much depends on the advantages of procuring it, its price, and the price of other manures.

As S. P.'s soil is a deep, black muck, or vegetable mould, it would be well to use some lime or ashes to destroy the acid which is probably in it; and if it is rather moist or wet, drain it, and add gravel or sand to improve the texture. As bone manure is composed largely of the phosphate of lime, it tends to correct acidity; but merely for this purpose, it is not usually so cheap as ashes or lime.

STEEPS FOR SEED CORN.

This is a subject that has received considerable attention; and many experiments have been made on it, with various success. Some have found an advantage from steeps, as they have thought, both in promoting the growth of the plants, and in protecting the corn from vermin; others, again, have received no advantage, and a few, still more unfortunate, have destroyed the seed. Steeps should be used with great caution. When corn is planted late, soaking the seed in water twenty or thirty hours, or in some suitable steep a proper time, will cause it to vegetate earlier. We select a few items on the subject.

Preparation for Seed Corn. — I promised you last year, while you were connected with the *Farmer*, to send you a recipe for republication, in regard to the preparation of *seed corn*. I took it from that journal several years since, and have used it with much satisfaction.

"Dissolve one pound of sal ammoniac in eight quarts hot water. When reduced to blood heat, put one peck of seed corn into it. Let it remain eighteen hours, roll in plaster, and plant it."

I prefer not to let the corn remain in the preparation more than sixteen hours, as, if it remains a *little too long*, it will not vegetate. It should be planted *soon* after it is prepared. I have used this recipe some four or five years, and with the best results. Corn prepared in this way will be ready for hoeing at the *same time* as corn planted without any preparation — *one week earlier*, unless it happens to be *very wet weather*. When this is the case, the sal ammoniac is of little value. I have raised eighty bushels to the acre of corn prepared in this way. And I have never been troubled with the crows pulling up the seed.

Perhaps I should add that sal ammoniac can be purchased for twenty-five cents per pound, although some merchants *ask* four and even six shillings.

S. P. CHAPMAN.

Clockville, Mad. Co., N. Y., *May*, 1850.

—*Rural New-Yorker.*

Soaking Corn in Saltpetre. — I had the benefit of soaking corn in saltpetre, to plant, well tested last year, on a small piece of ground, planted late. I had not enough soaked to plant all the piece. Where it was not soaked, the blackbirds pulled out about one third; where it was soaked, they seldom touched a hill. But what was most peculiar, there happened to be one row planted with dry corn between two rows that were soaked; of the dry, they took several hills clean, and, altogether, about one third of the row; while they did not take more than one hill of the two saltpetre rows.

JAMES C. TAYLOR.

Atlantic, N. J.

—*American Agriculturist.*

FOOD RAISED ON AN ACRE.

The amount of human food that can be produced upon an acre is worthy of great consideration. One hundred bushels of Indian corn per acre is not an uncommon crop. One peck per week will not only sustain life, but give a man strength to labor, if the stomach is properly toned to that amount of food. This, then, would feed one man 400 weeks, or almost eight years!

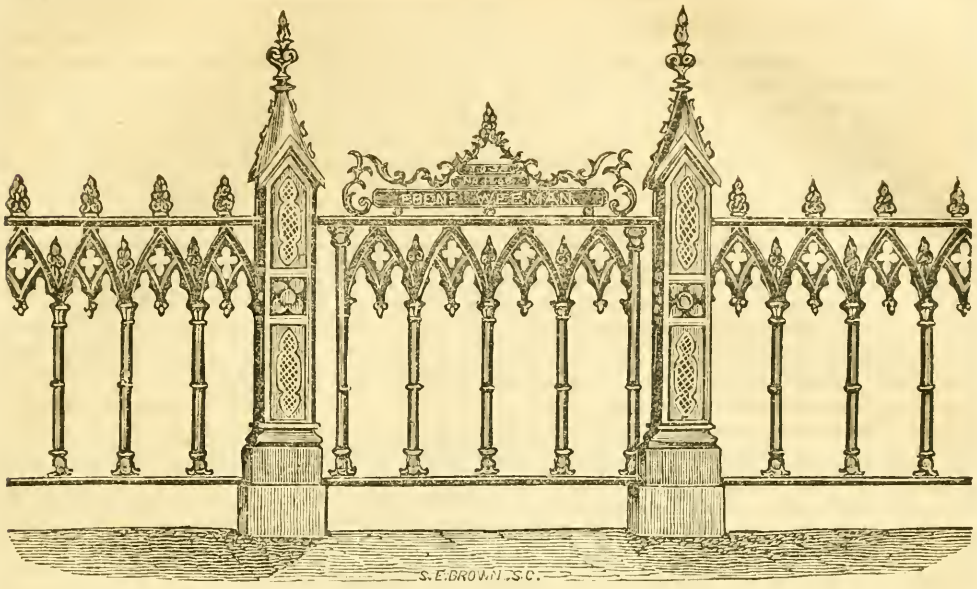
Four hundred bushels of northern potatoes can also be raised upon an acre. This would give a bushel a week for the same length of time; and the actual weight of an acre of sweet potatoes is 21,344 pounds, which is not considered an extraordinary crop. This would feed a man six pounds a day for 3557 days, or nine and two thirds years!

To vary the diet, we will occasionally give rice. This has been grown at the rate of ninety-three bushels to the acre over an entire field. This, at forty-five lbs. to the bushel, would be 4185 lbs.; or, at twenty-eight lbs. to the bushel, when hulled, 2604 lbs., which, at two pounds a day, would feed a man 1302 days, or more than three and a half years!

Upon reflection, it is not very wonderful that so many non-producers are able to find food, when we see how many mouths one laborer can fill.—*American Agriculturist.*

Nature is a book of sweet and glowing purity, and on every illumined page the benevolence and goodness of God are divinely shown. Study its pages, and learn wisdom.

As well pass a kaleidoscope from hand to hand, and expect no trembling touch will alter its aspect, as to think to hear a story from mouth to mouth literally and accurately repeated.



ORNAMENTAL IRON FENCE.

This cut represents an iron fence, recently got up by Mr. Ebenezer Weeman, Nos. 16 and 18 Merrimac Street, Boston. This fence is in Gothic style, and is very ornamental. It is well adapted to cemeteries, front yards, and other purposes. It is neat, of medial lightness, and well proportioned.

Specimens of this fence may be seen in Mount Auburn, on the lot (1268) of the late Hollis Thayer, on Pine Avenue. Mr. Weeman makes iron fences of various descriptions, and he has some of the best original patterns, from recent designs.

For the New England Farmer.

N. Y. STATE AGRICULTURAL SOCIETY.

Mr. Cole: This society will hold its next show and fair at Albany, the first week in September next, commencing on the 3d, and continuing four days. It will, as we learn, be held on spacious grounds provided for it north of the city, and at a convenient distance between Albany and Troy. Ample arrangements are making for the comfort and convenience of the large collection anticipated at this gathering; and by the spirit manifested by our Albany friends, we are confident they will make it the greatest thing for farmers ever witnessed in America.

As this fair is brought almost to the line (which we rejoice is only an imaginary separation, having no control over social feelings and general harmony) between New York state and New England, we hope all our Yankee farmers will go and witness the triumph of our sister commonwealth; and that they will not only go themselves, but that those who can will take their wives and their little ones; their flocks and their herds; their useful and beautiful fabrics; their fruits, so joyous to the eye and refreshing to the taste; their beautiful flowers, sent to gladden the heart, and proclaim the skill and wisdom of their Creator, to beautify and interest the anniversary, and cement the bonds which naturally unite men engaged in the same noble offices, and say to all men that we are brethren, too closely associated to be moved by petty jealousies or sectional advantages.

The exhibition will undoubtedly be worth ten times the cost incident to attending it, but its value will be greatly increased to those who carry in for exhibition; for all such will naturally feel, however small the amount they exhibit, that they have a part and a lot in the matter, beyond that of being *mere lookers on*, to witness the triumphs of others. None need to fear for the safety of articles exhibited, for due care, we are confident, will be taken, by a thorough police, to have every thing, even the smallest, kept safely out of harm's way. We again repeat the hope and expectation, that the farmers of New England will all set themselves about contemplating an excursion to the New York State Cattle Show and Fair at Albany next September.

April, 1850. W. B.

Deep planting is always to be avoided. We have an illustration of this error in our garden — two trees side by side, which were planted five years ago, and were then of equal size. One was planted as deep as it previously stood, and is now twice as large as the other, which was planted a foot deeper, and has produced no fruit, while the former has yielded abundantly for the last two years. — *Granite Farmer.*

Jenny Lind was offered some thirty thousand pounds to sing at the Imperial Concerts at the court of Russia. Jenny's significant negative to the offer was, "Hungary." Great is the triumph of genius, when the nightingale is too much for the eagle.

Set out a Tree. — Let no one who has a spot on which to place it, neglect to set out at least one tree this spring.

For the New England Farmer.

FARM BUILDINGS.

Mr. Editor: In your number of April 13, we observed a selected article, which treats of the merits of the different materials used in the construction of farm buildings. The writer enumerates the advantages claimed for wood, by its advocates — "its cheapness, beauty, the facility of obtaining it, and the readiness with which it can be repaired;" and asks whether they can be sustained. As to cheapness, he says he believes that "most farmers, who have their farms and buildings in decent condition, spend as much in repairing the structures for a term of years, as would pay the interest upon good stone ones." This is given as a mere opinion, unsupported by any ascertained and stated facts. Upon a question of this kind we should be pleased to see the figures upon which the calculation is based — what the supposed amount of repairing upon a wooden building costing any given sum, for a term of years — what the difference in cost between constructing a building of the same dimensions, of wood, or of stone — and what the difference in the expense of repairing which each would require. Taking the statement referred to to be correct, it admits that, in the first instance, the cost of stone is much greater than that of wood, and that farmers have a capital, which they can well invest in the manner proposed; while the fact that the former requires repairs as well as the latter, is entirely overlooked. The percentage for repairs upon substantial wooden buildings, always kept in decent condition, (and this will be the cheapest,) for a series of years, according to my experience, would form but a small capital to meet even the interest upon the *difference in costs* between those of wood and those of stone, supposing the latter required no repairs. But much of those expenses having been incurred for interior work, and roofs, doors, windows, &c., would have been necessary, of whichsoever of those materials the buildings had been constructed.

The writer referred to says, "When a man sells his farm with wooden buildings upon it, such as are generally found in New England, it brings no higher price per acre, than if destitute of buildings altogether;" that is to say, the buildings being wood, they do not enhance the value of the estate. This is absurd. No single instance, we venture to say, can be produced to corroborate this statement. Take two farms of equal size and of equal goodness, the one entirely destitute of every structure, and the other having upon it such wooden buildings "as are generally found in New England," would any judicious man, who is called upon to appraise the estates, appraise them at the same value? Would not any person wishing to buy, be willing to pay more for the one than the other? Supposing a farm is offered for sale, with good wooden buildings upon it, and a person offers, and is willing to pay, what is considered, by competent judges, its value, and pending the contract those buildings should be consumed by fire, would he afterwards pay as much for the remainder of the estate? It is true, that farm buildings, whatever may be the materials used, will seldom be estimated and sell at their costs. Rarely will a farm in good condition bring the costs of its improvements, putting the ordinary charges upon labor. Indeed, we know of good farms, which it is said would not sell for more than an amount sufficient to pay for the stone fences constructed upon them, at such a computation.

Then the liability of wooden buildings to take fire is considered; and this is regarded as a "*serious* objection in the country," on account of the scarcity of fire-engines. Stone structures are certainly more secure from fire from without, but not within; and where engines are scarce, it will rarely happen that either "are ever extinguished" when once well on fire. The advantage in favor of stone, if any, can be ascertained by the difference in the rates of insurance.

Stone is then pronounced "emphatically the material for us at the north." The writer says, "Its solidity, durability, strength, beauty, imperviousness to moisture, its coolness in summer, and warmth in winter, the facility with which it can be obtained, render it, take it all in all, the best." A part of these qualities may be correctly claimed, but we do not consider them *advantages*. A stone building is *solid*, but one of wood can be constructed quite solid enough for all useful purposes. A stone building may or may not have greater *strength* than one of wood; this depends upon the labor expended, and the quantity and quality of the materials used, in erecting it. But supposing it has, — is not a well-built wooden one strong enough?

As to "beauty," we should prefer an ordinary house of wood well painted, to one built, as suggested, of common pasture stone. Most of the stone ordinarily used in the country to build cellar and pasture walls is too large, heavy, and misshapen, and too difficult to hammer, to build the outside walls of farm buildings. There are some *beautiful* stone structures in the country, but they are expensive. In erecting farm buildings of that material, it would not answer to pay much regard to ornament. The "beauty" part, especially if carried to that extent which an improved taste is reaching, must be of wood, to meet the condition of ordinary republican purses.

As to the imperviousness of a stone building to moisture, much also depends upon the kind or quality of the stone and mortar used, and the care and skill expended in erecting it. Where there is a deficiency in either, it is difficult afterwards to apply a thorough remedy. Perviousness to moisture is not a rare complaint with regard to stone. Downing says, the fault of dampness, which is generally found of stone buildings, can be remedied by what is technically called furring off. This undoubtedly, to a partial extent, avoids the difficulty, but does not wholly eradicate it. There is an atmosphere like that of a vault or cellar, in the rooms of stone buildings, in the winter, which have not been heated for some days. Many of our stone churches, which are not heated but once a week in that season, are wholly unfit for an invalid to attend.

"Bad mortar," says Waistell, a celebrated English writer, "is the main cause of the decay of *all our modern buildings*, from the cottage to the palace." And in connection with this subject he remarks, that "Roman cement should be used in the foundation, in exterior jointing, and frequently even plastering in the interior in different proportions, according to circumstances." This material is seldom here used for such purposes, if for no other reason than for the additional expense. We do not think that the mortar ordinarily used here is superior to that used elsewhere, while the frost, being more severe, acts more freely, and produces a greater injury.

Stone is certainly more durable than wood, but the latter is more readily repaired. Whether the walls of a house be of one or the other, the building is of use so long as the doors, windows, and the interior materials and work admit of its being kept in habitable order. The *old* stone walls would be of little value of themselves alone. If proper attention is paid to repairs, the wooden house will fully realize the wishes of the writer referred to, when once well built; "there it stands, to be transmitted to children, and children's children, unto the third and fourth generation," and longer if desirable.

It is generally thought, perhaps, that stone is warmer in winter and cooler in summer than wood. We have never been convinced of the truth of this opinion by any reasoning of others, or by our own experience. Stone is a better conductor of heat than wood. In winter, the rooms of a wooden building are more readily heated, and will better retain the warmth. Walls of stone when cold, being thick, are not then much affected by the sun's rays. In summer, the sun heats them to a high degree, and from their thickness, they retain greater heat than will ordinarily pass off in the night. A neighbor of ours, a great stickler for the advantages of stone, says he has observed that the rooms of a stone house continue cooler later into the warm weather, and continue warmer later into autumn, than those of wood. Why is this so, except for the reason that the walls of stone cooled by the cold of winter, are less readily heated, and being thoroughly heated, are less readily cooled?

It is often said that the buildings in our country make an unfavorable impression upon foreigners, because they are built of wood. They have the appearance of being mere temporary tenements, boxes, hastily built, and to be removed at a convenient opportunity. Let us not place too much value upon such opinions, nor attempt to please the taste of strangers accustomed to see structures of other materials, (mud and turf, as well as stone,) unless for substantial reasons. For our part, we prefer the cheerful buildings of our own happy villages, to the heavy, *solid*, gloomy, and sombre structures of stone.

But the main objection to stone is its greater expense. Farmers who have more capital than is sufficient to build of wood, and do not mind making an outlay, if not a sacrifice, can try the experiment of erecting stone ones; but we should advise them to expend their extra funds in improvements upon the land. L. C. E.

Providence, *April* 27, 1850.

For the New England Farmer.

NATURE AND OFFICES OF EARTHS AND SOILS.

I. Earths and Soils being the laboratory wherein the food or nutriment of the plant is prepared, and the media through which it is conveyed to the root, it becomes a matter of primary importance to the gardener and agriculturist to obtain correct ideas of their component parts, and of the offices they perform in the work of vegetation. It will also be very useful to acquire a method of *general classification*, so as to arrive at some degree of precision and systematic arrangement. On this subject, says the Encyclopædia of Gardening, at No. 1031. 1.: "A correct classification of soils may be founded on the presence or absence of organic or inorganic matter in their basis. This will form two grand classes, viz., *primitive soils*, or those composed entirely of inorganic matter; and *secondary soils*, or those composed of organic and inorganic matter in mixtures. These classes may be subdivided into *orders*, founded on the presence or absence of saline, metallic, and carbonic matter. The *orders* may be subdivided into *genera*, founded on the prevailing earths, salts, metals, or carbon; the *genera* into *species*, founded on their different mixtures; the *species* into *varieties*, founded on color and texture, and *subvarieties*, founded on moisture, dryness, richness, lightness, etc."

In naming the genera, the first thing is to discover the prevailing earth or earths; thus, "Sir Humphry Davy has observed, the term *sandy soils* should never be applied to any soil that does not contain, at least, seven eighths of sand; sandy soils, that effervesce with acids, should be distinguished by the name of calcareous (chalky) sandy soils, to distinguish them from those that are silicious, (of the nature of flint.) The term *clayey soils* should not be applied to any land which contains less than one sixth of impalpable earthy matter, not considerably effervescing with acids." The word *loam* should be limited to soils containing at least one third of impalpable earthy matter, copiously effervescing with acids. In general, the soils, the materials of which are the most various, are those called *alluvial*, or which have been formed from the depositions of rivers; and these deposits may be designated as silicious, calcareous, or argillaceous, (clayey;) and in some cases, the term *saline* may be added as a specific distinction, applicable, for example, at the mouths of rivers, where their alluvial remains are overflowed by the sea.

II. The Qualities and Value of Soils are discoverable botanically, and by chemical analysis. First, botanically, that is, by the plants which grow on them naturally. The sainfoin (*hedysarum onobryitris*) is almost always an indication of a calcareous soil; the common colt's-foot, (*tussilago-farfara,*) of blue clay; purple sandwort, (*arenaria rubra,*) of poor sand; the common wood sorrel, (*oxalis acetosella,*) of the presence of iron. Secondly, by chemical analysis. The quantity of soil best adapted to a perfect analysis is stated to be four hundred grains; it should be collected in dry weather, and exposed to the air till it becomes dry to the touch. The process of analysis is complicated, and one of extreme nicety. Some cultivators may be qualified to perform the necessary operations, but in general a degree of accuracy is required which can only be obtained by constant practice, founded upon scientific principles. The following is the analysis of a fertile soil in the neighborhood of Bristol, R. I.: in four hundred grains, there were of water, .52; silicious sand, 240; vegetable fibre, .05; vegetable extract, .03; alumina, .48; magnesia, .02; oxide of iron, .14; calcareous earth, .30; loss, .06. On the utility of analysis, Dr. Ure (Dict. of Chem.) observes, that "no system can be devised for the improvement of lands, independently of experiment; but there are few cases in which the labor of analytic trials will not be amply repaid by the certainty with which they denote the best methods of melioration, and this will particularly happen when the defect of composition is found in the proportions of the primitive earths. In supplying organic matter, a temporary food only is provided for plants, which is in all cases exhausted by means of a certain number of crops; but when a soil is rendered of the best possible constitution and texture with regard to its earthy parts, its fertility may be considered as permanently established. It becomes capable of attracting a very large portion of vegetable nourishment from the atmosphere, and of producing its crops with comparatively little labor and expense."

III. Of the Uses of Earths. *Pure earths*, exclusively of organized matter and water, are allowed, by most physiologists, to be of no other use to plants than that of supporting them, or furnishing a medium by which they may fix themselves in a situation favorable to their future growth. But earths and organic matter, that is, *soils*, afford at once support and food. Thus the *pure earths* may be considered as the mechanical agent in the soil. They consist chiefly of metallic bases united to oxygen, not readily decomposable; and consequently they cannot be reasonably supposed to be convertible into the elements of organized matter, which, as has been stated, are chiefly found to be oxygen, hydrogen, carbon, and azote. Plants, it is true, consume a small portion of the earths they grow in, as is discoverable by burning, for their ashes are found to contain earths; but the quantity has been ascertained

never to equal more than a fiftieth part of the weight of the plant consumed. The earthy parts of the soil are chiefly useful in detaining water, so as to supply the proper proportions to the roots of the vegetables; and they are likewise efficacious in producing the proper distribution of the animal or vegetable matter. The earths, when duly mixed with such matter, prevent it from decomposing too rapidly, and regulate the supply of its soluble parts in proper proportions to the roots of the plants. The earths are also necessary to the existence of plants, both as affording them nourishment, and enabling them to fix themselves in such a manner as to obey those laws by which their radicles are kept below the surface, and their leaves exposed to a free atmosphere.

IV. The due Tenacity and Coherence of the Soil arise from the finely-divided matters of its constituent parts, and they possess the power of giving those qualities in the highest degree when they contain much alumina (pure clay.) A small quantity of finely-divided matter is sufficient to fit a soil for the production of turnips and barley; and a tolerable crop of turnips has been produced on a soil containing eleven parts out of twelve sand; a much greater proportion of sand, however, always produces absolute sterility. Tenacity is obtained by certain proportions of finely-divided vegetable and animal decomposable matters in union with alumina.

V. Friability, or Looseness of Texture, is chiefly occasioned by the admixture of sand; and in a certain degree this quality is of importance, in order that the operations of culture may be readily conducted, that moisture may have free access to the fibres of the root, that heat may readily be conveyed to them, and evaporation may proceed without obstruction. As alumina possesses all the properties of adhesiveness in an eminent degree, and silex those of friability, it is obvious that a mixture of those two earths, in suitable proportions, would furnish every thing wanted to form the most perfect soil, as to water, and the operations of cultivation. In a soil so compounded, water will be presented to the roots by capillary attraction; it will be suspended in it, as in a sponge, in a state of minute division, so that every part may be said to be moist, but not wet.

VI. The Power of Soils to absorb Water from the Air is much connected with fertility: when this power is great, the plant is supplied with moisture in dry seasons; and the effect of evaporation in the day is counteracted by the absorption of vapor from the atmosphere by the interior parts of the soils during the day, and by both the exterior and interior during the night. The soils that are most efficient in the supplying the plant with water by absorption from the atmosphere are those in which there is a due admixture of sand, finely divided clay, and carbonate of lime or chalk, which mixture constitutes a loam, with some animal and vegetable matter; and which are so light as to be freely penetrated by the atmosphere. *The productiveness of soils* is influenced by the nature of the subsoil on which they rest. When they are immediately situated upon a bed of rock, they are rendered dry by evaporation much sooner than when the subsoil is of clay or marl. A clayey subsoil will sometimes be of material advantage to a sandy soil, and will retain moisture so as to be capable of supplying that lost by the earth above. A sandy or gravelly subsoil often corrects the imperfection of a too great degree of absorbent power in the true soil. In calcareous countries, where the surface is a species of marl, the soil is often found only a few inches above the limestone, and its fertility is nevertheless unimpaired; though on a less absorbent soil this situation would occasion barrenness; and the sandstone and limestone hills may be easily distinguished at a distance in summer, by the different tints of vegetation. The grass on the sandstone hills usually appears brown and burnt up; that on the limestone hills, flourishing and green. In the Island of Cuba, and others, where the subsoil is chalk to a considerable depth, the verdure of grass, and of young trees and shrubs, is often retained during parching seasons, while in many other situations the grass is entirely scorched, and the trees lose their leaves, owing to the continuance of dry weather. Chalk absorbs moisture readily, and retains it tenaciously; hence, in hot, dry summers it gradually affords moisture to the roots of plants at a time when more open and porous soils are comparatively deprived of moisture.

VII. Chemical Agency of Soils. Besides the mechanical uses of soil, there is another agency between soils and organizable matters, which may be regarded as chemical. The earths, and even the earthy carbonates, have a certain degree of chemical attraction for many of the principles of vegetable matter; when boiled with pipe-clay or chalk, they form a combination by which the vegetable matter is rendered more difficult of decomposition and solution. Pure silica and silicious sands have little action of this kind; and the soils which contain the most alumina and carbonate of lime, are those which act with the greatest chemical energy in preserving manure. Such soils merit the appellation, which is commonly given to them, of *rich* soils; for the vegetable nourishment is long preserved in them, unless taken up by the organs of plants. Silicious sands, on the contrary, deserve the term *hungry*, which is commonly applied to them; for the vegetable and animal matters which they contain, not being attracted by the earthy constituent parts of the soil, are more liable to be decomposed by the action of the atmosphere, or carried off from them by water. In most of the black and brown rich vegetable moulds, the earths seem to be in combination with a peculiar extractive matter, afforded during the decomposition of vegetables; this is slowly taken up and attracted from the earths by water, and appears to constitute a prime cause of the fertility of soil.

VIII. Soils may be improved by Pulverization, or the minute divisions of the particles by mechanical labor; and under this term are included the operations of ploughing, harrowing, digging, trenching, hoeing, and raking. It is of the most essential service to land, and induces fertility in a variety of ways. It opens the ground, and thus promotes the regular diffusion of water. It tends to increase the quantity of vegetable food, by enabling the water holding nutritive matters in solution, to convey it more equally to the roots of plants. Pulverization, by opening the soil, promotes and assists the free ingress of heated air, and thus regulates and improves the temperature of the soil; it also introduces, and as it were buries, a portion of the atmospheric air, and thus furnishes another source of electro-chemical decomposition and combinations.

The depth of pulverization must depend upon the nature of the soil and subsoil. In rich, clayey ground it can scarcely be too deep; and even in sand, unless the subsoil contains principles noxious to vegetables, deep comminution should be practised. When the roots are deep, they are less liable to be injured either by excess of rain or drought; the radicles are shot forth into every part of the soil, and the space from which the nourishment is derived is more considerable than when the seed is superficially inserted in the soil.

IX. Soils may be improved by adding to, or subtracting from, them ingredients in which they are deficient, or superabound. If a soil, of good appearance and texture, contain sulphate of iron, it may be ameliorated by quicklime; if there be excess of calcareous matter, it may be improved by the application of sand or clay. Soils too abundant in

sand are benefited by the use of clay, marl, or vegetable matter.

By *burning soils*, considerable chemical change can be brought about. The bases of all common soils are mixtures of the primitive earths and oxide of iron, and these earths have a certain degree of attraction for each other. When clay or tenacious soils are burnt, they are brought nearer to a state analogous to that of sand. In the manufacture of bricks, the general principle is well illustrated: if a piece of dried brick earth be applied to the tongue, it will adhere to it very strongly, in consequence of its power to absorb water; but after it has been burnt, there will scarcely be any sensible adhesion.

The soils improved by burning are all such as contain too much dead vegetable fibre; also, all such as contain their earthy constituents in an impalpable state of division, that is, stiff clays and marls; but in coarse sands and rich soils, containing a just mixture of the earths, and in all cases in which the texture is sufficiently loose, or the organizable matter sufficiently soluble, the process of burning cannot be useful.

X. Trees improve bad Soils. It certainly is not one of the least recommendations of planting, that it may be made to contribute essentially to the improvement of a bad soil, as is the case on sterile heath and commons, where three means, the consequences of the planting, act together in promoting such improvement. The first is, the shade of the trees, which, by decomposing the vegetable matter on the surface soil, renders it at once more fertile, and easily penetrable by the root. The second is, that by the decomposition of the annual fall of leaves, an addition is made to the vegetable soil, and that of the very best description. The third circumstance is, that as the roots collect a great deal of their support from a depth much lower than field vegetables are used to reach, they hence convert the *useless* into *useful*. In short, instances are not wanting, where land previously producing little besides heath, has, after producing a crop of trees, proved, without further means, very tolerable pasture.

BERNARD REYNOSO.

For the New England Farmer.

CULTIVATION OF INDIAN CORN.

Mr. Editor: In reading F. Holbrook's article on this subject, I was much pleased with his manner of cultivation, in some respects, particularly the preparation of the soil, and the method of saving seed-corn. Deep planting, too, in case of frost, is an advantage, as the corn is much more likely to start again if killed down to the ground. But in advocating wide planting, I beg leave to differ from him. He says he is "suspicious of the reasoning which favors close planting as a protection against drought." Now, if, as he seems to imply, in planting double the number of hills, we raise double the number of stalks on an acre, his reasoning might be in some measure correct; but I think that if, instead of doubling the number of stalks, we leave a less number in a hill, so as to have three as often as we should have two at the usual distance, the extra draught upon the moisture of the soil will be fully counterbalanced by the increase of shade! I think, too, that Mr. H. furnishes us with evidence in favor of close planting, in the fact that the corn planted in drills yielded from ten to fifteen bushels more than that planted in hills.

Another point, in which I should differ from Mr. H., is in the application of manure wholly by spreading; although I do not advocate the opposite course, of applying it all in the hill.

I think the land should be made rich by spreading manure on the surface, and ploughing it in, and then a small quantity of well-rotted manure should be applied in each hill. In a climate as cold as the central and northern parts of New England, something is required to warm the ground, and keep the young plants thrifty during the cold weather which sometimes succeeds the time of planting in the spring. This the manure in the hill supplies, while that which is spread carries it through, and causes it to ear better; thus obviating objections, to which either mode, alone, would be liable.

I have now given you my opinion, in part, as to the best method of planting, and applying manure, and I will give you a few facts to show how it works in practice. Previous to 1838 we applied our manure mostly in the hill, and planted our corn at the distance of three and one half feet each way; planting as much ground as we could manure in this manner, and hoeing it twice or three times, as we could spare time before haying; after which, it was generally left until time to harvest. I do not recollect particularly about the crops obtained, as I was young at that time, but I am told that eighty bushels of ears were considered a large crop, and fifty or sixty a fair average. But the summers of 1836 and 1837 were so cold, that in this way we got no corn at all; and in 1838 we planted less than half our usual quantity of land, and applied as much manure as we had previously allowed for the whole. In addition to this, instead of having the hills three and one half feet in the rows, we planted them about two; and we were careful to hoe thoroughly three times before haying, and, immediately after haying, all the weeds which had escaped were pulled up and thrown into the hog-yard. The result was, that instead of sixty bushels to the acre, we obtained one hundred and sixty. Since that time, we have pursued a similar course with like success.

We generally spread about twenty-five loads of manure to the acre every other year, and put from eighteen to twenty in the hill every year. (These loads contain only twenty-five bushels to the load, which, taking the average, would be considerably less than Mr. H. applied.) By keeping the ground wholly clear of weeds in the manner I have described, which makes the least work in the "long run," we have obtained from one hundred and forty to one hundred and sixty bushels ears to the acre, and the land was constantly improving.

On one piece, containing one hundred and twenty-eight rods, after managing it in this way for two or three years, we raised a fraction short of sixty bushels of clean, heavy oats; and there were four apple-trees under which but little grew, so that there was, in fact, no more than three fourths of an acre; besides which, eight hens lived on them for some time before they were harvested. This would make the oats yield at the rate of eighty bushels to the acre. While speaking of this piece, there was another fact, which goes to confirm what you have remarked in a former volume. When we seeded it with grass, we sowed herdsgrass and clover, mixing them together, and sowing the whole of the piece alike; but a part on which we had raised corn produced clover, with scarcely any herdsgrass, and a part on which we had raised potatoes produced herdsgrass, with as little clover.

W. F. B.

Ashfield, Mass., *April* 19.

Remarks. — As to the distance of planting corn, much depends on the size. The Canada corn, and the small cap corn, will bear near planting; and without close planting, a full crop cannot be obtained. These kinds require twice as many plants on an acre as would be proper for the large varieties. — Ed.

DORKING FOWLS.

For the New England Farmer.

Mr. Cole: This breed of fowls derives its name from a town in England, where, some fifty years since, it was introduced from China. These fowls were selected by a person, a native of Dorking, Surrey, who resided in the East Indies, and held a civil office under the Honorable East India Company.

The fowls were brought to England in one of the company's ships, and were carried to Dorking, where they were highly prized by the recipients, as great curiosities, on account of the fifth toe, the snow-white plumage, and the soft and downy feathers with which they were covered.

These fowls were for many years bred with the utmost care, by the family of the person who selected them, and were kept by them exclusively, the family regarding it a matter of some honor to be the sole possessors of this race; and only within a few years, the thorough-bred fowl has been allowed to go out of their possession.

That the Chinese possess a race of fowls which have the fifth toe, is proved by the fact, that a gentleman of this city has received direct from Canton, China, a pair of fowls, which have the fifth toe developed as fully and distinctly, and in the same form, as the best bred Dorking. These fowls, which arrived within the last six weeks, are also covered with a snow-white plumage.

I have been thus particular in giving the history of the Dorking fowls, from the fact, that Dr. J. C. Bennett, in the Poultry Book, on page 200, says, "For instance, the Dorking fowl was originally produced *by crossing the Great Malay with the English Game fowl*, as an accident; but it by no means follows that Dorkings are the uniform, or even the common result of such a cross, for hundreds of such experiments have proved unsuccessful. In order, then, to produce pure Dorkings, the breeding must continue from the original stock, carefully avoiding 'close,' and 'in and in' breeding."

Pure Dorkings from the Great Malay and the English Game!

The plumage of the pure bred Dorkings is white, with legs and bill of the same color. The fifth toe is also an indispensable characteristic. The combs are both single and double. The wattles are of medium size. The hens are good layers, constant sitters, and most excellent nurses. The flesh of these fowls has an agreeable flavor, and is rich and juicy. The average weight of these fowls is from twelve to fourteen pounds per pair. The eggs are large, rich, and nutritious. The chicks are hardy, and easily raised.

The engraving was made from a drawing of a pair of Dorkings which were two years old at the time it was taken.

No thorough-bred Dorking ever has legs or bill of any other color than white. Dorking fowls which show any other color, are of impure blood, and cannot be depended upon to produce their like.

All *speckled*, *fawn-colored*, or *black* Dorkings are mongrels, and any person having the thorough-bred white Dorkings, can produce, by crossing with other breeds, mongrel specimens of such color as they may desire.

On page 74, Dr. Bennett has *favored* the reader with an elaborate description of the Black Dorking, given by Mr. N. C. Day, of Lunenburg, Mass., who says, "they came from Philadelphia." "Their bodies are of a large size, * * and of a jet black color." * * "The neck feathers of some of the cocks are *tinged* with a bright gold color, and those of some of the

hens bear a *silvery* complexion." (*Jet black, bright gold color*, and *silvery complexion!*) "Their tails are shorter and broader than others of the race," (what race?) "and they feather rather slowly."

I, for one, cannot suffer such gross misrepresentations to pass unnoticed. Dr. Bennett has no apology for suffering Mr. Day's statement to appear in his work. Dr. Bennett, if he had but a slight acquaintance with the different breeds of domestic fowls, would have seen at once, that the Black Dorkings described by Mr. Day were a mongrel race, into whose composition the blood of the Black Java largely entered. Yours, &c.,

S. BRADFORD MORSE, Jr.

For the New England Farmer

WHITE SHANGHAE FOWLS.

Mr. Cole: In the account of the White Shanghaes written by me, and published in the last number of your paper, an error occurs as to the year in which the importation of the Shanghae fowls by Capt. A. S. Palmer, of Westerly, R. I., was made. The gentleman from whom the information was received, has had an interview with Capt. Palmer, and in a letter bearing date May 9, 1850, says, "In one of my communications to you, I gave it as my opinion, that the fowls of Dixon were not Shanghaes — not having been imported from that place, but probably from Canton. That information, though derived from two sources, was incorrect. Capt. Palmer informs me that he brought them from Shanghae, in the year 1845, via Canton. He put up two large coops of them, but succeeded in bringing home only eight pairs, most of the largest having died on the passage. He says that they ate fowls on the passage that weighed eleven pounds, dressed; and that some of his fowls died on the passage, in consequence of becoming too fat. When he arrived in Canton, the fowls were nearly as great a curiosity to the people of that place as they were here. He also informed me that his was the second vessel that ever entered the port of Shanghae.

"Capt. Palmer's brother has just brought from Shanghae several pairs for the captain, of two or three sizes; one pair he speaks of as being uncommonly large. I endeavored to purchase a pair of the captain, but he says that fifty dollars would not purchase a pair." Yours, &c.,

S. BRADFORD MORSE, Jr.

For the New England Farmer.

CONGENIALITY OF STOCKS AND SCIONS.

Mr. Cole: This subject seems to be very imperfectly understood, probably from the fact that those most engaged in horticulture have but little time or desire to try experiments. Enough has been done, however, by amateurs and others, to show that scions set in unnatural stocks will frequently grow, and that some such scions are productive of fruit, even better than on their own bottoms. The drawback, however, is, that they will not live so long. But the pear on the quince, which some years past was thought to be but of short duration, is now known to live twenty-five years. This union seems to be the most successful of unnatural unions. There was a paragraph in the first volume N. E. Farmer, p. 40, which had traversed the rounds of the horticultural papers, stating that a gentleman visiting England had tasted of an apple grown on a *pear* stock, and that "it had a peculiar flavor, somewhat like a pear." See, also, the same on p. 79. It seems from these paragraphs, that the apple can be successfully ingrafted into the pear. It is not understood, however, that the *reverse* is so successful, if we except the Seckel pear, which is said to do quite well so far as tested. Now, in this union, can it make any difference whether the pear is the scion or the stock? If the Seckel pear does well or better on the apple, may there not be some other varieties which will do as well? There seem to be different natures in pears, (as some will, and others will not, grow well on the quince;) and may we not reasonably infer that there are many other pears which, by proper testing, will yet be found congenial with the apple? Having last year quite a number of suitable apple stocks, I inserted some of the scions of the Beurre Diel, Louise bon de Jersey, and one of the Beurre d'Aremberg. The two former kinds did well as respects growth; the latter put forth only a couple of leaves, and died the last winter. The Diels and the Jerseys are grafted a foot from the ground, and I shall let them take their course, and at some future day may report their fate. This year I have inserted a variety snug to the ground, with a view of their *re-rooting*. I have two other pears inserted on *forest* stocks, (different from any which I have heard experimented upon,) and anxiously wait the issue. I intend to make still further experiments, for my own gratification.

I have heard of pear scions bearing well on apple-trees in a bearing state, and think that inserted in small stocks they may *begin* to bear a little; but whether they will so continue, in either case, is doubtful. Nevertheless, it seems to me, that if the apple will do well on the pear, the pear will do equally well on the apple. L.

Boston, *April* 22, 1850.

For the New England Farmer.

"CORN FOR FODDER."

Mr. Cole: Having seen several inquiries, in the New England Farmer, with regard to raising corn fodder, and having been in the habit of raising it for a number of years, I will give you a statement of my method of raising and curing. I think that sweet corn is preferable to any other. I sow it in drills, about three feet apart. I furrow deep, and fill the furrow with compost, and drop the corn the whole width of the manure, and from two to three inches apart. I always cut it up before the frost. I stook it up immediately after cutting, in bunches so large that I think the wind will not blow them over. I place my arms round near the top, and bring them in as tight as I can, then break the tops over as you would a shock of stalks. I let them stand out till they are sufficiently dry to pack away in the barn. I have never had any trouble in curing fodder in this way. W. S.

Medfield, *May* 8, 1850.

CULTIVATING DWARF PEARS.

Every intelligent fruit raiser is aware of the necessity of cultivating and manuring the soil well for dwarf pear-trees. S. B. Parsons states that he has seventeen hundred trees on four acres; that he applied to this orchard, last spring, $150 worth of manure, and gathered in the autumn two hundred and seventy-five bushels of potatoes, thirty tons of sugar beets, and a large quantity of turnips and cabbages — paying the expenses of manure and cultivation, and giving the pear-trees a vigorous impulse. — *Maine Farmer.*

Domestic Department.

The Education of Farmers' Daughters. — Most of the farmers of our country are the sons of farmers; and most of their wives are the daughters of farmers. This shows the propriety of educating our children with reference to our own occupation. The first and most important step towards the improvement of the great agricultural community, is the improvement of the mind, by a proper early education. Until they, as a class, are as well informed as those engaged in other pursuits, they must and will feel a degree of diffidence, a want of confidence in themselves. The most important duty we have to perform, either as parents or citizens, is that of properly educating and bringing up our children. Until the farmers so discharge that duty, as that their descendants rank equal with those engaged in other pursuits, they will be guilty, as they too long have been, of a great dereliction of duty.

I am well pleased to see, of late, able articles in our journals, on the subject of giving our sons an agricultural education; but this should be coupled with a good common education, at least. I am proving the want of this, in almost every sentence I write.

We should also remember, that the education of our daughters is of equal importance, and that common justice requires that we give them an equal chance with our sons. It is true, our women do not vote at our elections, or hold political offices, or manage the out-door concerns of the farm; but it is equally true, that they exercise their full share of influence in all our concerns. They have the moulding, direction, and training the minds of our children — the boys to the age of ten or twelve, and the girls to a much greater age; and nature has admirably fitted them for the performance of this important duty. Their early impressions, derived from the mother, are indelibly fixed in their minds, and have great weight in forming their future characters. Most of us, who had a mother living after we became old enough to recollect, can well remember the fine sympathetic feelings she possessed, and taught us; and these are among the noblest feelings of the human heart. We can also well recollect the rigid principles of morality taught us by her, and the lasting impression they made on our minds. If we look about among our acquaintance, we shall see that wherever there is a well-educated, intelligent mother, there is also an intelligent family of children. And this is a much more important matter, than the rearing of fine, high-blooded animals with four legs.

If we will divest ourselves of pride and prejudice, and examine coolly, we shall see that our women have greater influence over us, than we are generally willing to admit.

Nor is the importance of educating our daughters less in a pecuniary, than in a moral and intellectual point of view. Much of the success, prosperity, and comfort of every farmer, depends upon the management of his in-door concerns, by his wife. There is no occupation in which intelligent women are more useful than that of farming. If we will look about among our acquaintance, we shall see that wherever there is a wife of the right stamp, if the husband possesses ordinary ability and industry, they will be prosperous. If I am right in this, it shows the necessity of properly educating our daughters, *and giving them a proper training in all matters that relate to good housewifery.* Let us fit them to make good farmers' wives, and they will answer for those engaged in other pursuits. We should first attend to the useful and substantial part — *that well done*, if we can afford it, to do something by way of the ornamental. But it is feared that some of our farmers pay too little attention to the former, and too much to the latter.

A young lady, with ever so fashionable an education, *if she possessed no knowledge of the kitchen, and the different departments of housekeeping*, however well she might show off in the parlor or drawing-room, would make a farmer a very unsuitable companion; she would not be worth as much as Lot's wife after she became salified, because he could procure from her salt for his porridge.

The first and most important step is, to make our common schools good. If this is neglected, the great middling class of farmers, and almost all the poorer class of people, will fail in giving their children a proper education. We should make our common schools such that our scholars can go from them direct to the academy, to good advantage, or procure a good common education without. When this is done, we shall have an intelligent agricultural community.

A FARMER.

— *Chickopee Telegraph.*

To clean Knives. — Charcoal, ground to powder, is one of the best things ever discovered for this purpose.

Youth's Department.

Good Society. — It should be the aim of young men to go into good society. We do not mean the rich, the proud, and fashionable, but the society of the wise, the intelligent, and the good. Where you find men that know more than you do, and from whose conversation one can gain information, it is always safe to be found. It has broke down many a man by associating with the low and vulgar — where the ribald song was inculcated, and the indecent story, to excite laughter, and influence the bad passions. Lord Clarendon has attributed his success and happiness in life to associating with persons more learned and virtuous than himself. If you wish to be respected, if you desire happiness and not misery, we advise you to associate with the intelligent and good. Strive for mental excellence, and strict integrity, and you never will be found in the sinks of pollution, and on the benches of retailers and gamblers. Once habituate yourself to a virtuous course — once secure a love of good society — and no punishment would be greater than by accident to be obliged, for a half a day, to associate with the low and vulgar.

Health Department.

Individual Odor. — Bathing. — The quantity of heat, perspiration, or moisture continually passing from the body is very great. Frequent exposure of the naked body to the air, changes of clothing, and bathing, are necessary to health. No person can be considered cleanly without their observance.

"It may shock the feelings of a young lady," says Mrs. Farrar, in her Young Lady's Friend, "to be told that this large quantity of matter which is constantly passing off through the skin, has an individual odor, more or less disagreeable in different persons. Now, each person is so accustomed to his own atmosphere, that he is no judge of his odor; but, since most persons can recollect some of their friends

who affect them disagreeably this way, all should bear in mind the possibility of so offending others; and, though none of us can change the nature of the atmosphere, which we are always creating around us, we can prevent its becoming a nuisance by the accumulation of excreted matter on the skin or in the clothing; we can, by washing every part of the skin once in twenty-four hours, be sure of sending off only fresh exhalations."

Mechanics' Department, Arts, &c.

The Ohio Indestructible Mineral Paint. — A paragraph in the last number of the Farmer and Mechanic, asking for information in regard to this valuable article, induces me to state the result of my own experiments with it. I have used it on *tin, wood, iron, canvas, and brick*, and find it exceedingly well adapted to either. For *tin roofing* it works exceedingly well, becoming in twenty-four hours sufficiently *set* to resist storms, and continues to indurate for several months, until it becomes a perfect stone coating, apparently sufficient, when three good coats are applied, to endure for half a century. Applied to wood covering, whether on the roof or sides of buildings, it is equally valuable. It *sets* as soon as ordinary lead paint, and, as when used on tin, continues to harden gradually, until it becomes perfectly indurated, or like slate. In this state, a quantity of glowing anthracite coal, or a small charcoal fire kindled on the surface of the wood thus painted, has no effect other than to char the wood underneath, decomposing or removing the paint. Any thing like cinders or burning materials, driven through the air and falling on wood thus covered with the paint, would fail to ignite the wood at all. For canvas or burlap roofs, or other covering, it requires three coats, and forms a perfect protection from the elements, and is apparently as durable as metal. For iron, it seems to adhere with great tenacity, and forms a perfect incorrosive surface, protecting it from all the effects of exposure to the atmosphere. For *brick* or *stucco* work, this paint seems to be invaluable, as two or three coats of it on the surface completely preclude moisture, and obviate the great evil attendant on brick dwellings, arising from the absorption and retention of moisture from the outside. In short, I have tested its qualities in a most thorough manner, and have full confidence in the extraordinary properties claimed for it by the proprietor. The article thus tested was of various colors, and furnished by Mr. W. H. Starr, 67 Beekman Street, who is general agent for the same, and has issued a pamphlet with full description, directions, &c., in regard to this paint. H. S.
— *Farmer and Mechanic.*

Blue Writing Ink. — Four ounces sulphate of iron, two and a half drachms of sulphuric acid, one ounce, or q. s. nitric acid, six ounces ferrocyanide of potassium; water q. s. Dissolve the sulphate of iron in one pint of water, then add the sulphuric acid, and heat the solution to boiling; then pour in the nitric acid, in small quantities at a time, continuing the boiling until the iron is peroxidized. Dissolve the ferrocyanide of potassium in two pints of water, and add the former solution, when cold, to this. Collect the precipitate that will be formed on a filter, and carefully wash it with distilled water, until the blue precipitate begins to dissolve in the water. It will now be found to be soluble in pure water, although insoluble if any other salt be present. Rub what remains, in a mortar with distilled water, until a clear solution is obtained, of the required intensity of color. A little oxalic acid is sometimes added, but this is not necessary, if the above instructions be carefully followed, as the precipitate will be perfectly and permanently soluble in pure water. — *Scientific American.*

SUBSOIL PLOUGHING.

The value of subsoil ploughing seems not to be generally understood in this country. In the renovation of old lands, that have been long under cultivation, there can be no reasonable doubt, that the breaking up of the under soil, which has become hard and almost impenetrable for air, roots, or moisture, and the gradually bringing up to the surface, or the intermingling with the surface, soil of substances from which former crops (if of a *culmiferous* class, such as wheat, oats, Indian corn, &c.) have extracted little or nothing of their fertilizing properties, is one of the most effectual means to bring the soil into its original productiveness, that can be adopted. This principle of culture, which has been in operation some twenty-five years in Europe, is operating in a large increase of agricultural product.

In this country we have not had sufficient experience to come at a correct comparative estimate of the system. An account of its operation, and some of the results as experienced by the writer, who has used a subsoil plough for the last five years, may not, Mr. Editor, be uninteresting to some of your readers.

This plough follows in the bottom of the furrow left by the seed or surface plough, and may be set by a gauge, or screw, for any depth desired, from eight to twenty inches. This plough has been constructed (or improved from its original construction) on principles appearing the best fitted to break up, or disintegrate, the soil at this depth, without throwing it up to the surface, as is the case with the surface plough. Some of the benefits derived, beyond the free admission of the air, are that, in seasons of drought or dry weather, the roots can strike down deep below the action of heat, and obtain moisture. So too, in seasons of wet weather, the surplus of moisture can easily pass down through the subsoil, so as to be beyond an injurious influence on vegetation. After the ground has received one thorough operation of the subsoil plough, it can be worked with much less expense, and be dry, and ready for use much earlier in the spring. I have a field of about two acres, one half of which, in the spring of 1845, was subsoiled; the other part was left without this operation. With a view to ascertain the value of subsoiling, the field was manured alike, and planted to corn, the last of May. The summer was dry, but not a hill on the subsoiled part intimated the want of moisture, while on the other part, the leaves rolled very much, and the product was less of fruit and stalk. The field was laid to grass in the fall, and I have mowed it four years, with the same comparative result as with the corn.

Perhaps I ought to have stated, that in preparing that part of the field where the subsoil plough was not used, it was ploughed with a large sod plough, to the depth of twelve or fourteen inches; and also, that we considered it the best texture of soil. I have another field, that has been under the hoe for the last nine years; six years ago, at the time of its coming into my possession, it produced about twenty or twenty-five bushels of corn per acre; the next spring (1841) it received a thorough operation of the subsoil plough. Since that time it has been cultivated for early vegetables, potatoes, peas, beans, vines,

&c., without any extra dressing of manure, and still with an increasing product from year to year. It is believed that all lands are benefited by subsoiling. I have not tried it much on light, sandy soils, but there are some of our very best farmers in the state, who have tested it on this kind of soils, that believe it to be of equal benefit on these, as on hard soils. It is hoped that many of the farmers of the county and state will try these ploughs the coming season, and note the result. Ploughs are kept at Manchester, Concord, and Nashua, the prices varying from eight to sixteen dollars; and we venture to predict that any farmer paying ten or twelve dollars for one, will never feel that his money was paid for a useless implement. B. SHATTUCK.

Bedford, 1850.

— *Granite Farmer.*

N. H. STATE AGRICULTURAL SOCIETY.

We acknowledge ourself deeply interested in the progress and welfare of this infant institution. We feel that on its successful operation, its early, rapid, and strong progress, depend great interests to our hard-soiled and rock-ribbed state. The objects of the society are to promote agricultural and mechanical interests; — to assist in the general diffusion of more enlarged and scientific views on these subjects; — to bring the practical working men of the state together from time to time, that they may compare notes and strength, acquire individual zeal by associated labor and emulation; and to rally around a home centre that interest that has in time passed looked abroad for its objects of desire and care. There is, we are aware, upon this subject a mistaken sentiment, that has in times past, and that may now, to a certain extent, prevent many from coming up with cordial and hearty effort to the aid of our new society. It is this. We hear it occasionally suggested that it may do for New York to support liberally a State Society — her soil is rich, easily tilled, and consequently such a course will pay. Massachusetts may do this to advantage, as she has more wealth to expend in agricultural investigations, greater facilities for advanced cultivation, and more inducements in the shape of a market demand. With the exception perhaps of this last advantage, are not the very reasons assigned as objections to hearty labor for, and support of, a State Society, *the very reasons* why the most earnest labor of every individual should be freely and unsparingly given for the support of such a society? Are they not the most urgent reasons why the new State Society should receive unmixed sympathy and most cordial support?

Is New Hampshire soil hard to cultivate, and does it yield its returns from force and grudgingly? Who then more than the New Hampshire farmer needs to call to his aid all the resources of science, that he may compel the more easily the unwilling earth? Who needs more than he the benefits of associated effort? For one individual to attempt for himself alone a tithe of all the chemical and observational experiments needed upon the varieties of our soils, would consume a lifetime in unrequited toil. And if, as it has been in times past, no one of these experiments should be put on record, at the end of this lifetime the farming community would be no wiser than before. Each one would be obliged to go over the same ground for himself, and that as though no other had ever tried that path before him.

Association puts the acquisition of a whole body of experimentalists into the possession of each individual; a member of an efficient association becomes gifted with the hundred eyes of the fabled Argus, with which to pry into the secrets of nature, the hundred hands of Briarius, with which to work in a hundred fields of labor. That New Hampshire soil is poor and hard, then, is the best reason why the New Hampshire farmer should strive for better modes of culture. Science has locked up in her depositories all the secrets of our hard soil, and the farmer has but to ask of her, and she will instruct him how to make the difficult easy. If our farms are the "strong man armed," science is the "stronger than the strong man armed."

That New Hampshire has not the wealth that other states may have, furnishes another reason why her farmers should combine their energies to bring wealth to their state by a better and more scientific mode of culture. What farmer is there, in our state, that could not by more care, a more intelligent labor, and a more judicious application of means to an end, secure the same crop from half the number of acres he now cultivates? In the language of the "Old Man of the Mountain," "Where's the use of mowing, tugging, and sweating over 30 to 40 acres of land to get 20 tons of scorched wiry redtop or speargrass, and this too filled with sorrel, whiteweed, and blackberry vines, when by proper culture, and as cheaply, in the long run, he can get the same quantity of well, made herdsgrass from 6 or 8 acres." If the intimation conveyed in this query of the venerable "dweller among the rocks" is true, that twenty tons of hay now grown on from thirty to forty acres, might be made to grow on from six to eight, to say nothing of improved quality, it is nothing beyond the limits of a reasonable supposition that on the same or even less amount of land the grass crop of the state might be doubled in a very short time, by a more intelligent adaptation of means and agencies. Suppose this done. The amount of hay raised in New Hampshire is put down in the last Patent Report, (not the one presented to the present Congress,) as 680,000 tons. Let this crop be doubled, and at fair average of the prices of hay throughout the state, the productive wealth of the state would be increased more than six millions of dollars. This is but one of many products of the soil that go to make up the agricultural wealth of the state. It is, then, one of the plainest dictates of common sense, that time, labor, and money, invested in the ways and means of increased knowledge of the natures of soils and crops, and the relations between them, — in increased facilities and in better constructed implements of culture, — in any thing that shall give the farmer more entire control over the natural elements, is time, labor, and money, most wisely given.

The New Hampshire State Agricultural Society affords to the farmers of the state just the field in which to labor for the increase of its wealth. This increase, too, is not only general, but individual. The state is richer because, and only because, the individuals composing it are so.

We intend recurring to this matter again, and would close by urging upon our citizens, generally, attention to the claims of this society. "Union is strength," and in the increased strength and prosperity of one interest, and especially one so vital, all are made stronger. — *Granite Farmer.*

MANAGEMENT OF SWINE.

Messrs. Editors: I give you my experience in the management of swine. In the first place, I take December pigs, let them run with the sows two months, then wean them, and enclose them in a pen, in which they are moderately fed on corn, with as much milk from the dairy, or good swill of some kind, as will keep up a thriftiness. As soon as clover is in blossom, I leave off grain feeding, and give clover three times per day until after harvest. I then turn them on to stubble. They remain there until

about the first of September, whence I remove them to a pasture adjacent to my cornfield, and keep up their condition by giving them a small quantity of green corn. When the time of fattening comes on, I have my hogs in very fine condition to take on fat. I enclose them in a pen, and feed them altogether on corn and water, and by the time the weather is cold enough, which is the latter part of November, I slaughter them at the age of about eleven and a half months. With this treatment, they weigh from two hundred and twenty-five to two hundred and fifty pounds dressed pork. In the mean time, my second litter comes on in June, which have the benefit of the stubble with the first litter; and running with the sows, and sucking, they get a very fine start. At about two months old, I wean them and enclose them in a pen, taking the same process as with the first litter, only forcing their growth more rapidly by giving good slops, and as much corn as prudent, without fattening too rapidly for their growth. I continue this process until the first of January. I then slaughter them at about the age of six and a half months. They will average one hundred and fifty pounds of dressed pork very readily. This is no fiction, but matter of fact, from personal observation.

You will now perceive that from one sow, say having two litters in one year, eight pigs in each litter, the result will be as follows: First litter, eight pigs, weighing two hundred and twenty-five to two hundred and fifty pounds each, aggregate eighteen hundred to two thousand pounds; second litter, eight pigs, average one hundred and fifty pounds, aggregate twelve hundred pounds; which would make from three thousand to three thousand two hundred pounds of dressed pork from one breeder. This has been my treatment of hogs for the last few years, and I am satisfied it is the most profitable way I have ever tried. Brother farmers, this is an experiment on the Bedford hog, which has the qualities of enormous size, and great tendency to fatten at any age. Yours, &c.,

EDMUND J. ROSENBERGER.

Smith's Creek Farm, Va., *Jan.* 1850.

— *Genesee Farmer.*

FREE MARTINS.

When a cow produces twins, one of which is a male and the other a female, breeders have applied to the latter the appellation of "Free Martin." Among many the presumption is, that such are always barren; but it would appear from a note published some years since in the Albany Cultivator, from the pen of I. Cope, of Chester county, Pa., that such is not the case. Mr. C. says,—

"Having spoken last year to some of my friends, of instances to which it was likely that heifers were likely to breed, both of which were twins to males, I can now state that they both produced calves this spring. As it is supposed by most that this circumstance can only happen when the heifer is the larger of the twins, I have made some inquiries on this point. In the first case, the female was decidedly the larger of the two; in the latter case, from what I could learn, I think that there could be little doubt that there was the same condition existing between the two, although the difference in size may not have been as marked as in the first instance."

It is seldom that free martins are seen. Twins, or two at a birth, are common; yet in a vast majority of cases the sex is the same in both.

Bensalem, May 4, 1850. B.

— *Germantown Telegraph.*

Keep notes of remarkable events on your farm.

SUGAR CANE IN FLORIDA.

Captain Sadler, of this vicinity, has produced, considering the circumstances under which it was grown, the most extraordinary crop of sugar on record; and as the facts in regard to it, if generally known, may be extensively beneficial to the country at large, we shall proceed to enumerate them as we collected them from him.

He has produced twenty-five hogsheads of sugar, averaging one thousand pounds, from one hundred and ninety-five acres of cane, and has lost at least fifty hogsheads by imperfect grinding — having wrought nearly his entire crop by two broken rollers, which would not admit of sufficient pressure to extract the juice by twenty per cent. Another source of loss occurred in cutting down, from apprehension of frost, about sixty acres of his best cane two months previous to grinding it. The juice stood at the remarkable altitude of 12° of Beaume's saccharometer, and the sugar is, consequently, of very superior quality. The yield of molasses is about fifteen thousand gallons.

The circumstances which render this crop extraordinary in this sugar climate, are, that it grew on some of our ordinary high sandy hammock land, which had been under a continuous cultivation of corn and cotton crops for a period of perhaps fifty years, and was literally worn out as regards these two objects of culture — being incapable of producing five bushels of corn or fifty pounds of seed cotton per acre; and what renders this crop still more remarkable, is the fact, that a large portion of this land has been five years consecutively in cane, without any diminution in the annual produce under so severe a trial of its powers, and without the aid of a particle of manure.

It is a matter of every-day experience with us, that rich land in Florida — whether virgin hammock or land made fertile by the addition of manure — is eminently adapted to the production of sugar-cane; but it remained to the enterprise and perseverance of Captain S. to demonstrate to us the practicability of growing this desirable object of culture profitably on exhausted old fields, five years in succession, not only without any diminution, but with a manifest improvement in the yield.

This presents a strong practical argument in favor of a rotation of crops, and forcibly establishes the inherent but hitherto overlooked capabilities of our worn lands on the River St. Johns, by proving that, however exhausted they may be by an unintermitting succession of corn and cotton crops, they still retain their pristine vigor in relation to sugar cane.

— *Jacksonville News.*

SORE TEATS IN COWS.

P. Hallock gives the following directions for the management of cows that have sore teats:—

"Take a full pail of cold water, and wash and rub the sores well. Use the whole pailful of water before milking, which cools the teats, or reduces the fever, and the cow will stand perfectly still. After milking, use half as much more cold water, cleansing the bag and teats well, and in a few days the sores will be healed. That is not all the good you will receive. You will have clean milk, and that is the way to have clean butter."

Fruit Trees for California. — It is stated in an exchange, that a very large invoice of fruit trees has been sent from New Jersey to California.

For the New England Farmer.

APPLES.

FALL SWEETINGS, — ROXBURY RUSSET, — LELAND PIPPIN.

MR. EDITOR: Being a subscriber to your valuable paper, and having a nursery of some twenty thousand fruit trees in various stages of growth, I should deem it a privilege to make some inquiries on the subject of fruits.

Among all the different kinds of fall sweet apples, which do you consider the *very best* for baking? There are many sweet apples that are large and handsome in appearance, which, in the process of cooking, will fall away and lose most of their rich saccharine flavor.

It is the opinion of many, that the Roxbury Russet is depreciating as to productiveness and quality of the fruit, yielding but a small proportion of fair marketable apples. Can you tell the cause, and propose a remedy? It is an apple valuable especially for its long keeping, which renders it desirable to retain the species. I have raised a Russet, for the last few years, varying somewhat in shape, which is more like that of the Baldwin, and the color of the skin seems to be a mingling of green and russet — flesh more juicy, not quite so acid, keeps about as long as the old Roxbury Russet, bears more abundantly, and the fruit is fairer, and quite as large. I think it is not the old English Russet. May it not be a cross between the Baldwin and Greening? It is different from the Red Russet which you have described in the last number of the Farmer, and also in your Fruit-Book.

I have seen statements of analyses of the wood of the apple and pear-tree, &c., but do not recollect of having seen accounts of experiments of the kind performed on the fruit. Now it appears to me quite as essential to understand the properties of which the fruit itself is composed, as it is that of the tree, in order to know how we may supply the soil where it may lack any specific properties that are essential to the growth and perfection of the fruit.

You speak of the Leland Pippin, or Leland Spice Apple, in your American Fruit-Book, as being an excellent apple, — and true it is. I have several trees in bearing, which were brought from Sherburne some twenty years since. With pretty good cultivation, they produce equal to the Baldwin, and fruit nearly as large. It is a fine apple, and many deem it *the best* of its season, which I think is longer than is named in your description, i. e., Sept. 15th and October. We have had them in use from 20th September till January, and have had good specimens in March.

Yours very respectfully,

JOB C. STONE.

SHREWSBURY, MASS., *April* 29, 1850.

REMARKS. — *Sweet Apples.* — In regard to apples, there is no point so unsettled as that relative to the best sweet apples. We have some forty or fifty on trial, and as our experiments on many of them are recent, we cannot decide on their merits, excepting as to their growth. Baked sweet apples are of very different texture. (See American Fruit-Book, p. 96.) Some are so soft, that they fall down flat when baked, and they mix with milk, forming a kind of porridge. These are of a fine texture for the dessert. Others are too hard when cooked. An intermedial kind, in texture, bake soft, but retain their form, even in slices when cut up. This is the kind for baking.

Fall Sweetings. — The Golden Sweet, often called Orange Sweet, which ripens the last of August, and continues through September, is excellent for baking. The Sassafras Sweet is said to be excellent for baking, but as we have had only a few specimens, we have not cooked them. It comes into use in September, and sometimes continues through the fall. The Pumpkin Sweet is an excellent baking apple, but a poor bearer. There are many other fall sweet apples of some notoriety, but their habits are not well known. Superb Sweet is one of the finest early fall sweet apples for the dessert, but it is probably too soft as a cooking apple to be used with milk.

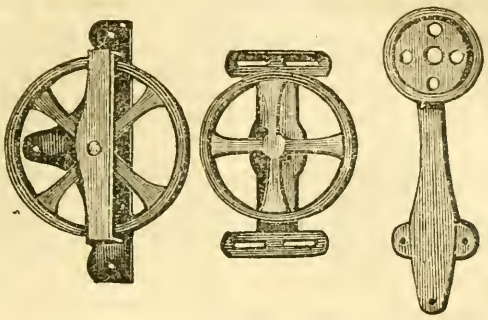
Roxbury Russet. — It is evident that this fruit does not flourish so well in this section as formerly, and many cultivators are discarding it; yet we think that this defect is not owing to any decline in this fruit, for it still flourishes well in new countries; but it is doubtless owing to our lands becoming old, and exhausted of some essential ingredients. If original forests were cleared off, and the land planted with this fruit, it would doubtless flourish as formerly. We often complain that fruit declines, when, in reality, the land declines, and the fruit declines only as a consequence of the declension of the land.

Analysis of Fruits. — This would be a nice business indeed for the chemist; and we doubt that he would determine what elements give to fruit its peculiar flavor and fine aroma, for these depend on properties remarkably evanescent and volatile, that are passing away with more rapidity than the man of science can produce his manipulations in his laboratory.

Leland Pippin is the standard name of this fruit, for under this appellation we first described and introduced it to public notice. We are aware that this fruit may be kept until winter, but we have observed that it loses its good qualities after October. It is usually disposed of in this market in September. This fruit is of a high quality, but rather too acid for the table, according to the taste of many. Those who like mild fruits would prefer Bars, Long Stem, Richardson, Garden Royal, and Magnolia, which are milder, and some of which ripen about the same time, and others earlier.

A NEW MANURE.

Robert Bryson, Esq., of Cumberland county, about eight miles from Harrisburg, has been experimenting for the last ten years, to make exhausted tan-bark available and valuable as a manure. Besides his magnificent farm, he likewise carries on the tanning business. Finally, after a great deal of expense and many failures, he has succeeded in discovering a method of producing from the tan an efficient manure. This is his plan: he has his tan wheeled out on a level piece of ground, and levelled off, two or three feet thick. Over this he spreads a layer of two or three inches of lime, and over that, again, a stratum of tan, then a layer of lime, and so on. He lets the bed, so prepared, remain for two years: at the end of that time he finds himself in possession of a bed of manure, the effects of which upon the land can hardly be surpassed for the richness of its product and the durable fertility which it imparts. — *Lancaster Co. (Pa.) Farmer.*



BARN-DOOR ROLLERS.

We would call the attention of farmers, who are building or repairing barns, to the valuable article represented by the above cuts. The cost of rollers is about the same as that of hinges, but they are far more substantial and durable; and as doors hung on them are less exposed to injury than those on hinges, of course they last much longer. A door sliding upon rollers is usually more convenient, especially when partially opened. Every farmer who has not this improvement should examine into its merits. "Economy is wealth."

For the New England Farmer.

CHERRY CULTURE.

"Don't talk of tree culture to me," says old Hunks. "It takes too long for 'em to grow; there's no use in trying to raise 'em; and then, the trees may all die, and you are no better off than you are now; or if they do live, a fellow may not live to get any good of 'em."

Now, in this matter we have only to say, that the growth of cherry-trees, under proper care, is very rapid. We can show, — and so we presume many others can, — from scions set in the spring of 1849, growths of more than *four feet* the following summer. We can also show scions set in 1848, as well set with fruit buds now, as you will find on any tree of twenty years' growth. We have seen trees grafted, near the ground, into stocks of not more than an inch and a half in diameter, in full bearing the third summer. And yet many will not put out cherry-trees because they do not expect to live to see them bear. Assure any of these individuals they will not live three years, and see the effect it would have upon them. They would probably think your words false, though they might not say so.

With regard to a loss of them, a tree is as sure to live and flourish as a horse or an ox. Care must be taken in both instances in order to insure success. But who ever stopped raising oxen, or horses, or hay, or grain, because they might not succeed? No provident man will do such things. Risks are necessary in any pursuit that is to result in success, and they are attended with less expense, and greater certainty, in trees, than almost any investment one can make.

Every man can raise his own trees. Sow the pits in autumn, and before the second following autumn is past, they may all be budded, or the third year they may all be ingrafted from bearing trees, which may, perhaps, result in earlier productiveness. So, in six years from the pit, the cultivator may begin to gather fruit. Six years! look back upon it and see how short a time; and how much of this time has been spent in whining over things that seemed impossible or impracticable? Enough in the latter to enable any one by well-applied industry, to fill his yards with choice fruits, and his field with productive orchards.

A cherry-tree! Why, it is a very model of beauty through its whole growth. If it had no other quality but its symmetry, it is well worthy of culture as a shade tree; but when to these graceful proportions, and its beautiful foliage, we can add the great amount of most healthful and delicious fruit it will yield, and continue to yield in greater quantities, only for the gathering, not only for one generation, but a long series of years, who can blame us for wondering that its cultivation is not universal?

W. B.

April 20, 1850.

LOW-HEADED FRUIT TREES.

By having low-headed fruit trees, the sun, which is, perhaps, in our hot and dry summers, the cause of more disease and destruction in fruit trees than all other diseases together, is kept from almost scalding the sap, as it does in long, naked trunks and limbs. The limbs and leaves of a tree should always effectually shade the trunk and keep it cool. The leaves, only, should have plenty of sun and light; they can bear and profit by it. If trees were suffered to branch out low, say within one or two feet of the ground, we should hear very much less of "fire-blight," "frozen sap-blight," black spots, and the like. The ground is always looser, moister, and cooler under a low-branching tree, than under a high one. Grass and weeds do not grow a hundredth part so rank and readily, and mulching becomes unnecessary. The wind has not half the power to rack, and twist, and break the tree, and shake off the fruit — a matter of no inconsiderable consequence. The trees will be much longer lived, and more prolific, beautiful, and profitable. The trees are more easily rid of destructive insects, the fruit is much less damaged by falling, and the facilities for gathering it are much greater; there is less danger in climbing, and less of breaking limbs. The trees require less pruning, and scraping, and washing; and the roots are protected from the plough, which is too often made to tear and mutilate them.

What an iron net is habit, and how securely it binds us in its folds!

NOTICES OF PUBLICATIONS.

Thoughts on Domestic Life, by Nelson Sizer: New York, Fowlers & Wells.—This is a pamphlet of 48 pages 12mo., containing very interesting articles on several subjects in relation to social life. Price 12½ cts.

An Introduction to the Water-Cure, by Dr. T. L. Nichols.—This work is also published by Fowlers & Wells, at 12½ cts. It is, in brief, a Treatise on the Condition of Health, the Cause of Disease, the Properties and Remedial Effects of Water, &c.

The Student, a Family Miscellany, devoted to the Moral, Intellectual, and Physical Improvement of Youth. Monthly, at $1 00 per year. Fowlers & Wells, publishers.—The first number indicates that this will be a very interesting and instructive work.

The Culture of the Carrot, and Manufacture of Patent Woad.—This is a small pamphlet, by C. Farmer, Ellington, Ct., who has a patent right for making woad of carrots; and this work contains certificates showing the success and utility of the process. They also show that this patent woad is superior to the foreign. We would call the attention of dyers to the subject. It is also worthy the attention of those cultivators who would give their attention to the investigation of new subjects.

ACKNOWLEDGMENTS.

Mr. Nourse, the publisher of the Farmer, gratefully acknowledges the receipt of a fine pair of Bolton Gray fowls, from Master George Dorr. These fowls are from the choice stock exhibited by Mr. James Dorr, of Dorchester, at the poultry fair last fall, which was regarded by competent judges as pure, and among the finest in the country. We trust that those who have purchased eggs from this stock will find that they produce fowls true to their name, and a valuable breed.

Of Master H. B. Coffin, Newton, a dozen of eggs of the Guelderland fowls. These eggs are remarkably large, which property is peculiar to the eggs of this breed. They are from stock imported by Capt. Devereux, of Marblehead,—the pure race.

From Wm. O. H. Gwynneth, Portland, Me., scions of the Baldwin apple, cut thirteen months since, by J. Larrabee. They appear remarkably fresh and fine; and Mr. L. will oblige us by giving his mode of keeping scions so long in fine condition.

Horticultural Society.—A gentleman of this city, of fine taste and considerable experience in the culture of trees and flowers, has suggested the propriety of forming a City Society, for the purpose of enlarging the amount of knowledge on those subjects, by mutual conversation, and adding to the beauty and health of our city, by exciting more attention to culture of trees and flowers.

Will some one propose a plan?—*Granite Farmer.*

THE SILK-WORM'S WILL.

BY MISS H. F. GOULD.

On a plain rush hurdle a silk-worm lay,
When a proud young princess came that way;
The haughty child of a human king
Threw a sidelong glance at the humble thing,
That took, with a silent gratitude,
From the mulberry leaf her simple food,
And shrunk, half scorn and half disgust,
Away from her sister child of dust;
Declaring she could never see
Why a reptile form like this should be,
And that she was not made of nerves so firm,
As calmly to stand by a "crawling worm."

With mute forbearance the silk-worm took
The taunting words and the spurning look.
Alike a stranger to self and pride,
She'd no disquiet from aught beside,
And lived of a meekness and peace possessed,
Which these debar from the human breast.
She only wished for the harsh abuse
To find some way to become of use
To the haughty daughter of lordly man;
And thus did she lay a noble plan
To teach her wisdom, and make it plain
That the humble worm was not made in vain—
A plan so generous, deep, and high,
That to carry it out she must even die.

"No more," said she, "will I drink or eat!
I'll spin and weave me a winding-sheet,
To wrap me up from the sun's clear light,
And hide my form from her wounded sight.
In secret then till my end draws nigh,
I'll toil for her; and when I die,
I'll leave behind, as a farewell boon,
To the proud young princess, my whole cocoon,
To be reeled and wove to a shining lace,
And hung in a veil o'er her scornful face!
And when she can calmly draw her breath
Thro' the very threads that have caused my death,
When she finds at length she has nerves so firm
As to wear the shroud of a crawling worm,
May she bear in mind, that she walks with pride
In the winding-sheet where the silk-worm died!"

We do not always converse with reason, to learn what we ought to do; but it is good to learn sometimes what we ought to avoid.

Wisdom is not always grave, nor folly gay.

Industry and perseverance merit success.

TERMS.—The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, JUNE 8, 1850. NO. 12.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

AGRICULTURAL STATISTICS.

WE hope that more care will be observed in taking the agricultural census this year, than was the case in 1840. Some years ago we published an article showing the gross errors of that census. It is far better to have no agricultural statistics taken, than to have them so erroneous. In many respects we can guess far nearer the true items than is the marshal's census, and certainly guessing would be a more economical mode.

Our attention was called to this subject a few months ago, at the State House, when Mr. Morse was reading the report of the Committee of Supervision of the poultry exhibition, before the meeting for forming a New England Poultry Association. We are astonished that the good sense of the committee had not led them to detect the great errors in the poultry statistics, or those of other items with which they compared them. But instead of this, they gave currency to them, and they have been copied into papers, and into Dr. Bennett's Poultry Book without comment as to the most glaring errors ever published.

In the committee's report it is stated "that the value of poultry in the state of New York was more than the value of its sheep, the entire value of its neat cattle, and nearly five times the value of its horses and mules." What absurdities! Did the committee, and others who gave currency to them, look or think beyond the fallacious figures?

Now, let us examine this statement. New York is mostly an agricultural state; and in the cities and large towns, where little or no attention is paid to agriculture, the value of horses exceeds that of poultry in a far greater proportion than in the rural sections.

Generally, in the country, each farmer has twenty head of cattle, worth $25 each, making a total of $500, where he has $25 worth of poultry. And in case the farmer has only half that value in cattle, he will usually have not more than half the value in poultry, making, as we should guess, the neat stock worth at least twenty times as much as the poultry. And instead of the poultry being worth nearly five times as much as the horses and mules, we believe that farmers average one to two horses, worth $100, while they would not average $20 worth of poultry. Then, if we are correct, instead of the poultry being worth five times as much as the horses and mules, they are worth five times as much as the poultry; making the value of poultry only one twenty-fifth part as much, in proportion to the value of the horses and mules, as has been stated. We have said enough to show the absurdity of relying upon figures, when they are so far from the truth, that a little reflection must show the error. The good sense of the observing farmer will support us in our guess-work. The reader will please to consider that we have estimated fowls at usual prices before this *mania* prevailed, that has led to speculation and deception, and consequently given a fictitious value to common and mongrel stock.

LATE CROPS.

As the spring has not only been backward, but there has been much wet weather, which has prevented farmers despatching their business with usual expedition, in such seasons, and as moist lands are too wet to work, and in some cases the seed is rotting in the ground, it is impossible for farmers to attend to their usual crops in due time; therefore, as an expedient, they should raise late crops in order to get their usual amount of produce.

Canada corn, and other kinds of early corn, may be planted as late as the 10th or 12th of June. Frequently good crops may be obtained with so late planting; and if it is only partially ripe, it may be cut on the approach of frost, and stooked, and it will make sweet bread.

Potatoes generally bear late planting well; but since their liability to rot, if planted late, it should be on dry land, both to forward their growth, and prevent injury from heavy rains in the fall, before harvesting. When planted late, it is desirable to plant early kinds. Last year, we planted early potatoes late in the season, and they obtained a full growth in season for digging the former part of September, so that they rotted but little.

Early beans will usually ripen well when planted as late as the middle of June. The Merrimachee, or Pierce bean, and Bremen, or large white six weeks bean will bear planting a fortnight later than the small pea bean; and they yield about as much, and sell about as high in the market; generally, the former sells higher than the pea bean. These two varieties are white, and well adapted to field culture; and their early ripening is frequently an important advantage.

Turnips may be substituted for other root crops which could not be planted in season. The early turnip beet, the Bassano, and the Early Sugar will yield good crops when sown as late as the middle or 20th of this month, if the seed be soaked a few days before sowing. These roots are of excellent quality, both for the table, and for stock; and by sowing a little nearer than usual, a large crop may be obtained.

Late vegetables, when there is time for their growth and maturity, generally yield the largest crops; but when it is too late to plant them with a fair prospect of success, it is better to attend to early kinds, which in urgent cases may come in with great advantage to supply the deficiency.

In some cases, buckwheat may be substituted for other grain, and it may be sown as late as the last of June. Farmers should not be discouraged from the tardiness of the season. With judicious management, they can yet plant with a fair promise of reaping.

SALT AS MANURE.

Common salt is a compound, consisting of the two simple elements, chlorine and sodium; three parts of the former to two of the latter. The inorganic elements, or those substances which plants take up from the earth, are usually reckoned fourteen, two of which are supplied by salt. In some plants, chlorine and sodium are rather prominent, and in others they are small.

In the ashes of one thousand pounds of wheat, there are, of different elements, 11.77 pounds in the grain, and 35.18 pounds in the straw. In the grain are 2.40 pounds sodium, and .10 pounds of chlorine. In the straw are .29 pounds sodium, and .30 pounds chlorine.

In the ashes of one thousand pounds of red clover (dry) are 5.29 pounds sodium, and 3.62 pounds of chlorine.

We do not suppose that these results of chemical analysis are, in every respect, correct, but they are doubtless near the truth. As the simple elements of salt constitute important component parts of plants, it is a good manure where these elements do not already abound.

On old lands, these elements become in a measure exhausted, unless restored by the application of salt manures, or the free use of salt hay on the farm; or on lands near the sea, salt in sufficient quantity may be supplied by salt spray. In some cases of high winds, in severe storms, the salt spray is carried considerable distance inland, so as to affect seriously some kinds of trees, and other vegetable productions. So it is evident that some lands are greatly improved by the application of salt, while others are already abundantly supplied with it. Again, some plants require a large quantity of salt, or those simple elements of which it is composed, while others contain but very little in their composition. This is like a thousand other subjects in agriculture. We have before us a vast field for experiments, with numerous variations and modifications from soil, climate, season, crops, and other circumstances.

On most lands, and for most crops, salt is a good manure, and its utility, in point of economy, depends on its price, the price of other manures, the price of produce, &c. On old lands, it is valuable for destroying insects, and in England it is frequently used for this purpose, even where it has no important beneficial effects as a manure.

Various quantities of salt are applied as a manure, according to the crop; usually from five to ten or fifteen bushels. From five to seven bushels to the acre, for turnips and cabbages, has an excellent effect in destroying worms, and promoting the growth of the plants. It is an excellent manure for all the turnip and cabbage tribe, and similar plants, such as mustard, &c.

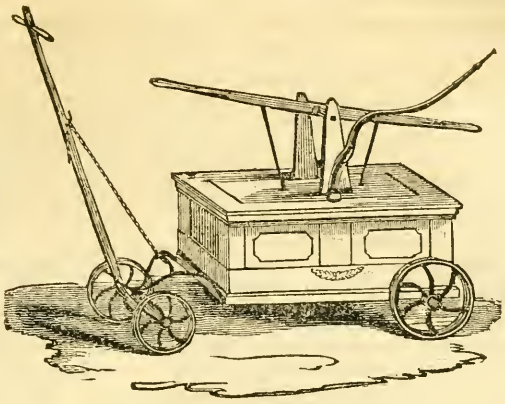
Salt is a good manure in old orchards for all kinds of fruit-trees. Apply eight or ten bushels to the acre. For plum-trees, twenty bushels to the acre, or half a peck to a square rod. Asparagus requires more salt than any other plant we cultivate. A suitable quantity is one hundred and sixty bushels to the acre, or one bushel to a square rod. Dock mud, or other salt manure, may be cheaper than salt, and if it cost much, it will not be profitable to use it so liberally.

We cannot give definite rules for the use of salt, nor show the precise advantage to the crop in its use. We have used a mixture of wood ashes, salt, and plaster in turnip drills, only a moderate dressing, and obtained as large a crop of turnips as from decomposed stable manure and ashes, and the cost, both of the manure and the application, were much less. But we cannot say how much each ingredient increased the crop. We have tried each substance separately, with an equal expense to each drill, without any satisfactory result, otherwise than each seemed to be nearly equally beneficial.

Will our readers who have made any useful experiments on the use of salt, give us the result of their experience.

Getting Good by doing Good. — Benevolence is a fundamental law of our moral being; and the man who labors for his fellow-men secures thereby the gratification of his most commanding principles of action; but he who labors for himself alone, stirs up against his own peace some of the most operative elements of his worst nature.

Burr Millstones. — The Burr millstones produced in Georgia are said to be fully equal to the best French.



GARDEN ENGINE.

This is a very useful machine, constructed on the principle of the fire engine. It may be moved to any part of the premises, and worked by one person; and some engines are so constructed as to conveniently admit of the aid of several persons. With a good machine, water may be thrown fifty to sixty feet, and it is very useful for watering gardens, washing windows, &c., and for protecting buildings against fire. It is also excellent for syringing trees and shrubbery, with various kinds of liquid preparations, for the destruction of insects. These engines are fitted with suction hose, to draw water from wells, reservoirs, &c., which may be done while they are in operation in discharging water. The price of good machines is from $30 to $35.

SHEPHERDIA.

In regard to inquiries concerning the Shepherdia or Buffalo berry, we remark that its native place is the Rocky Mountains, and it is perfectly hardy and flourishes well in Maine. The price is probably about fifty to seventy-five cents each, according to size. They should be set in pairs — one staminate, the other pistillate — from six or eight feet apart, which will allow them room to grow, to twelve or fifteen feet.

The two kinds can be distinguished by the leaf or bud; the pistillate having a long slender leaf, while the staminate has a shorter leaf, approaching nearer the oval form. The form of the buds corresponds with that of the leaves. This is ornamental as a plant, and the fruit, which grows only on the pistillate tree, is very beautiful, and excellent also for preserves.

If these shrubs, of good size, are well transplanted the last of September or the first of October, they will grow the next season, as though they had not been moved, and probably bear fruit also the first year. It is propagated by seeds. Besides its utility for ornament and fruit, as a shrub it makes a good ornamental hedge.

For the New England Farmer.

ELEMENTS OF SCIENTIFIC AGRICULTURE.

Mr. Cole: An essay with this title, by Prof. Norton, has found favor with the New York State Agricultural Society, and will soon be given to the public through the medium of their annual publication. If we do not mistake, it will be found admirably well adapted to instruct those who are inclined to learn. Simplicity of language and distinctness of illustration are its prominent characteristics. The author has, in a good measure, happily avoided the use of technical and unusual terms. No treatise of the kind, so well suited to form the basis of agricultural instruction in our public schools, has come to our knowledge. We trust it will be found highly useful as a text-book for popular instruction.

Many things are here stated as simple elements, the demonstration of which has been the result of much observation and labor. It not unfrequently happens, that the most useful truths when known and distinctly stated, awaken surprise, that they should have so long passed without notice. One of the greatest obstacles to the acquisition of agricultural science, has been the forbidding garb in which it has been arrayed. But our object is not to write an essay, but to call attention to one that has been written. P.

Danvers, *May* 30, 1850.

CATTLE DESTROYED BY EATING WILD CHERRY.

Deacon Joseph Wadsworth, of North Becket, recently had three cows and two steers poisoned by eating the twigs of the black cherry. The first died in two days, and the last lived eleven days after eating the cherry.

We have been for years aware of the fact, that there was abundance of poison in the cherry. It contains considerable prussic acid, which is among the most deadly poisons. Many have supposed that nothing but the wilted leaves were dangerous; but the poison is in the green leaf as well as the wilted. In the summer, creatures will not ordinarily eat the green leaf, but the wilted leaf is eaten readily. — *Berkshire Culturist*

For the New England Farmer.

CHARRING AND SETTING FENCE POSTS.

Mr. Cole: I observed in your present volume, page 148, an article taken from the American Farmer recommending charring the but-ends of posts for fence. Now, as the public may be deceived as I once was, I will say a word about this matter. "Experience" is said to be the best "schoolmaster." When I was a lad, my father made a set of bars at the end of a lane leading to the cow-pasture. One of these bar-posts outlasted the other two or three times over; at last, the good post, which had lasted so long, was, by accident, turned out of the ground by running the cart against it, whereupon it was found that the post had been charred as far as it went into the ground. This fact, corroborated by others, led me to conclude with great certainty that charring would add greatly to the durability of posts, burning them as far up as they were set in the ground. Now, as I was about to build a garden fence and a barn-yard fence in the spring of 1818, I cut and split, out of the very best of white oak timber, a sufficient quantity for this purpose. These posts were all charred with great care to five or six inches above the surface of the ground when set. But to my great surprise and disappointment, all had to be renewed in seven years.

In 1819, I set about two hundred and fifty posts to fence through the swamp, peat-muck soil; all of these posts, without charring, are good to this day, thirty-one years' standing. We have another fence about seventy rods, set in 1830. These posts are on upland, set chiefly top-ends in the ground, all of which are sound, with the exception of a very few, which were broken by a severe wind this spring. But on examining these broken posts, it is found that they were set but-end down.

Now, I am inclined to believe, so far as I have tried the experiment of charring, it has been not only a considerable item of expense, but has been a serious damage to the durability of the timber. Perhaps, if I had allowed my posts to season perfectly before they were charred, and then burned the top-ends of the timber instead of the buts, and set all my posts top-end down, I might have been more successful.

It has been my invariable rule for more than twenty years to have all my posts set top down; — but my men are sometimes careless, and set a post the same end down as it was grown in the woods; but these usually tell the stupidity of the workmen in fifteen or twenty years, by breaking off at the surface of the ground. How long posts are to last in the ground, top down, must be left for time to determine. Twenty-one years in coarse, porous, sand does not yet tell either in regard to *oak* or *cedar*. Perhaps, some of your correspondents may give some information on each of the foregoing points, and will greatly oblige a lover of improvement by communicating the same.

Respectfully yours,

JOHN M. WEEKS.

West Farms, near Middlebury, Vt., *May* 6, 1850.

For the New England Farmer.

CORN FODDER.

Mr. Editor: Various opinions have been given on the utility of corn to be cut green and given to milk cows for the purpose of increasing the *quantity* of milk. I was induced last season to try the experiment; so far, at least, as to satisfy my own mind in relation to it. The comparison, you will perceive, was made between dry hay and green corn. The result of the trial was as follows: —

Aug.	6,	the weight of the milk was		98¼	pounds.
"	7,	"	"	94¾	"
"	8,	"	"	97	"
"	9,	"	"	101	"
"	10,	"	"	102¾	"

Monday and Tuesday, (6th and 7th,) the cows were fed wholly on hay. On the 8th, they were fed partly on hay and partly on corn; on the 9th and 10th they were fed entirely on corn in the morning, with a foddering of hay at night. The milking was done wholly by myself, and at the same time each day, and carefully weighed. The pasturing was the same during the whole time, which was rather poor, inasmuch as it was very dry. Whatever difference there was in the weight of the milk, I think, must have been made by the feed given them. The comparative cost of the corn and hay I have no means of *knowing*, but I *guess* the corn cost the least. My pasturing is such that I must have something upon which to feed my cows, and I have for years raised corn for that purpose. I shall commence planting for fodder about the 20th inst., and again about the 30th, and so on about once a week till the 1st, or perhaps the 10th of July, which will furnish fodder from about the 1st of August to about the 1st of October, or till the frosts come.

D. MERILL, 2d.

Methuen, Mass., *May* 10, 1850.

For the New England Farmer.

CARROTS.

Mr. Editor: I was much pleased with a communication in your paper of April 27, headed "Cultivation of Carrots," and I agree with the writer, Mr. Holbrook, on their value as an article of food for stock — horses, as well as cows. For five winters past, I have used them for my horses, and they appear in as good flesh and condition in the spring as when I gave them grain.

In my manner of cultivation, I differ somewhat from the plan recommended by Mr. Holbrook. When I commenced raising carrots, I was told by persons of more experience in farming than myself, that I should not sow them before the first of June, as I could then plough in a crop of weeds before sowing, and should not have so much weeding to do after the carrots came up. This plan I tried till I was satisfied it was not the best one. The method I now pursue, and which has given me less trouble than any other, is as follows: About the first of December, I select a piece of land that has been cultivated the previous summer, plough subsoil, and harrow it. I then cart on, and spread evenly over it, forty loads, thirty bushels to the load, of compost manure, it having been previously prepared by being beat up very fine, — plough it in as deep as a single horse plough will do it, and let the land remain in a rough state during the winter; as soon as the frost is out of the ground in the spring, say by the 20th of April, I plough, harrow, and sow my seed. By this method I get through with the second weeding before haying comes on, and the carrots get an early start before the ground becomes dry, which frequently happens before the middle of June. My first weeding I do mostly with the hoe; but the second is done very carefully by hand, thinning the roots at the same time to six inches apart, in the rows. My bed I make as level as possible, and I put the rows fourteen inches apart.

Last year I harvested eleven hundred bushels per acre, at a cost of six and a half cents per bushel,

which I consider the cheapest crop a farmer can raise for his stock.

The reason so many farmers get discouraged and discontinue raising roots, is because they sow them so late that the weeding time comes on while they are engaged in haying, which they do not like to leave; consequently the young plants are overgrown, and by the time they can be attended to, it is too late, and their crop is ruined. I use a seed-sower procured of Messrs. Ruggles, Nourse & Mason, which I like very much, as it does the work perfectly. O.

Billerica, *May* 15, 1850.

For the New England Farmer.

OLD TREES IMPROVED BY CULTIVATION AND GRAFTING.

Many farmers neglect to do aught to their old trees, lest they make a bad matter worse; but old trees, that are not too much decayed, may, by grafting, be brought to bear excellent fruit. Effectually to bring this about, the land about the trees should be well cultivated: if the whole surface is not broken up where the orchard stands, the ground, at least, around the trees should be spaded up; and better to forward the growth of the trees, potatoes may be planted, after having the land well manured. This plan followed up while the process of grafting is going on year after year, the owner will soon have the satisfaction of seeing his old decaying apple-trees presenting beautiful tops, and loaded with choice fruit.

When I first moved out on the farm I now occupy, there was an old apple-tree standing in one corner of the door-yard, which was of little consequence as it then was, although it bore pretty plenty of apples, but were scarce worth harvesting. Four years ago I commenced cutting off the top, and inserting scions; I put in but few the first year, (which was done merely for an experiment;) these thrived so well, I was induced to repeat the operation. The tree had a large branching top, capable of receiving about one hundred and fifty scions. The operation was performed in three different years. I have now the pleasure of seeing a tolerably thrifty tree, with a nice top of grafted fruit. Last fall I had about a peck of apples, and the tree this spring bids fair to reward me for my labor. For four successive years I have grafted in an old orchard of one of my neighbors, which consisted of about one hundred trees. Part of the orchard has been repeatedly cultivated, while the rest has been spaded up around the trees, and the same planted to potatoes. Some of the first grafted trees present tops sufficiently large to bear the present season, while others are coming on nicely. In the same lot, separated only by a private road, is another orchard of the same size, and trees of the same age, which have been left to take care of themselves, with the exception of an occasional trimming. The difference in the appearance of the two orchards is perceptible nearly as far as the trees are visible. The one that has been nursed and taken care of looks thrifty and flourishing, while the other has a sickly and decaying look. Now, mark the difference in the views of the two individuals, owners of the orchards. One is for putting his trees in a condition to be of benefit to others, if he does not live to take the good of them himself. The other is of the opinion, that as he is becoming advanced in years, and not likely to live to reap the benefits in *his* day, he will leave his trees to take their own course. Supposing all were of this opinion, supposing *our* fathers had been of the same opinion, what would have been the state of our farms, when left to us? Is it right to suffer our property to go to decay, because we are not likely to live to enjoy it? Should we not feel interested for our children, as our fathers have done for us? Certainly. Then let us take care of our orchards — improve our old trees if they are worth it — if not, transplant new ones, and if *we* are not benefited by them, we shall have the gratification of having left something for our children, and those that come after us. ALBERT TODD.

Smithfield, R. I., 1850.

For the New England Farmer.

BONE DISORDER IN COWS.

Mr. Editor: Lest your readers weary of the repeated articles on this subject, this shall be the last from my pen, unless I have something to communicate of more importance than at present. I can add nothing new to what I have said — I have no theory to maintain — all I wish is, that the true cause of the disorder may be ascertained, and if it be eventually proved that the one suggested by yourself and your correspondent is the true one, I shall be as ready to admit, as I have been to question it. I do not doubt that a peculiar disease exists, in some sections of this country, in milch cows, and that bone meal has been successfully used as a remedy. The symptoms and the cure of the disorder, I suppose, are well known to the farmers whose cows are thus affected. But I cannot yet see — perhaps I require stronger proof than the nature of the case admits — that the disorder is owing to the want of sufficient phosphate of lime in the food of cows afflicted with it.

Your correspondent, Mr. Putnam, has given some interesting information respecting this disease; but in attempting to trace it up to the want of phosphate of lime, he does not, in my view, connect the one with the other as an effect with a cause. I will not again cite examples from his communications in proof of this — but will merely, in conclusion, refer him, for the statement made by me, that Indian corn contains seventeen per cent. of phosphate of lime, to the essay on that grain, by Mr. Flint, which, together with an essay by himself on the same subject, is to be found in the transactions of the Essex Agricultural Society for 1849. The analysis there given was the authority I consulted; and approved as this essay has been by our own society, and by the New York State Agricultural Society, I need not, I suppose, cite any other authority. At all events I leave the subject here, hoping that sooner or later some new light may be shed upon it.

ALLEN W. DODGE.

Hamilton, *May* 13, 1850.

For the New England Farmer.

SETTING FENCE POSTS.

Mr. Editor: I have for some time been satisfied of the economy in setting posts for permanent fence in lime mortar. I have proved the plan, and give it my sanction, for *permanent* record in your *paper*. Air-slaked or refuse lime (at ten cents per bushel) answers; and the cost except labor is not over one cent per post. We dig the holes with a spade, and have two semicircular pieces of sheet iron to put down round the post, and after filling inside with mortar and outside with earth, draw up these pieces, and the work is done for many years. It dries hard as stone, and remains "in statu quo." I set the *top-end* down. BENJAMIN WILLARD.

Lancaster, *May* 21, 1850.

For the New England Farmer.

WHITE SHANGHAE FOWLS.

Mr. Editor: In a recent communication to your paper on the "White Shanghaes" it is stated that they are a separate breed of fowls. Will your correspondent, or some gentleman versed in feathered genealogy, give us his authority? The statements of your correspondent contain several errors in point of fact, which are likely to mislead those who are interested in fowl-breeding.

1st. The importation of Capt. A. S. Palmer was made in 1846, and not in 1848.

2d. It consisted of eight *red* Shanghae fowls, and no *white ones*, and is believed to be the earliest importation made, as Capt. Palmer's ship was the third American vessel that visited the port of Shanghae after it was thrown open to American commerce.

3d. The White Shanghae fowls spoken of as lost by Squire Dixon are purely fabulous as a distinct breed. As this stock multiplies, white ones come by laws yet undiscovered, as they do among almost all other races of fowls, however purely bred.

4th. Squire Dixon's stock is not mongrel, but is as pure now as when first imported; so much so, that they are considered by Capt. Palmer equal to an importation made by him this spring. The fowls of the Dixon stock grow as large as any of the fresh importations. They are extensively scattered in Rhode Island, and in the adjoining towns in this state. It is quite common for the farmers to have a Shanghae cock with their common breed of fowls. The cross has very much increased the size and quality of the poultry brought to our markets.

If there is a distinct species of White Shanghae, it is not known to Capt. Palmer. We venture a prediction that the White Shanghaes mentioned in the communication, if they are pure blood, will turn out some fine red chicks in the course of the summer.

STONINGTON.

May 30, 1850.

Note. — The error as to the date of Capt. Palmer's importation was corrected by Mr. Morse, in our last number. — Ed.

FARMING ECONOMY.

Messrs. Editors: Twenty years ago it was a common saying among farmers, that all a man could make in farming was enough to support his family, and, possibly, save a hundred or two hundred dollars a year besides. Farmers who held this idea were, no doubt, honest; they only judged of the profits of farming from their own management. Even now, a great many farmers suppose that in order to make money by farming, they must do all the labor themselves; they say they "can't afford to hire help." This is evidently a great mistake, for if the farmer makes his own labor profitable, he could make that so which he hires, under good management, and without that, no labor can be profitable.

Labor in this country is high, in proportion to what it is in older and more populous countries; but I do not regard this as a subject of regret, for who is "worthy of his hire" if the day-laborer is not? If the high price of labor operates against the interest of some, it tends greatly to improve the condition of the masses. As a matter of course, the farmer will save as much manual labor as possible, consistent with the proper cultivation of his farm.

But a great point in farming economy consists in the adoption of labor-saving machines and improved implements. Yet a good deal of hand labor will always be required to carry on farming advantageously.

The question is often asked whether capital laid out in farming can be made to *pay*. In reply, I would say, I have known many instances where money laid out in this way has paid well. It is true, that *time* is required for this result; but I believe that capital invested in farming need never pay less than six per cent.; and under good management, it may yield even eight to ten per cent. on the original stock. The culture of fruits — such as apples, pears, peaches, &c. — often yields a profit of eight to fifteen per cent.

A great barrier to improvement in farming is the erroneous value which farmers often put on *money*. They seem to think that a dollar is worth much more than its equivalent in wheat, or any agricultural product. This leads them to hoard their cash with scrupulous care, fearing to trust the earth with the loan of a cent — the risk being so much greater, as they say, than on deposits in banks. This difficulty can only be removed by demonstrating to the farmer the certain success of a better system of management; which will gradually inspire confidence that labor and money expended on the soil shall not go unrewarded.

L. DURAND.

Derby, Ct., *Feb.*, 1850.

— *Albany Cultivator.*

BREAKING ROCKS BY FIRE.

Messrs. Editors: While perusing the February number of the Cultivator, I observed a statement from one of your correspondents in regard to the manner in which he cleared his land of stones. His mode was to excavate a large hole upon one side of the boulder, and partially under the rock, which he wished to remove, and then roll it in. I think the process might well be replaced by one which is much more economical. Your correspondent observes that it is very hard to drill some "hard-head" rocks — an assertion which I truly confirm, having been engaged in the business myself, for weeks in succession, upon my father's farm, in Lewis county, New York.

In 1843, we were clearing a piece of ground of stone by the aid of the drill and powder. One very cold day, a fire was built upon a rock, which was, perhaps, four feet in diameter, near the wall where we were at work. By means of the heat there were large scales loosened on the top of the rock, which were taken off with a crowbar, and used for filling up the centre of the wall.

Subsequent to this, a fire was built upon the same rock; and some time after, the scales being removed, it was ascertained that the rock was broken through in two different directions, dividing it into four nearly equal parts.

The quarters being left with face sides, fitted them admirably for laying into wall. From this time henceforth, the drill was dispensed with. Experiment showed that one man could carry a sufficient quantity of wood to break any rock, which a farmer might be desirous of removing from his fields. Another great advantage was, that wood of little value, such as old pieces of rails, stumps, and the like, might be used with advantage and economy.

There is one point which must not be neglected, if success is expected; that is, to keep the rock clear of shells while heating. To do this with facility, the tools required are a sharp iron crowbar, and a pair of large tongs. As soon as any shells are found to have started up, the fire should be removed with the tongs, and the scales carefully taken off with the bar. This is the only secret in the process. The object is, that the heat may be applied directly to the solid rock. The fire should then be replaced with the tongs, and so on until the stone is broken. Throwing on cold water is superfluous.

One man can attend twenty of the fires, or one man can perform as much work in this as ten will with drills. The beauty of the process is, that it is performed comparatively without danger or expense.

DENNIS JOHNSON.

Mt. Airy Ag. Institute, Pa., *Feb.*, 1849.

We have seen rocks broken by the process above described, and we endorse what our correspondent says in regard to it. — Eds. — *Albany Cultivator.*

A FULL STOP TO THE BLEEDING OF GRAPE-VINES.

Mr. Editor: I devote a few moments of my time to inform all cultivators of the grape how to put a complete and final *stop* to the bleeding of the vines, whether from pruning or accident: I should like to say more about the grape, but have not the time just now.

Two or three years since, in the month of May, I was overhauling my vines and tying them up for the season, when I found the pruned ends bleeding profusely. I was surprised at this, as the vines were trimmed in December previous, before covering them for the winter. My better half, Mrs. J., heard me *grumbling* at something amiss, so I told the occasion of my perturbation, and she immediately set to work to find a remedy. This remedy *was found* forthwith, and a comical one it is. Here it is, without more ado. Take a little atom of cotton batting, as large as a bean; dip this into "*Turlington's Balsam of Life,*" and bind it with three or four turns of thread over the pruned end or eye, first wiping the bleeding part dry. If this does not stop the flow of sap in twenty-four hours, drop on a little more of the "Balsam," and it *will* stop, certain.

It was supposed that the *balsam* would do what nothing else will, effectually, from the fact, that, notwithstanding the saliva, and general moisture of the mouth and tongue, yet the balsam of life will cling fast for many hours to the tongue and interior of the mouth: so, notwithstanding the profuse flow of sap from the vine, which forces through sealing-wax, bits of bladder, and every thing else, yet the balsam *stays put*, and closes up the pores.

I have tried it repeatedly, and again three days since, with uniform success. I *know* it will answer, and I know that many a cultivator of the grape-vine will thank us for the information. Try first, and laugh afterwards. Sat verbum — (or verbum sat?)

A. J., Jr.

Wiscasset, *May* 11, 1850.
— *Maine Farmer.*

CORN SUCKERING.

Your correspondent "J. J." of Centreville, New Jersey, wishes information in regard to suckering corn. If corn hills are four feet apart each way, and not more than three stocks in a hill, there will be no necessity of suckering the corn, for the increase, and the excellence of the suckers for fodder, will fully compensate the injury done the maturing of the crop by their growth, and the expense of suckering will be saved. If corn has been planted close, it can be suckered and thinned out soon after the suckers make their appearance, and from that time on, till the ears are set, provided it is carefully done. Dry weather is the best time to sucker or thin out corn. I will not go inside of my cornfield when the corn is wet, if I possibly can avoid it. I plant from four to six acres of corn every year; the hills are four feet apart each way, and six grains in a hill. After I have finished ploughing, and the corn is about two feet high, I begin to sucker and thin out as fast as a yoke of oxen will consume the forage, taking out the weaker stalks and suckers from the largest hills, reserving the smaller, as need may require, to feed my oxen — and so continue on until I have gone through the entire lot, leaving but three stocks in a hill. In this manner, I get a vast amount of feed, and cannot see any perceptible detriment to my crop of corn, as the yield appears to be about as good as my neighbors', on the same kind of land. I would advise J. J. to *succor* his corn by suckering out the hills as soon as the suckers are from six to eight inches high; but it should be done carefully. The fewer stalks there are in a hill, the larger will be the ears; and so of consequence with suckers. In proportion as the hot sun gains access to the roots of the corn, after a soaking rain, so will the ears increase in size. If corn don't stand too thick on the ground, and hands are scarce and wages high, and there is other urgent work to do, it would be as well to let nature take her course, and the suckers to grow. P. F. W.

Newportville, Bucks Co., *July* 24, 1850.
—*Dollar Newspaper.*

MOVABLE FENCE.

Eds. New-Yorker: I have become a subscriber to your valuable paper, and would wish to make a suggestion in regard to fences, since the subject is so often referred to by your correspondents. Mr. Langworthy will recollect the miniature length of fence exhibited at the Monroe County Fair, in 1844, (I think.) This kind of fence has been used to some extent, in this neighborhood, and found to do well, as no part of it is to be in the ground. It is made as follows: —

Saw straight-grained stuff of any hard wood six inches wide and one and a half thick; saw other the same thickness, four and a half feet long, seven inches wide at one end, and four inches wide at the other; cut with a saw across the wide end, (and eight inches *from* the end,) one fourth inch deep, and split off so as to form a shoulder. Then cut your six by one and a half stuff, three feet long; clap the wide end of the other on to this three foot piece in such way as to form a capital T inverted, (thus ⊥,) nailing them strongly together; bore two and a half inch holes at proper distances through this tapering piece for rails to pass through, having the lower rail pass through both pieces. Saw the rails two inches square, and fourteen or sixteen feet long, having a piece of inch board, with corresponding holes to slip on to the middle of each length or panel. Set these ground or cross-pieces on flat stones, so that they will rest on the stones at each end — cap with inch stuff six inches wide. If you wish to have a movable fence, make each panel by itself; or if stationary, then bore the holes immediately above each other. J. H.

Adams's Basin, *March*, 1850.
— *Rural New-Yorker.*

The Season. — Our spring here has been unusually cold and backward; up to the middle of May we had rarely a warm spring day; but it has been a fine season for planting, and all have had a long and favorable time for completing their improvements. The weather now, May 16, is fine, and fruit-trees are loaded with blossoms, promising a most abundant crop. The thinning process will very generally have to be resorted to, if no untimely frost or other accident occurs after this date. — *Genesee Farmer.*

A VETERINARY COLLEGE.

By the following article it will be seen that Drs. Dadd and Hurliman propose to establish a Veterinary College in this city. As to the great utility which would result from an establishment of this character, none will dispute. We need a place where men who design to become practitioners in the veterinary art, can learn, under skilful direction, the theory and practice of this profession.

There is no reason why a business of so much importance, both in the cause of humanity and in a pecuniary consideration, should be left to chance or ignorant pretension, while it may be enlightened by science, and improved by practice, as well as any other system or pursuit.

We trust that gentlemen who are in favor of public improvement, and contributing to the relief and comfort of our domestic animals, that conduce so essentially to our necessities and pleasure, will give to this enterprise a liberal support.

We have occasionally spoken of Dr. Dadd, and his reformed mode of practice, by which harsh modes of treatment, and violent means, falsely called remedies, are dispensed with, and the animal is treated with humanity, and in accordance with reason and common sense; allowing the operation of the wonderful restorative powers of nature, assisted with good management and mild means.

Dr. Hurliman is a graduate from the celebrated Veterinary College at Munich, in Switzerland. We hope that the intelligence and zeal of these gentlemen, with the coöperation and liberal aid of the public, will lead to the establishment of an institution that will be an honor to our country, from its highly favorable and practical influences.

Subscriptions in accordance with the following proposals will be received at this office.

PROPOSALS FOR ESTABLISHING A VETERINARY COLLEGE AND INFIRMARY IN THE CITY OF BOSTON.

The undersigned, *Veterinary Practitioners* of the city of Boston, respectfully call the attention of the people in New England to the lamentable fact, that the humane and praiseworthy science that teaches man how to ameliorate the condition of our domestic animal is totally neglected. That in consequence of this neglect, many thousands of our most valuable animals die prematurely, occasioning not only individual, but also national, losses. Cruelty, and ignorance in the treatment of disease in domestic animals, have been more destructive than the pestilential sword, and will continue to exercise their devastating influence on the animal kingdom, until veterinary knowledge shall be diffused.

The undersigned have abundant testimony to prove that the great mortality, among horses in particular, may be prevented. The records of the Veterinary Colleges of England, France, and Germany also prove this fact; and that a knowledge of Anatomy, Physiology, Pathology; the proper management in the stable and out of it; the proper method of feeding, shoeing, watering, grooming, &c., are the media through which many millions of valuable animals have been saved from certain destruction.

The Almighty has endowed that noble animal, the horse, with all those moral powers, differing from ours, not in kind, but only in degree. They, like us, have memory, ideas of reflection, reason, feelings of gratitude, and duty; and it should be the pride and duty of every man to sympthize with those who, though our slaves, have common feelings with us; the interest of every man speaks the same language. Hence the American people, to whom we appeal, have great encouragement, as interested individuals, to aid us in diffusing veterinary information. The beneficial results of such information will be, that the diseases of horses, cattle, and sheep will be better understood, and the dreadful loss which this country sustains will very soon be materially diminished. The veterinary science is efficient in itself, and has given unequivocal proofs of its ability to enlarge the boundaries of general medicine. It has lately acquired an importance, and received such improvements, as predicts a great revolution in this branch of knowledge.

The undersigned propose to erect a suitable College edifice and Infirmary, similar to those now established in Europe. This we propose to do by the aid of voluntary contributions, for which purpose we respectfully solicit donations. If seconded by liberal contributions, our success will be immediate, and the people of New England will be enabled, with pride, to point to an institution devoted to the cause of humanity.

GEO. H. DADD, M. D., V. S.
DR. I. I. HURLIMAN, V. S.

PROSPECTUS.

Privilege of Subscribers. — A subscription of one hundred dollars and upwards will entitle the subscriber to send, when sick or lame, any number of horses to the Veterinary Infirmary, during such subscriber's life, provided said horses are his own personal property. No charges are made either for medicine, attendance, or operation; the subscriber merely paying for the keeping and shoeing of said horses. In cases where it is impracticable to remove such horses from the subscriber's stable, they will receive daily medical attendance, without charge.

A subscription of twenty dollars entitles the subscriber's horses to medical treatment for one year, subject to the same rules as above.

The subscribers to this institution will have the privilege of visiting the infirmary, museum, &c.; and any information relating to the managing of domestic animals will be communicated by the Professors.

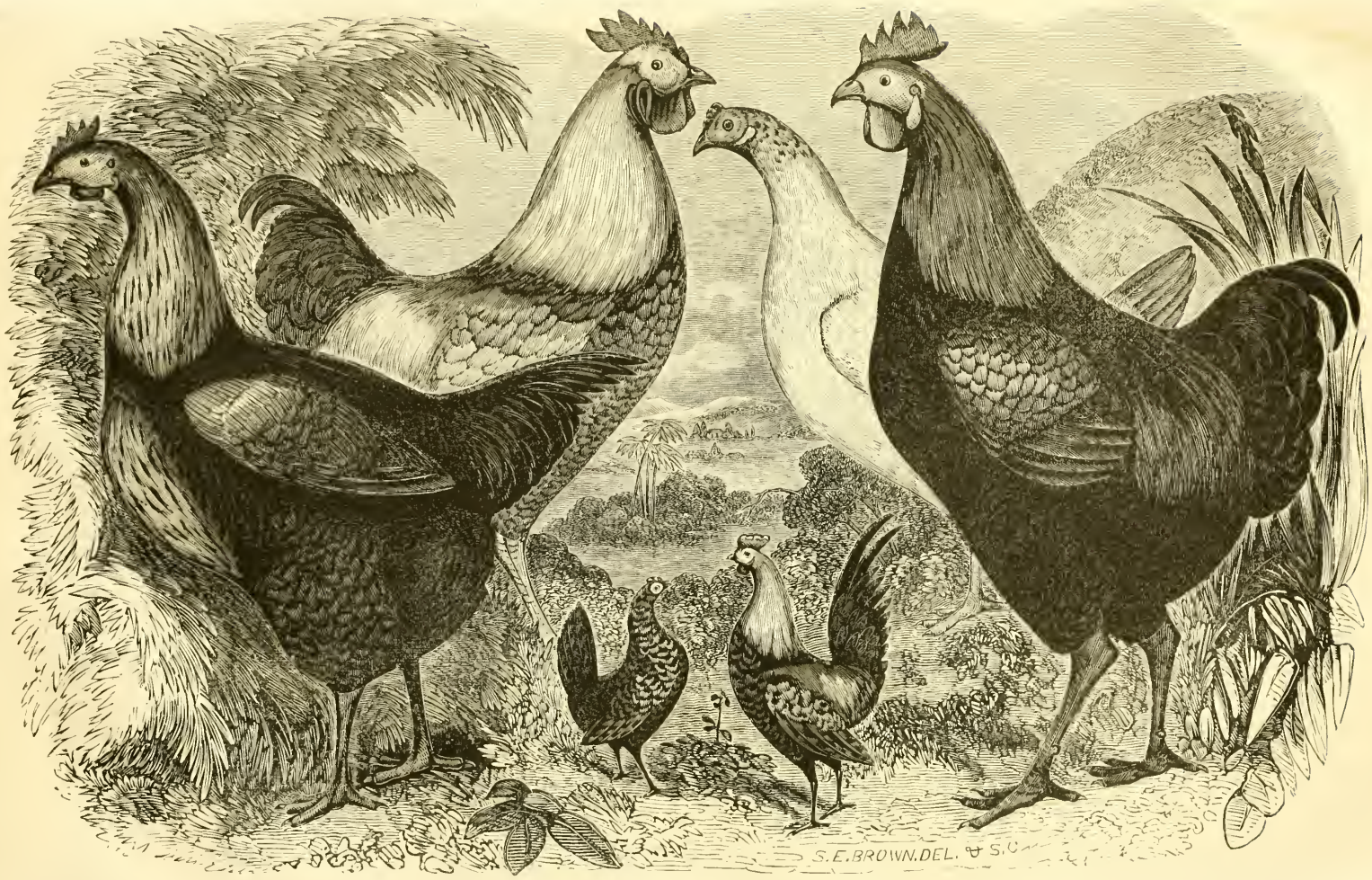
Mode of Instruction. — The Professors will deliver daily lectures during the sessional course, (*of six months in each year,*) on the theory and practice of Medicine, Surgery, and Surgical Anatomy, Physiology, Pathology, and Chemistry. Illustrations and experiments will be conducted in the most advantageous and instructive manner. In addition to the usual course of lectures, the pupils will attend the daily practice of the Infirmary.

The period requisite for obtaining a knowledge of the veterinary art will be regulated by the talents and industry of the pupils; yet all candidates for graduation must have attended two full courses of lectures, and must well sustain an examination in the different branches of veterinary study.

Any donations of money, or preparations adapted to facilitate illustrative teaching in any of the departments, are respectfully and earnestly solicited.

No subscriptions called for unless a sufficient sum is raised to accomplish the object.

False Economy. — The *American Agriculturist* estimates there are ten farmers who waste fifty dollars annually in manure, where there is one who pays a dollar for an agricultural paper, which would show him how to save it.


S.E.BROWN.DEL. & S.C.

For the New England Farmer.

A GROUP OF CHOICE FOWLS.

Mr. Cole: Your readers are herewith presented with an engraving of three distinct breeds of fowls, of the Gallus tribe, belonging to Geo. P. Burnham, Esq., of Melrose, Malden. The equals of them cannot, in my opinion, be found in New England.

The engraving is the work of Mr. Samuel E. Brown, No. 50 Cornhill, Boston. Mr. Brown delineated the fowls from life, and, in the completion of the whole work, has shown abilities rarely possessed by one individual.

The engraving was printed "in tint," personally, by Mr. C. H. Freeman, of the firm Devereux & Co., printers, at No. 162 Washington St., who, deservedly, have the reputation of being unsurpassed in all that relates to the art of printing.

The small figures in the middle foreground are the portraits of the Sir John Seabright Bantams, belonging to Mr. Burnham. The plumage of this breed of Bantams is variegated, being black feathers alternated with those of a bright orange color. The tail and wings are black, sometimes shaded or flecked with white. The colors of the hens are not so brilliant as those of the cocks. The Seabright Bantams are much smaller than Bantams of other breeds; the pair belonging to Mr. Burnham weighing, at sixteen months old, but twenty-four ounces the pair.

For a description of the other fowls shown in the engraving, the reader is referred to the letter from Mr. Burnham, which is here inserted.

S. B. Morse, Jr., Esq. Dear Sir: The group of my *Cochin China* and *Seabright Bantam* fowls, so admirably portrayed in the picture by Mr. Brown — a copy of which you kindly sent me on the 25th inst. — is life-like, and very satisfactory; and I send you herewith a description of them, which you can use at pleasure.

The two chief figures in the foreground represent a cock and hen of the Cochin China tribe, and as they are somewhat peculiar in their characteristics, I will devote a paragraph to them especially.

The cock is one of six fowls of my own importation, direct from *Canton*, early in the present season. His color is quite dark, the prevailing shade of plumage being a rich, glossy, greenish black, on the breast, sides, and legs; the hackles, wings, back, and rump feathers are of a bright red; his legs are dark; wattles, heavy; eye, very large; prominent comb, and very short tail. He is a splendid bird, not yet ten months old; his weight this day is ten and one quarter pounds.

The hen is a perfect match for the cock, in color and general appearance — dark plumage, (black, saving her neck-hackles,) of very fine form, and one of the rarest birds I have ever yet seen. She is also imported directly from Canton, and was sent me by a gentleman-fancier who chanced to see my rooster, and who considered him a fitting mate for *such* a fowl. I weighed this hen on the 27th of May — *she drew ten pounds, strong*, though she had but just come from the sitting-coop, and was not so heavy by half to three quarters of a pound, probably, as she will be in fair laying condition. A few of her chickens, hatched this spring, have proved rare specimens, for domestic birds.

The other pair of large fowls, in the background of the picture, are also correct portraits of the Royal Cochin Chinas imported by me, last winter, from Dublin, and which have already been fully described in the books lately published, as well as in the "New England Farmer." The pullet therein portrayed I have already spoken of. She commenced laying about the middle of February last; up to the 27th of May, one hundred and four days, she laid ninety-two eggs, and she is now laying daily. Her weight is now eight and one quarter pounds. One of the others which accompanied her from Dublin weighs light nine pounds; the average is about eight and one half pounds.

The *Canton* pullets which I received with the dark cock will weigh from eight to eight and one half pounds each; they are very superior birds, and are uniform in color and general characteristics. The hens are a light brown, with the feathers tipped on barred with black. The legs are yellow, and the forms very handsome. The chickens from this stock are quite uniform, and, thus far, very hardy.

The "Seabright Bantams" are true to the life; and I need only say that the pair shown by the artist are as beautiful samples of this breed as I have ever seen. The joint weight of the cock and hen is but a trifle over a pound and a half; and the latter is now laying vigorously!

I shall be happy to show this stock to yourself and friends, at my new residence in *Melrose*, at any time hereafter, where I *may* have a few choice specimens to dispose of during the coming season. With the assurance that your artist has done himself credit in this beautiful and accurate picture, I am

Yours truly, GEO. P. BURNHAM.

Roxbury, *May* 29, 1850.

Mr. Burnham, in the foregoing letter, speaks of the dark-colored cock and hen as being Cochin China, although differing in size and color of plumage. The Royal Cochin Chinas are parti-colored, with light-colored bills and legs. The color of the others is very dark, nearly black, with black legs and bills. There is also a great difference in the ear lobes and wattles, both in size and form. In my opinion, the dark-colored fowls are much superior to the Royal Cochin Chinas, yet the Cochin Chinas have no competitors in any other breed of fowls in this country.

There is at the present time a great inclination, on the part of many persons, to give to mongrel fowls the names of well-known and truly valuable fowls.

In the Poultry-Book by Dr. John C. Bennett, on pages 54, 55, and 56, an account of the Shakebag fowl is given, and portraits of fowls imported by the "Tremont House," and kept at the "Samoset House," are shown. Dr. Bennett says, "they are magnificent birds," "they are exceedingly rare in this country, this being the only importation of which I have knowledge."

Richardson says of the Shakebag, "A good many years ago, *there used to be* a variety of fowl much in request in England, called the 'Shakebag,' or the 'Duke of Leeds' fowl, his grace of that name, about sixty or seventy years ago, having been a great amateur breeder of them."

Mowbray, in 1816, says of the Shakebag, "Formerly the largest variety. * * It has been entirely worn out for some years. It was called the Duke of Leeds breed, but it does not appear whether his grace first raised the variety, or whether it arose merely from improving the size of the common dunghill kind, or from any foreign cross. The only one I ever possessed was a red one, in 1784. * * * The breed of Shakebags has been for many years extinct."

Martin says of the Duke of Leeds fowl, or Shakebag, "A breed of game fowls, of enormous size. * * The breed is now extinct."

W. B. Dickson does not mention the Shakebag or Duke of Leeds fowl in the last edition of his work on poultry.

Thus it seems, by the authority of all English writers on poultry, that the Shackbag, Shakebag, or Duke of Leeds fowl has been lost for many years. What apology can Dr. Bennett offer for this *mistake?*

Yours, &c., S. BRADFORD MORSE, Jr.

Domestic Department.

To prevent Milk souring during Thunder-Storms. — We have heard great complaints from dairy women, about their milk getting sour during a thunder-storm, although perfectly sweet a short time previous. The following plans, suggested by a correspondent, will prevent this in a great degree: All the pans containing the milk ought to be placed upon non-conductors of electricity, such as blocks of baked wood, pieces of glass, or wood that has been well painted and varnished. The following articles are most easily provided: Beeswax, feathers, and woollen cloth, are also non-conductors, but inconvenient to be used. All these articles will insulate the pans, and prevent the electric fluid from entering, which is the cause of acidity; or is, in fact, the principle of acidity itself. If glass basins were substituted for tin pans, the plan would be better still, and there would then be no necessity for the practice suggested above. The glass would preserve the milk much longer sweet than pans, and the acid would have no effect upon it. We are not aware of any acid that has the least impression on glass, except the fluoric acid. All iron vessels, or vessels compounded of iron, as tin pans, attract the heat very readily, and of course sour the milk; and such is the affinity of iron for an acid, that we doubt much if it is ever washed out entirely. Iron vessels, we are confident, are the very worst that could be used for the purpose; they are even inferior to wood. — *Am. Agriculturist.*

A Mother's Voice. — The editor of the Cincinnati Atlas, after a visit to the Asylum for the Deaf and Dumb, at Columbus, Ohio, relates the following: —

We inquired of an intelligent and modest young lady, who had become deaf from sickness when two years and a half old, whether she could recollect any thing of sounds or words. She answered that she could not.

It occurred to us that there might have been at least one sound which might be remembered even from that tender age, and we ventured to inquire whether she had no recollection of her mother's voice. It will be long before we forget the sweet, peculiar smile which shone upon her features, as, by a quick inclination of her head, she answered, yes.

What a world of thought and feeling clusters around such a fact! In all her memory there is but one sound, and that is her mother's voice. For years she has dwelt in a silence unbroken from without, but those gentle tones of love still linger in her heart. There they can never die; and if her life should be prolonged to threescore years and ten, o'er the long, silent track of her life, the memory of that voice will come, in loveliness and beauty, reviving the soul of weary old age with the fresh, lovely sounds of her cradle hours.

Youth's Department.

Only one Step at a Time. — Horace is a round-faced, white-headed little boy, three years of age. One Sabbath morning, as we came from our chamber, we overheard his mother say, "Here, Horace, my dear, carry this book into your father's study, and lay it on the table." The little fellow took the book, went to the foot of the stairs, and there he stopped. We wish our little readers could have seen him, as he stood gazing up that long flight, from the bottom to the top. Such a look of *discouragement* surely never before came over the countenance of a little boy. He seemed to say, by his appearance, "How *can* I go up all these long steps?"

The watchful eye of the mother immediately saw his trouble, and with a sweet, encouraging voice, she said, "O my son, it is *only one step at a time.*"

And so the little boy found it. When he looked at the long, steep journey, and thought of it *all together*, it seemed a task too great for his tiny feet; but when he thought of it "only one step at a time," it seemed an easy matter. And how many a "hill of difficulty" would disappear, if we would think of it "only one step at a time." The long Sabbath school lesson, the hard sum in arithmetic, the errand a mile off, the big pile of wood to be carried into the house, the bed of strawberries to be weeded, all appear *easy* to accomplish, when we remember it is only one word, one figure, one step, one stick, one weed, at a time.

Whenever, then, little reader, you feel discouraged at some task your mother has assigned you, think of this mother's remark to her white-headed boy, "*only one step at a time.*" You must surely be a faint-hearted little fellow, if *one step* frightens and discourages you. Well, if you can take *one step*, you can take the next, for that is only *one step*, and then another, and so on to the top. Try it, and not be chicken-hearted. — *Well-Spring.*

Duty of Labor. — No man can rise from the workman's rank. Fall he may, and often does, from that state, but to rise above the order the great God has established to govern his world, is impossible. Every man should be a workman, and fill up a workman's rank. He must fill that or a loafer's. He who made the world never made a spot on it for an idler. He never made a man who has to live by his brains alone, or such a one would have been *all* brains. Body and soul, powers physical and mental, are to be used, else they never would have been given; and whoever finds himself in possession of a pair of hands, a set of bones and muscles, may rest assured that he has a command to use them.

Health Department.

Health. — Horace Mann thus discourses of health, in his new book, just about to be issued from the press of Ticknor, Reed, & Fields: —

"Appetite is Nicholas the First, and the noble faculties of mind and heart are Hungarian captives. Were we to see a rich banker exchanging eagles for coppers by tale, or a rich merchant bartering silk for serge by the pound, we should deem them worthy of an epithet in the vocabulary of folly. Yet the same men buy pains whose prime cost is greater than the amplest fund of natural enjoyment. Their purveyor and market-man bring them home headaches, and indigestion, and neuralgia, by hampers full. Their butler bottles up stone, and gout, and liver complaint, falsely labelling them sherry, or madeira, or port, and the stultified masters have not wit enough to see through the cheat. The mass of society look with envy upon the epicure who, day by day, for four hours of luxurious eating, suffers twenty hours of sharp aching; who pays a full price for a hot supper, and is so pleased with the bargain that he throws in a sleepless and tempestuous night as a gratuity. English factory children have received the commis-

eration of the world, because they were scourged to work eighteen hours out of the twenty-four; but there is many a theoretic republican, who is a harsher Pharaoh to his stomach than this; who allows it no more resting time than he does his watch; who gives it no Sunday, no holiday, no *vacation* in any sense. Our pious ancestors enacted a law that suicides should be buried where four roads meet, and that a cartload of stones should be thrown upon the body. Yet, when gentlemen or ladies commit suicide, not by the cord or steel, but by turtle-soup or lobster-salad, they may be buried in consecrated ground, and under the auspices of the church; and the public are not ashamed to read an epitaph upon their tombstones false enough to make the marble blush. Were the barbarous old law now in force, that punished the body of the suicide for the offence which his soul had committed, we should find many a Mount Auburn at the cross roads."

Mechanics' Department, Arts, &c.

The Hydro-Electric Light. — After a period of six years, employed in a series of experiments, conducted upon the most philosophical principles, and continued with indefatigable perseverance, Mr. Henry M. Paine, of Worcester, has completed his "Magneto-electric Decomposer,"—an ingenious apparatus for evolving hydrogen and oxygen gases from water, by the agency of electricity, generated by mechanical means. The gases thus obtained may be used for light, heat, and motive power, and have already been practically tested for the two first named purposes, on a considerable scale, with wonderful effect.

At his residence, on Tuesday evening, April 23, Mr. Paine exhibited the operation of his invention to a number of gentlemen of Boston and Worcester, some of whom have considerable experience in the gas business; and others have taken great interest in plans and projects having in view the production of artificial light at cheaper rates than it can be furnished by the means hitherto employed by gas manufacturers. Mr. Paine had his house brilliantly lighted up, although he used only one small burner for each room. The light was exceedingly strong and white, and so pure that the most delicate shades of blue and green, in some colored prints, could be instantly distinguished at a distance of several feet from the burner, (a common gas-burner,) which was supplied with gas from a pipe whose diameter did not exceed one quarter of an inch.

At the same time that the light was being exhibited, the mode of using the gas for heating was also shown. A small jet of *pure hydrogen*, between two circular plates of iron, raised a few inches from the floor, was lighted, and in a few minutes an equal and genial heat was diffused throughout the apartment. Thus the astonished party had the light and heat together, supplied from the same source below, and their expressions of admiration were unbounded; nor were they abated when they were led down into the cellar to examine the exceedingly small machine by which the gas was made. The box containing it was about eighteen inches square and eight in depth. We cannot give the details of the interior of the machine, but will simply state that, as its name indicates, it evolves magneto-electricity by purely mechanical action. From the above-mentioned box there ran flat copper wires into the decomposing jar, which was about two feet in height, and six or eight inches in diameter, partly filled with water; in this jar, by the action of the electricity just spoken of, pure hydrogen gas *alone* was formed from the water, whence it passed into two gasometers or reservoirs about the size of a barrel each. The pole, at which oxygen gas is liberated, on this occasion passed into the ground, so that hydrogen only was evolved by the action of the machine. The process of carbonizing the hydrogen for illumination is exceedingly simple, and was open to view. It is very cheap, so much so, that Mr. Paine says that the cost of carbonizing the gas he has burned in his house in three burners, every evening for a week, has not yet amounted to *one cent*. The hydrogen is used for the general purposes of light and heat, and the oxygen can also be secured in a second jar, and may be used with the hydrogen to produce the "calcium light" for lighthouses.

Mr. Paine has also discovered a principle by which he can regulate the quantity of electricity to be discharged into the decomposing jar. A large machine has recently been perfected by Mr. Paine, of sufficient power to supply three thousand burners with gas; it is set up in the Worcester Exchange, and only occupies a space of three feet square by six inches in height.

One cubic foot of water will make two thousand one hundred feet of gas; and a weight of sixty-seven pounds, falling nine feet in an hour, will make, from this large machine, one thousand feet of gas. The apparatus can be applied to gas works o any kind, and be used with any of the gas fixtures at present in fashion. — *Boston Post.*

SELECTION OF SOILS FOR ANALYSIS.

We are often asked how soils should be selected for analysis, whether entirely from the surface, or part from below, what quantity is required, &c.

As earth is not a crystallized substance, whose composition may be ascertained by its geometrical form, but is heterogeneous in its character, we must be careful that the sample selected should represent an averaged quality; and to do this, it will be necessary to bear in mind that the lighter and soluble portions of soils are both to be found in excess in low parts of fields or at the bottom of slopes, and indeed, even accidental deep furrows in flat fields may, by a single shower, be rendered the recipients of more than a due proportion of particular constituents.

Other parts of a field, by being underlaid by a tight subsoil, may remain wet for a sufficient length of time to induce the decomposition of some of the integrants of the soils, and subsequent evaporation of the more volatile portions. For the proper selection of a specimen of soil for analysis, where the results obtained are to enable the cultivator to select the proper manures for his crops by knowing the deficiencies of the soil, it is necessary to select from a large number of places, and at different depths, mixing them all together, and then taking a pint or less of this mixture as the average of the surface soil of the field.

A sample so selected, although it cannot be expected to represent an exact average of the quality of the surface soil, will still be sufficiently near for all practical purposes.

The above directions apply particularly to the surface soil, or that which has been freely worked, and which has sustained vegetables; but when the advice of a consulting agriculturist is intended to be asked in relation to the abilities and proper crops for such a soil, and the manures required for its greater fertilization, &c., then an analysis of the subsoil should also be made. By the subsoil, is meant that under portion which has not previously been disintegrated by the plough; and the parts of the subsoil selected for analysis should be equally assorted in position and depth, to at least as great a depth as could be

reached by a subsoil plough. These selections of soils for analysis should never be made soon after a manuring, as the soluble portions will pervade the soil in more than dependable quantities, and thus lead to errors.

We often receive copies of analyses, with a request to advise modes of culture, manuring, &c., &c., and too often are compelled to visit the locality, simply because the applicant has not been sufficiently explicit in his communications. We should receive, accompanying the analysis, a description of the farm generally — such as the fertilizing materials upon it, marl, muck, &c., &c., and when known, the class of rocks pervading or underlaying the subsoil; also, some account of the previous mode of manuring, depth to which it has been ploughed, elevation above the sea, and indeed all facts which may in the most remote degree affect the economy or requirements of the farm. — *Working Farmer.*

AGRICULTURAL EDUCATION.

Dr. Lee, superintendent of the agricultural department of the Patent Office, in his report to the commissioner making suggestions in reference to the ways and means now available for improvements of American agriculture, offers the following remarks on agricultural education :—

Since 1823, when Judge Buel introduced the first bill to establish an agricultural college in the state of New York, by legislative aid, constant efforts have been made to render the study of rural economy as a *science*, not less than its practice as an *art*, popular in this country. Twenty-seven years have now elapsed, a whole generation has passed off the stage, and New York, with her five hundred thousand cultivators of the soil, is still without the first agricultural school worthy of the name; nor is any other state in a better condition. Dark as this view of agricultural education really is, it is the darkness that precedes the dawn of a bright and happy day. Men who have labored for the improvement of agriculture, and the elevation of agriculturists, for a quarter of a century, with little of hope, and less of pecuniary reward, now realize the beginning of an auspicious change in public sentiment. Thanks to agricultural journals and societies, the people will soon discover that labor and capital devoted to tillage and husbandry are as worthy of legislative consideration, as labor and capital employed in mining, commerce, and manufactures. So soon as this truth shall be fairly comprehended, the long struggle of the friends of improvement will be crowned with success; and the victory won over both ignorance and its traditions.

It is, indeed, wonderful how long those enlightened, reasoning farmers, who, like Washington, cherish a due respect for their high calling, have had to beg, and beg in vain, of state legislatures, and of Congress, for a little assistance to prevent the universal impoverishment of American soils. Whatever has been done to arrest the exhaustion of arated lands, has been effected not only without due aid from government, but in spite of a mistaken policy, which encouraged the removal of all the elements of bread and meat from cultivated fields, and their speedy transportation beyond the possibility of restitution. Neither the earnest recommendation of the illustrious farmer of Mount Vernon, nor the prayers of two generations of agriculturists, nor the painful fact that nearly all tilled lands were becoming less and less productive, could induce any legislature to foster the study of agriculture as a *science*. Happily, this term, when used in connection with rural affairs, is no longer the subject of ridicule.

Some pains have been taken in this report to prove that one thousand millions of dollars judiciously expended, will hardly restore the one hundred millions of acres of partially exhausted lands in the Union, to that richness of mould, and strength of fertility for permanent cropping, which they possessed in their primitive state.

The continued fruitfulness of the earth is an interest far greater, and more enduring, than any form of government.

If the twenty-two millions of people now in the United States may rightfully exhaust the natural fertility of one third of the arable lands of the country, the forty-four millions who will be here twenty-five years hence may properly consume the productiveness of the remaining two thirds of all American territory.

A great principle is involved in the science of agriculture, which reaches through indefinite generations, and forms the basis of all possible improvements, and of the highest hopes of our race. All advancement is impracticable in a country that closely approximates the condition of a desert.

As a nation of farmers, is it not time that we inquire by what *means*, and on what *terms*, the fruitfulness of the earth, and the health and vigor of its invaluable products, may be forever maintained, if not forever improved?

These are questions of universal concernment, to the careful and rigid investigation of which no man should refuse to lend a listening ear. A governmental policy which results in impoverishing the natural fertility of land, no matter by what popular name it is called, must have an end. It is only a question of *time*, when this truly spendthrift course, this abuse of the goodness of Providence, shall meet its inevitable punishment. To show the necessity of reform, a plain estimate has been made, in the chapter on "agricultural statistics," to prove that we annually waste enough of the elements of bread, without which, not the first kernel of corn can be formed, to produce one thousand million bushels of this important staple.

The Board of Agriculture of Ohio estimates the crop of corn in 1849, within the limits of that state, at seventy million bushels; and it will hardly be extravagant to say, that the farmers of Ohio, Indiana, Michigan, Illinois, and Wisconsin export a million tons of breadstuffs and provisions, where they import one ton of the atoms drawn from their virgin soils, to form agricultural products. Can it be said, in truth, that a million tons of bread and meat are produced from *nothing*? Will it be contended that the earth, within the reach of good ploughing, contains an unlimited amount of the precise things consumed to make the plants, whose organic and inorganic elements are taken from the soil, and never restored? If this be true, then all fertilizers are not only unnecessary, but absolutely worthless. This cannot be so; for lands that seventy years ago produced from twenty-five to thirty-five bushels of wheat in the state of New York, now yield only from six to nine bushels per acre; and in all the old planting states, the results of exhaustion are still more extensive, and still more disastrous.

A lack of mental culture and discipline is the most serious impediment to the diffusion of agricultural science among the mass of farmers. Its language is to them an unknown tongue. Hence the most sublime truths in the economy of nature are shut out from the popular understanding. It is feared that this will ever be the case until schools designed to teach those branches of learning which the practical farmer greatly needs, but does not possess, are established and maintained throughout the United States.

So long as we refuse to plant the seed, it is folly to expect a rich harvest of knowledge.

We over-estimate the value of mere physical strength, like that of the ox or mule, and under-estimate the intrinsic worth of cultivated, well-developed reason, in practical agriculture. No inconsiderable degree of mental culture must precede all scientific tillage and husbandry. An oak is not matured from an acorn in a day, nor in a year; nor is it possible to form, in a single generation, a universally educated and highly improved race of men. Such improvements, to be general, and fixed in a people as a distinguishing feature in their character, must be deeply impressed on several successive generations.

As a class, farmers have few advantages for being well informed in the rapid progress now making in the economical improvement of soils, cultivated plants, and domestic animals. This lack of opportunity is a serious misfortune, and leads to this practical result: With 5,000,000 farm-laborers—2,700,000 in the slaveholding, and 2,300,000 in the free states — American agriculturists so misdirect this immense power of production, that the injury done to 100,000,000 acres of land is nearly equal to all the apparent net profits on the whole rural industry of the country.

To illustrate an important fact, as well as principle, let us suppose that a farmer produces crops worth $1000, and that they cost him, including all expenses for labor, wear of implements, interest on capital, &c., $850. Nominally, he has a profit of $150; but it often happens, that, if he undertakes to replace in his cultivated fields as much of potash, soda, magnesia, phosphorus, soluble silica, and other elements of crops, as both tillage and cropping had removed, it will cost him $175, or $200, to effect that purpose. It is only by *consuming the natural fertility of the land* that he has realized any profit.

In a national point of view, all labor that impoverishes the soil is worse than thrown away. No fact in the science of political economy is more important than this. To reduce a field, which in its virgin state produced forty bushels of corn per acre, down to twenty in ten years, and then cultivate it forty years, and harvest only twenty bushels per acre in place of forty, is equal to a loss of four hundred bushels of corn per acre in the aggregate, or half the diminished product, without any equivalent whatever. Thus to impoverish land is to wither the muscles of both man and beast employed in its tillage. Human toil is often praised for being highly *productive*, when, had the whole truth been known, it would have been seen to be remarkably *destructive*. Labor never creates a particle of new matter by ploughing deep or shallow; but it frequently places the elements of grain, cotton, and provisions beyond the reach of all scientific farmers who may live hereafter, and find the soil wanting in the raw material for making human food and raiment.

Is it not the duty of government to diffuse among its citizens a knowledge of the true principles of tillage, and impress upon them the obligation which every agriculturist owes to posterity, not to leave the soil he cultivates in a less fruitful condition than he found it?

When we understand better the importance of *concentrating* labor instead of *scattering* it; when we shall come to estimate duly the superior profit of "a little farm well tilled," over a great farm half cultivated and half manured, overrun with weeds, and scourged with exhausting crops, we shall then fill our barns, and double the winter food for our cattle and sheep, by the products of our *waste lands*.

THE CURCULIO.

This insect has become very destructive to plums, particularly, and as it is a great evil, which should receive more attention, and which requires further investigations, the following recent communication from Dr. Eastman Sanborn, of Andover, to the Puritan Recorder, will be read with interest and profit. In our first volume, we introduced Dr. S. to our readers, in relation to this subject. His thorough and numerous experiments on this subject give an importance to his articles.

A few years only have passed, since the curculio, or *Rhynchaenus Nenuphar*, was known as the destroyer of fruit. At its first appearance, its demands, like those of many other invaders of the vegetable kingdom, were modest and unpretending. It seemed quite satisfied with visiting here and there tender plum-trees, and depositing its egg in their fruit.

But, alas!

"The young disease which must subdue at length,
Grows with its growth and strengthens with its strength."

The present year this invader holds almost the entire kingdom of *Pomona* in subjection. Apples, pears, peaches, plums, cherries, apricots, and nectarines have fallen a prey to it. What further encroachments it is to make on the productions of the soil, in 1850, and in succeeding years, may well excite the most serious apprehensions. Individuals and associations, if not legislatures, should put forth such exertions as will exterminate it.

In compliance with your request, that all experiments calculated to give valuable information upon this, as well as other branches of agriculture and horticulture, may be reported, I here submit a few examinations made in 1849. If they suggest thoughts, or lead to discoveries which shall have a tendency to preserve to us the golden productions of our fruit-trees, and thus gladden the heart of honest industry, and reward labor, my object will be abundantly accomplished.

May 18. Plum-trees in my vicinity were in full bloom, and, to be in season for the curculio, I had a platform built on cross-bars and stakes, four feet high, covering the entire surface of the earth under a Green Gage and a Bolmar's Washington. These trees stood nine feet apart. The expense of the materials was less than two dollars.

From this date to Wednesday evening, June 6, the trees were jarred morning and evening. Thousands of other insects, perfectly innocent, but which are often mistaken for curculio, fell upon the platform, but not a solitary insect of this tribe was to be found above or below it. The wind was west and north-west. The next morning, June 7, on jarring the trees at six o'clock, though jarred so thoroughly the previous night, a whole shower of curculio fell upon the boards, and were secured in network cages for exhibition and experiment.

At seven o'clock P. M., about a dozen more were taken, and "shown up" in due form. I speak of this operation as the duty of all who have the opportunity of exhibiting "these foxes, these little foxes, that spoil our tender fruits," till all fruit-growers may recognize them wherever they see them. At this time, the plums were about the size of the marrowfat pea.

June 8. At six o'clock A. M., I jarred off five curculio; at seven o'clock P. M., six; on the morning of the next day, two; but at night, none. Between this time and the evening of the 15th, none were taken. At the last date I caught one; the next morning, two, and on the same day, one. On the morning of June 18, another shower of a dozen

fell at the first jar; in the evening, none. On that day, in the morning, two were caught, and in the evening, the same number.

The plums were at that time nearly half their full size; and those that were first bitten began to fall. On breaking them open, I found that the grub had worked its way over nearly the whole circumference of the kernel, and was about ready to enter the earth and assume its beetle form. I prepared glass jars, partially filled with earth, for their reception, in such a manner as to render visible all their changes. I also prepared jars and kegs of earth for the apple, pear, peach, and cherry. On June 20th, in the morning, no curculio fell from the trees, but at evening I found one, and deposited the bitten fruit for experiment. On the 21st, the temperature being 90° at three o'clock P. M., I caught one curculio. On the 22d, three in the morning, but none at night — the thermometer standing 100° at one o'clock, 90° at four o'clock, and 85° at six o'clock P. M.

On the 23d of June, three curculios were caught, the wind being west and south-west. A few rose-bugs (*Cetonia aurata*) appeared on the blossoms of the Charryanthus, (?) and on the leaves of the Sweet-water Grape. I secured them in network cages, to observe their habits, means of reproduction, &c. I found also worms coiled up in the apple-leaf, which are very numerous, and deposited more fruit bitten by the curculio.

On the 24th, we had a strong west and south-west wind, and I found no curculios. On the 25th, the wind blew from the west and north; and I observed that the blossoms and foliage of the Charryanthus were nearly covered with rose-bugs. I placed pans of hot water underneath, and jarred them off into it. I then gave some of them to my fowls, which did not seem to relish them, and threw the remainder into my fish-pond, where they were eagerly devoured. After the appearance of the rose-bugs, I found but few curculios, not more than three or four from June 25th to July 17th.

Finding that my plums were out of danger, I removed the platform, and had the felicity to see my trees bowing to the earth and loaded, as many persons of taste and judgment declared, with several bushels of the finest Gages and Washingtons.

I speak this, not boastingly, yet confidently, as the result of my experience. Two other Gages, which blossomed equally full, yielded but one perfect plum, though subjected to a great variety of *popular* experiments, quite too numerous to be mentioned.

Reproduction of the Curculio.

The plums which have been bitten by this insect, and deposited in jars June 28th, produced, on the 28th of July, one curculio, on the 30th, three; and the number increased for several successive days. These jars were set in a window with a southern aspect, but shaded from the sun. On the 5th of August, the plums deposited in other jars at the same time, but sunk in the coldest location in the garden, produced curculios. I attended carefully to this experiment, to satisfy myself and others in relation to a question asked by Hon. Mr. Calhoun when the subject was discussed last winter at the agricultural meetings.

It was then intimated that these insects come from the earth in the same season in which they enter it, and this was attempted to be proved by the fact that they had been seen to, when buried in earth in a jar. But the inquiry was made, whether this fact was not owing to their exposure in the jar to a warm temperature, and whether, if buried in the cold earth, they would not remain there during the winter.

However cold the position, or late the deposit of these grubs, in about six weeks they return to the surface perfectly furnished, winged, and equipped for their work of destruction. I come to this conclusion from many experiments, and much research. For two seasons I have had an opportunity of witnessing the daily changes of this insect, from the moment it leaves the fruit till it reappears. I know the order and time of its appearance, and have it preserved in twelve or fourteen of its different stages, showing what changes it undergoes from day to day.

From the great variety of jars and positions in which the grub of this insect was preserved in 1848, not one curculio has appeared this year, (1849.)

In the latter part of May, broad covers were placed under trees which were subject to their ravages last year, from which the fruit fell and deposited them in the ground, but not a single curculio was caught in them, proving conclusively that they do not come up from the ground, as is generally supposed.

Also, peaches bitten by the curculio were put into a keg half filled with earth, and placed in a cool, shady place in my garden. In due time, thirty or forty curculios made their appearance beneath the network which covered the top of it. The decayed fruit was removed, and the insects kept confined as before. In three or four weeks, all of them were found dead on the surface of the earth, none having reëntered it. These, and many similar experiments which I need not at present describe, satisfy me that neither the curculio nor its grub burrow in the ground during the winter; and, consequently, that the common practice of guarding against its ravages by various operations in the soil, rests on a false theory, and is productive of no valuable results. Truth alone can make us free, and crown our efforts with success.

If every fruit-grower will examine carefully the habits of this insect, and report the result of his labors, we may yet see them subjected to human control.

> "Many a shaft, at random sent,
> Finds mark the archer little meant."

I am permitted, through the courtesy of Judge Greenleaf, of this place, to relate to you a very interesting and successful experiment, one that is worthy of the imitation of all our cultivators, and capable of application to various kinds of fruit. As soon as his young apples began to fall, he employed boys to pick them up from day to day, and put them in barrels by the sunny side of his house. On emptying them after a few days, he found at the bottom of the barrel a large handful of small white grubs or *Nymphae*. From all the barrels he obtained a full quart, which were destroyed with hot water, except a handful which he put into a glass jar half filled with earth, into which they immediately descended, and from which, in due time, reappeared *bona fide Rhynchaenus Nenuphar*, or *Plum Weevil*, alias curculio, and as a curiosity they were exhibited to very many.

My neighbor, Mr. A. W. Pike, also brought me a vial swarming with curculio, which he obtained from cherries bitten by this insect, and deposited as above described. I have the results of many other experimenters, all affording materials for valuable discoveries.

Dear sirs, if I had not already taxed your patience too long, I would describe similar experiments on the rose-bug, apple-leaf worm, and other insects injurious to our fruits, but I will defer this till a future occasion, and will close with an interesting fact, of which I had nearly forgotten to speak — the rearing of curculio from the black wart, which often appears on the plum-tree. I had, at one time, living specimens from this source; also from apples, pears, plums, peaches, and cherries, all of which, examined through a powerful microscope, presented the same general appearance in form, size, and color.

BEES AND HONEY.

I have seen a communication in your paper, signed "S. W. R.," Darlington, Beaver county, Pa., on removing or transferring bees from hive to hive, for the purpose of cleansing from worms, or taking the honey. The way stated may be good, but I think my plan better. It is said to be the French mode, as practised by the honey raisers of France — that is to say: take an empty gum or hive precisely of the same size and dimensions of the one you wish to change or transfer, turn the full hive bottom upwards, and place the empty one on top; tie a cloth around the middle to prevent the bees from coming out where the two hives join; then take a stick and crack around the full hive, and the bees will all run up into the empty hive. By putting your ear close to the hive you can hear them passing up. When you have reason to believe they are principally all up, lift off the top hive, set it down on the bench, and take away the hive with the honey, some eight or ten yards from the bee bench, and take out the honey. What bees may have adhered to the honey-comb will fly back to the new hive. In this way you need not kill a single bee intentionally. I have practised this plan with success when the season is good for honey-making, which is not every year. Bees are like every thing else; there are good and bad seasons for them. Sometimes they will hardly make enough to keep them through the winter, and other years they will make as much again as is necessary to keep them. When I have no other object in view than the honey, I rob them in this way from July till August. They will, if a good season, as I before observed, fill the second hive before frost. There are various opinions as regards the size of the beehive. I generally make them from eight to twelve inches square. The proper time for transferring them is early in the morning, or when it is raining, as the bees then are all in the hive. T. M.

New Castle City, Del., 1849.

— *Dollar Newspaper.*

BEANS.

There is, perhaps, nothing grown by the farmer more profitable than white beans. The small, round kind is preferred to any other, and may be raised as easy as other kinds. The labor required is not as much as some suppose. Beans may be raised with less labor than a crop of corn. An acre will yield from twenty to thirty bushels, and as a bushel is worth from $1 25 to $1 75, the straw and pods being the best kind of fodder for sheep, there can be no more profitable crop grown. It is a mistaken idea to think that it will not pay to plant beans on good soil. They will grow better than any thing else on a poor one, but they will yield much more abundantly on good. Beans grow best on gravelly soil, neither wet nor cold, but moderately moist. But they may be planted to advantage on any ground where corn will grow. From an experience of six years, I have adopted the following method of culture: I mark the field, after being ploughed in furrows about one foot or a little less apart, and drop four or five beans in a hill, and then cover slightly, as the beans require all the heat of the sun to germinate quickly. I plant from the 10th of May to the 20th. They generally want but one hoeing, unless the ground is very grassy, when they require two. When sufficiently ripe,—of which the farmer must be the judge,—I pull them, throwing four rows together, and let them lie a day or two to dry, when I draw them on a sled to the barn, and thresh with a flail. I am careful not to let them lie long before winnowing, as, if they are not perfectly dry, they mould or turn black, which renders them worthless, except for sheep. It is best after winnowing to spread them on a floor until they are perfectly dry, when they may be put in barrels or bins without danger. Choose a time when rain may not be expected, to pull beans, for if they become wet they may be injured. — *Selected.*

LIGHTNING RODS.

Why do not the farming portion of our community pay more attention to lightning rods? Their utility, and the trifling expense of putting them up, are generally acknowledged. Any man, with a little assistance, can accomplish the work. Procure a rod of sufficient size, say of three quarters of an inch in diameter, and attach it to your building, or to a lofty pole beside, being careful that it passes through good glass insulators, where it is fastened to the building. The parts of the rod had better be connected by screws than by links, as the latter are apt to become rusty or displaced in time, and thus the continuity of the rod is broken. The rod should terminate in a sharp silver point at the top, and in moist ground beneath, which varies with different soils, but which, during the dry summer months in our latitude, is not less than four or five feet beneath the surface. A rod put up in this way will effectually protect a circular space around it whose radius is equal to twice its height above the building; e. g., if the rod extends ten feet above the building, it will protect a space of twenty feet around it on every side. Conductors carefully put up will scarcely fail to secure their purposed end, and thus be of important service. Let the farmer think of this, and profit by the reflection in this season of comparative leisure, this period of the year so favorable for their erection. M.

Mercer Co., N. J., 1849.

— *Dollar Magazine.*

AN IMPROVEMENT IN BLASTING.

We have lately seen a very simple invention of Mr. Thomas S. Speakman, of this city, which, as an improvement in the operation of blasting rock and coal, seems to be founded upon a correct principle, and in practice is said to produce very important and satisfactory results. In blasting, the hole bored is usually widest at the top, and the rock, if very hard, or more obstinate than the tamping, or earth which is filled in to confine the powder, will cause the powder to blow out vertically in the direction of the least resistance, without producing the effect intended. In the invention of Mr. Speakman, the powder is contained in a conical or wedge tube. The greater body of the powder being at the bottom of the tube, the pressure against the tamping is reduced to the surface of its upper point or edge, throwing the whole force of the explosion laterally, or against the sides of the rock to be split, and of course giving it the greatest possible effect, the same as driving a wedge. The tube is made of stiff waterproof paper, and it may be so placed as to split the rock in any direction desired. It is very cheap in its construction, and requiring less powder, saves enough cost, in this particular alone, to more than pay for the use of it, besides doing double the amount of effective work. — *Dollar Newspaper.*

To catch Rats. — Set a common fox trap; over which spread a piece of cotton or linen cloth, sufficiently large to cover, and sprinkle some meal over the pan — and you *have* him; at least I did. — *Genesee Farmer.*

NOTICES OF PUBLICATIONS.

Elements of Agriculture, by J. P. Norton, M. A., Professor of Scientific Agriculture in Yale College. Albany, N. Y.: H. Pease & Co.—This is a neat volume of 208 pages, 12mo., by one whose reputation for agricultural science stands high, and whose writings on this subject we have read with interest and instruction. We have not yet had an opportunity to peruse this work. We refer the reader to a notice on page 187, by a gentleman distinguished for his zeal and intelligence in the cause of agriculture.

Proceedings of the Second Congress of Fruit-Growers. — We are indebted to Hon. Marshall P. Wilder, (president of this association,) for a copy of this work. It is a large pamphlet of 110 pages, containing a great variety of valuable information to the fruit-grower. We shall review the work, and present our readers with the most important facts that it contains.

The Philosophy of Electrical Psychology; in a Course of nine Lectures; by Dr. J. B. Dods. New York: Fowlers & Wells; 168 pp.; stitched; 25 cts. — This work is an able exposition of a new and interesting, and apparently a mysterious science, which shows the philosophy of disease — the connecting link between *mind* and *matter*, and their reciprocal action upon each other. To the philosopher, the nice observer, and the physician, it is a subject of great importance.

Der Amerikanische Bauer, or The American Farmer. — This is the name of a neat monthly work, in the German language, published at Harrisburg, Pa., by J. M. Beck, at one dollar per year. A German friend, who appreciates this work much better than we can, considers it a valuable publication. It is the only periodical of the kind, published in this country, in the German language, and we trust that those for whom it is particularly designed, who are distinguished for their intelligence, industry, and economy in the great rural art, will give it a liberal support.

The Journal of the New York State Agricultural Society. — This is a monthly publication, in pamphlet form, containing the proceedings of the society, and executive committee, and such communications and articles of interest as may be received by the society.

Flowers. — Spring flowers, breathing their soft perfumes, touch us like the spirit of poetry. The soul is renovated while we wander among verdant hills and dales, profusely spread, from the topmost rock to the lowest marsh, with these vernal offerings. Even the infant, gambolling on the green, seizes, with rapacious grasp, the variegated blossoms, sensible of their sweet odors and beautiful hues. E. P. H. — *Student.*

A wise man makes more opportunities than he finds.

OUR HOMESTEAD.

BY PHŒBE CAREY.

Our old brown homestead reared its walls
  From the wayside dust aloof,
Where the apple-boughs could almost cast
  Their fruitage on its roof;
And the cherry-tree so near it grew,
  That when awake I've lain,
In the lonesome nights I've heard the limbs
  As they creaked against the pane;
And those orchard trees, O, those orchard trees!
  I've seen my little brothers rocked
In their tops by the summer breeze.

The sweetbrier under the window sill,
  Which the early birds made glad,
And the damask rose by the garden fence,
  Were all the flowers we had.
I've looked at many a flower since then,
  Exotics rich and rare,
That to other eyes were lovelier,
  But not to me so fair;
For those roses bright, O, those roses bright!
  I have twined them with my sister's locks,
That are laid in the dust from sight!

We had a well, a deep old well,
  Where the spring was never dry,
And the cool drops down from the mossy stones
  Were falling constantly;
And there never was water half so sweet
  As that in my little cup,
Drawn up to the curb by the rude old sweep,
  Which my father's hand set up;
And that deep old well, O, that deep old well!
  I remember yet the plashing sound
Of the bucket as it fell.

Our homestead had an ample hearth,
  Where at night we loved to meet;
There my mother's voice was always kind,
  And her smile was always sweet;
And there I've sat on my father's knee,
  And watched his thoughtful brow,
With my childish hand in his raven hair —
  That hair is silver now!
But that broad hearth's light, O, that broad hearth's light!
  And my father's look, and my mother's smile,
They are in my heart to-night.

"You labor overmuch on your composition, doctor," said a flippant clergyman to a venerable divine. "I write a sermon in three hours, *and make nothing of it.*" "So your church says," quoth the doctor.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

☞ The Postage ☜

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, JUNE 22, 1850. NO. 13.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

CONGRESS OF FRUIT-GROWERS.

THE second session of this association was held in the city of New York, October 2d and 3d, 1849. So great was the delay in publishing their proceedings, that they have not appeared until very recently. We propose to make a general review of the work, and give our readers the most important matters that it contains.

We would first premise that the discussions of intelligent fruit-growers convened from different parts of our country, showing how each fruit taken into consideration flourishes or fails in different climates and localities, are very interesting and instructive; and the assembling together of pomologists, the exhibiting and comparing of specimens of fruit, and the interchange of opinions, all have a valuable effect in fixing on the best varieties, and disseminating them over the land. So far very good. But when such associations, composed of gentlemen from distant parts of a great country, recommend a list of fruits for general cultivation, and fruit-growers place implicit reliance on their opinion, and act accordingly in their practical operations, without knowing whether their section of the country was represented in the convention that made the decision, or whether the kinds of fruit recommended had been tried in their region or climate, a great injury is often done to the inexperienced. For instance, we find that the Congress have recommended some fruits that have proved to be poor in New England, and others that have not been tried, or sufficiently so to warrant a decision in their favor. We remarked to a delegate on his return from the Congress, who politely furnished us with a list of fruits that had been recommended, that of the list of apples, some were not known in New England, and others had been tried and found wanting. To this he replied, that the list was mostly recommended by the Pennsylvania delegation; and this we learn by the report before us. This fact shows that the decisions of a body made up from an extensive country, are not reliable for every section.

That this Congress was composed of gentlemen of extensive knowledge in the science of pomology, we do not doubt, and that they acted with a view to promote improvement in the great subject before them, there is no question; for these facts are evident from their able transactions: their zeal and intelligence are commendable, and the result of their candid and wise deliberations is an honor to our country; and we would venture to say, that more wisdom in the same number could not be collected in the old world. Though our country is young in horticultural improvement, our steps are rapid, and our course as thorough as the nature of the variable and multifarious subject will admit.

This Congress, after some discussion on the subject, determined to recommend a list of fruits for general cultivation, also to prepare a list of worthless or rejected fruits. Some objected to making a rejected list, but as they established a rule to reject none excepting by a unanimous vote, and those proposed for rejection should be retained with the name of the objector, no one could object to it; and a rejected list made with so much caution will be of important service, particularly as we have five times as many varieties of fruits as we need to cultivate.

But the accepted list was made with much less caution, or established by a very different rule. It was formed by a vote of the congress, even when several members objected to some varieties; and we regard this list as less reliable, or entitled to less confidence, than the other. We may safely drop those fruits which all condemn, but we may not safely cultivate those kinds which many condemn, which fail in various sections, or which are not generally known.

With these preliminary remarks, which we deem essential to the reader, we proceed to give a part of the lists of fruits made by this Congress; and we shall continue the subject, and give the remainder soon.

APPLES.

List selected by the Congress in 1848.

Early Harvest, Large Yellow Bough, American Summer Pearmain, Summer Rose, Early Strawberry, Gravenstein, Fall Pippin, Rhode Island Greening, Baldwin, Roxbury Russet; *and for particular localities*, Yellow Belle Fleur, Esopus Spitzenburg, Newtown Pippin.

Additional List selected in 1849.

White Seek-no-further, Fameuse, Porter, Hub-

bardston Nonsuch, Winesap, Lady Apple, Danvers Winter Sweet, Wine Apple, Red Astrachan, Vandervere, Bullock's Pippin, Swaar, Autumn Pearmain.

Rejected List.

Gloucester White, Beachemwell, Pennock, Henry's Weeping Pippin, Red Ingestrie, White do., Kirke's Lord Nelson, Marmalade Pippin, Priestly, Rowland's Red Streak, Red or Royal Russet, Hoary Morning, Large Red Sweeting, Red Doctor, Grand Sachem, Cathead, Dodge's Early Red, Gray French Reinnette, Muscovia, Irish Peach, Pigeonette, Salina, Woolston's Red Streak, Golden Reinnette, Woolston's White Sweet, Caroline, (English,) Fenouillet Rouge.

List proposed for rejection, but retained agreeably to the rule which we have named.

Black Apple. — Mr. Hayes, of New Jersey, objected to its rejection.

Winter Pearmain. — Mr. Hancock, of Burlington, N. J., Mr. Hovey, of Boston, and Mr. French, of Braintree, Mass., objected.

Cabashea. — Col. Hodge, of Buffalo, N. Y., and Mr. Barry, of Rochester, N. Y., objected.

Blenheim Pippin. — Mr. Hovey objected.

American Pippin, or *Grindstone.* — Mr. Hayes objected.

Scarlet Pearmain. — Col. Hodge, and Mr. Elliot, of Cleveland, Ohio, objected.

List of new Seedlings.

The committee on seedling fruits reported as follows on apples : —

Balm Apple, from H. C. Hunt, Vt. Medium size, fair quality, or good. Said to bear every year.

Tender Apple, presented as a cooking apple.

Jewett's Best Apple, of fine appearance, but not in season for eating. Has a high character in its original neighborhood.

Northern Golden Sweeting, from J. Battey, Keeseville, N. Y. Of beautiful appearance, good size, best quality. We recommend it be called simply the *Northern Sweet.*

Champlain Apple, from the same. Good quality, beautiful appearance.

Bailey's Spice Apple, from the same. Good, spicy, handsome.

Forrence Apple, from the same. Good.

Ribbed Codlin, from D. Miller, Jr., Carlisle, Pa. Large, waxen, tender; good, particularly for cooking.

Cumberland Seedling, from the same. Large, handsome, oblate, red, tender flesh, pleasant, very good.

Page Apple, from Henry Little, Bangor, Me. Handsome, good appearance, not in eating order.

Seedling Apple, from W. T. & E. Smith, Geneva, N. Y. Large size, greenish-yellow, quality good.

About half of the list of apples selected as worthy of general cultivation, are either but very little known in New England, or have been tried, and found to be deficient.

Early Harvest is a slow grower, poor bearer, and the fruit is very liable to crack and blast. Some of our most skilful orchardists and nurserymen have excluded it from their nurseries.

American Summer Pearmain is very liable to blast, and though long since introduced, it is cultivated but very little.

Early Strawberry is but little known in New England, and in some cases it is affected with blight, and it is too small for the market.

Fall Pippin is very liable to blast, and far less profitable than some other varieties.

The three varieties recommended for particular localities are not generally profitable in this section. The first two are fine fruits, and succeed in some favorable situations in propitious seasons.

White Seek-no-further is but little known, and we do not have a very favorable account of it. Thomas, in his Fruit Culturist, speaks of it as a fruit cultivated in New England. We think he must have been misinformed. In our numerous visits to fruit orchards, we have never seen but one tree of this variety, nor do we hear of it to any extent elsewhere. We have seen it in this market but once, and then it was raised in some other section, and it sold only at a moderate price. It is liable to be imperfect. When perfect, it is a fine fruit, but it will not sell for its full value in the market, owing to dark spots on it, which have the appearance of mildew or blast.

Fameuse is a very beautiful apple, and this is its greatest excellence. It is not of a high quality. It originated in Canada, and is one of the most popular apples in that country. It is adapted to a northern climate and cool locations. In this region, it does not succeed well in warm locations.

Winesap is but very little known, though long since introduced, which shows that it is not a favorite. It is too small for the market, and better for cider and for cooking than for the table.

Lady Apple is a very small apple, very beautiful, of tolerably good quality, but often imperfect. Some cultivators, who keep stalls in this market, and who know what is profitable, have changed their trees of this variety to something more valuable.

Wine Apple of Coxe is hardly known in New England. It is frequently in this market from the south or west, and sells well. It is tolerably good fruit, but we have better natives for the same season.

Vandervere is hardly known in this region. It is generally fine in New York, but as it is liable to the blast, and bitter rot, under unfavorable circumstances, and as it is a native of the south, we do not think that it will flourish well here.

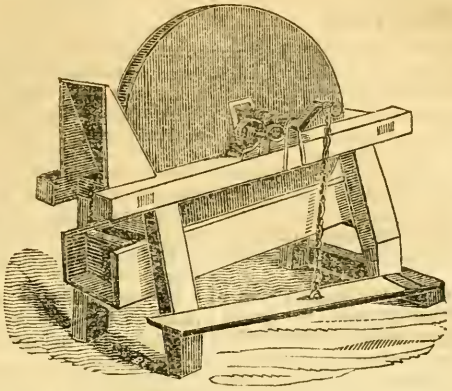
Swaar. We have had fine Swaar apples from New York, but have never seen a good one raised in New England, and we have never heard but one cultivator speak well of it, and he was an amateur. All that we have seen raised in this region were not *swaar*, (heavy,) but light and corky at the core.

Autumn (or *Herfordshire*) *Pearmain* is but very little known in New England.

It is stated in the report, that some of these fruits were adopted unanimously. In such cases, did the New England delegates vote in favor of apples not known in this section, or did they give their silent approval of a list, many of which had not been fairly tested among us, or, having been tested, *Tekel* is written on them ?

Having disposed of the apples, in our next, we shall give the action of the Congress on other species.

We intended to state at the commencement of this article, that Hon. Marshall P. Wilder presided over the deliberations of the Congress in the former part of the session, but having been called away, Samuel Walker, Esq., of Roxbury, was called to the chair.



GRINDSTONE ON ANTI-FRICTION ROLLERS.

This mode of hanging a grindstone renders the turning much easier than the old way, in which much labor is required to overcome the friction. These grindstones may be had all rigged upon frames, with a crank on one side, and a treadle on the other, by which the grinder can turn the stone himself with his foot, which is frequently a great convenience.

Those who would prepare their own implements and machines as far as possible, can obtain cranks and rollers for grindstones for about the expense of having an iron crank without rollers made to order. This shows how cheaply this improvement may be had under proper management.

Recently an improvement has been made by a flange on the arbor, forming a plate against which the grindstone is placed, and fastened there. This flange keeps the stone firmly in its place. The flange is not represented in the above cut.

AGRICULTURAL COMMISSION.

For a number of years past, a great deal has been said in this state, as well as in other sections of the country, on agricultural education, and the subject has frequently been before the meetings at the State House, where, in some cases, the same speeches have been repeated year after year. The past winter, at these meetings, it was thought that it was high time, and a favorable time, for action.

Every body in the state seemed conscious that something should be done for the agricultural interest, and all appeared willing to help on the good work; and the joint committee on agriculture in the legislature reported a bill, the substance of which was, that a commission of ten persons should be appointed to examine and report on the subject, also to examine and purchase a suitable tract of land for a pattern or experimental farm, and for the location of an agricultural school.

But unexpectedly, this bill met with opposition, and after a while many members of the legislature got an idea that the object of some was to establish a school on a grand and expensive plan, for the education of rich men's sons, and that notwithstanding all the state might do to encourage the school, the expenses would still be so great for tuition and board, that the sons of men in middling circumstances, or in an humble condition as to property, would not be able to avail themselves of the advantages of this public school.

Speeches were made against the bill, and it did not pass. A committee of conference was appointed, and after much discussion, a bill was reported and passed, and finally approved of by the governor, appointing a commission of five to examine the subject and report to the next legislature.

With this modification it will be perceived that the commission is shorn of most of the power designed to be delegated to it by the former bill; and perhaps this is as well, and may be better; for if the commission had much authority, and did not use it to the general satisfaction of the state, it would have a discouraging effect, as considerable expense will have been made.

The governor and council have appointed the following gentlemen to this commission: Hon. Marshall P. Wilder, of Dorchester; President Edward Hitchcock, of Amherst; Thomas E. Payson, of Rowley; Samuel A. Elliot, of Boston; and Eli Warren, of Boston; to consider and report to the next legislature upon the expediency of establishing a state agricultural school.

Tropical Fruits in Florida. — The cultivation of the pineapple has been commenced in Florida; and with a little protection occasionally in winter, it is believed this delicious fruit can be raised in that state in abundance. The banana, guava, fig, date, plum, orange, and, in fact, all tropical fruits, are now successfully cultivated in the neighborhood of St. Augustine.

Labor conquers all.

For the New England Farmer.

INSECTS ON POTATOES.

Mr. Cole: I am reminded by the article on the "Potato Rot," in the February number of the N. E. Farmer, and by other notices of the disease, of some facts that have been communicated to me concerning the presence of insects within the stalks of the potato. The discovery of the insects was made by Mr. Wilkinson, the principal of the Agricultural School at Mount Airy, in Germantown, Pennsylvania. From a correspondent, who had been engaged in making observations with him, I received specimens of these same insects last August, with the following account of them: —

"The eggs are deposited on the leaf-buds, about a foot above the ground. When hatched, the grubs enter the tender buds, and proceed down the stalk, and frequently reach the root before they change. They remain in the pupa state about eight or ten days, when they assume the perfect form, and creep out of the stalk by perforating the thin bark. The eggs are oval, and of a bright orange-red color. The very young grubs are of the same color, but soon change to a pale yellow. The potato-fields" (where these insects prevail) "look as if they had been scalded; and on examining the plants, from one to three weevils were found in each stalk. The potatoes have not yet begun to rot, but on cutting them open, a watery spot is found in the middle, and a well-defined streak of disease is marked from thence to the root on which it grew. The injury appears to have been confined to the late potatoes. Whether this prove the origin of the potato rot or not, it is an evil of great magnitude, and demands the attention of entomologists and farmers."

The writer here very prudently refrains from expressing a decided opinion that these weevils are the exciting cause of the potato rot; and there is sufficient reason for this caution.

The insect referred to is, in its mature state, a little beetle, about three twentieths of an inch long, belonging, as my correspondent rightly judged, to the weevil tribe. It was first described by Mr. Say, in July, 1831, under the significant name of *Baridius trinotatus*—the three-dotted Baridius. The Chevalier Schoenherr, in a large work, extending to several volumes, and exclusively devoted to the description of all the known insects of this tribe, redescribed this species under the name of *Baridius vestitus*, so called in allusion to the vesture of short gray nap that covers its body. In fact, its gray coat and the three black dots on its back, (one on each side of the base of the thorax, and the third on the scutel or escutcheon,) as Mr. Say remarked, distinguish this species sufficiently from all others. Mr. Say found it in Pennsylvania and in Indiana, and I have specimens from the former state, and from North Carolina. It has never fallen under my notice in Massachusetts, nor am I aware that it has ever occurred in New England.

Now, before we attempt to charge this or any other insect with being the cause of the potato rot, we must prove that the insect is coëxtensive with the disease; for there can be no doubt that the disease in all parts of Europe and of America, wherever it has appeared, is specific and identical in its character. It is as much a disease unique in its kind as is the Asiatic cholera, and almost as extensive in its range. This being true, the same cause that originated and propagated the disease in Europe, must have extended and continued it in America; and whenever this cause shall cease to act in one place, we may reasonably hope that its influence will begin to subside in other and more distant places. It would be not only unphilosophical, but contrary to all analogy, to attribute the disease to one cause, or to one kind of insect, in Europe, and to another cause, or to another kind of insect, in America.

Let us, then, inquire what are the facts in regard to the insects in question, and in regard to other insects that have been supposed to be the cause of the potato rot. Are they as universal as the disease? Naturalists, being those who are most conversant with the subject, will tell us that *Baridius trinotatus* is wholly unknown in Europe, and that it is exclusively confined to America, where also its range is limited to a part of the country only. On the other hand, the *Aphis devastator*, which Mr. Smee has described as the cause of the potato rot, is confined to Europe, and perhaps also to a comparatively small part thereof.

If due weight be given to such considerations as these, shall we not be brought to the conclusion that potato rot is independent of any such causes as the attacks of insects?

It has long been my opinion that the potato rot is a disease of an epidemical character, propagated by a kind of *malaria*, or atmospheric poison, capable of extensive diffusion, and though of uncertain duration, destined to come to an end in the course of time. How far *the change in the constitution of the potato produced by cultivation*, may have had any influence in the production and propagation of the disease, will be an interesting subject for investigation. We may find that some varieties, like the St. Helena potato, either from original hardiness of constitution or from some other cause, have hitherto been exempt from the disease; and that new and vigorous varieties raised from the seed, may have power to withstand its attacks. And perhaps we may find that new soil, like the virgin loam of the forests, unchanged by tillage and manure, and uncontaminated by the exudations of agricultural crops, may prove most favorable to the free growth, healthy condition, and early ripening of the potato, and thereby enable it to pass unhurt through a visitation of the epidemic.

T. W. HARRIS.

Cambridge, Mass., *May* 28, 1850.

For the New England Farmer.

WHITE SHANGHAE FOWLS.

Mr. Editor: In the last number of your paper, a correspondent, "Stonington," says, "In a recent communication to your paper on the 'White Shanghaes,' it is stated they are a separate breed of fowls. Will your correspondent, or some other gentleman versed in feathered genealogy, give us his authority?"

"If there is a distinct species of White Shanghae, it is not known to Capt. Palmer."

That there is a breed of fowls at Shanghae with white plumage, is shown by those imported in March last, now in the possession of Mr. Wight, at Dedham, Mass. These fowls were obtained at Shanghae, and were shipped by the Vancouver, and purchased at a much greater price than is paid for the ordinary store fowls, with which the foreign ships are supplied. The progeny of those White Shanghaes has been, so far, without the slightest deviation as to color, (as I am informed by Mr. Wight,) showing that they are a distinct breed.

The Shanghae fowls imported by Capt. Palmer, and presented by him to Mr. Dixon, and of which "Stonington" speaks so highly, were undoubtedly the remainder of the store fowls put on board of Capt. Palmer's ship, and were of mixed blood, having the same character that fowls purchased, under similar circumstances, for ships leaving any of the ports of this country, would possess, and it requires

no search for "undiscovered laws" to account for the white plumage thrown by their descendants. The fowls, when bought by Capt. Palmer, were of *mixed blood*, and were selected, not for *breeders*, but for being eaten during the voyage.

"Stonington" cannot, it seems from the tenor of his communication, believe there can exist at Shanghae a breed of white fowls, because "it is not known to Capt. Palmer," and ventures "a prediction that the White Shanghaes mentioned in the communication, if they are pure blood, will turn out some fine red chicks in the course of the summer." If "Stonington" has no better ground on which to found his prediction than the want of knowledge of Capt. Palmer, I place no reliance on his opinion, and no faith in his prediction.

Who "Stonington" is, what facilities he may possess for obtaining information, and how well he may be "versed in feathered genealogy," I do not know; but it is hoped that he will, when he next attempts to correct "several errors in point of fact, which are likely to mislead," &c., favor the readers of your paper with his real name and place of residence. I dislike to reply to a person who does not give his name to the public.

For the account of Capt. Palmer's examination of the different kinds of fowls at Shanghae, and of the loss of the White Shanghaes by Mr. Dixon, I am indebted to John Giles, of Providence, R. I.; and what reason he could have to give false information, I leave the reader to judge. Yours, &c.,

S. BRADFORD MORSE, Jr.

For the New England Farmer.

EARLY BEARING—QUINCE STOCKS FOR THE NORTH.

Mr. Cole: Will you, or some of your able correspondents, give information, through your valuable publication, on the following subjects?

When large fruit trees are grafted, will the scions bear fruit sooner when taken from bearing trees than when taken from young trees?

Will pears flourish when grafted on quince stocks, as far north as New Hampshire? (lat. 43° 15′.) If so, or in trying the experiment, what variety of the quince is preferable? INVESTIGATOR.

North Charlestown, N. H., *March* 6, 1850.

Remarks. — There are different opinions as to scions from bearing trees bearing fruit earlier than those from young trees. We think that there is generally but little difference. If the scion is old, the stock must also have age and vigor, before the scion will bear. We have cut scions from bearing trees, which scions (as is evident from others that remained) would have borne fruit the next season, set them on young stocks, and managed well the trees, and they have not borne for seven or eight years. At the same time, such scions set on bearing trees have borne plentifully the third year. We have had scions that retained so much of their original disposition to bear, that they bore the first season, but afterwards became so modified by the young stock, that they did not bear again for six or eight years.

A few days ago, a fruit cultivator showed us a seedling set on a standard tree to forward its bearing. It had not borne, though set as long a time as is necessary for seedlings to bear on their original stock. So there is a doubt whether the bearing of seedlings can be much hastened by grafting on bearing trees, though it may be done by working them on dwarfs, and pursuing other modes of causing early maturity. We do not consider these questions settled, but we do think that it is of but little importance whether scions are cut from bearing trees, or young trees, for the purpose of grafting young trees. Will some of our correspondents give us their experience in regard to the time of bearing of scions cut from old and young trees, and set on bearing trees?

Pears will doubtless flourish as well on quince stocks in New Hampshire, as in a more southern clime, if such pears are selected as are adapted to that region. We think that there is but little difference in the value of the different varieties of quince for the pear; but further experiments may give us a different view of the subject. The most vigorous stocks are best, but we do not, in this respect, perceive much difference in the apple, pear, and Portugal quince. Yet these are unsettled questions, and we need more light on them. — Ed.

For the New England Farmer.

MILDEW ON GOOSEBERRIES.

Mr. Cole: The prevalence of the mildew on many of the choice varieties of gooseberries, has become so common, that many have, in utter despair, abandoned the cultivation of them. We had well nigh concluded that any further attempts in their behalf were useless; and had it not been for a kind of farming denominated "book farming," found in our agricultural journals, we should long ago, probably, have consigned our bushes to the rubbish heap, and concluded that there was an end of the whole matter. From the experience of some one in this matter, we learned that *salt meadow hay* placed around the bushes had a good effect. Such hay does not grow on the mountains of Berkshire; so we applied a substitute, without knowing whether, in our case, we should kill or cure. If we had done the former, there would have been no loss, for the bushes were worthless as they were.

In the first place, we dug in a plenty of fine manure among the roots of the bushes. Rotten chip manure is excellent for the purpose; so are composts. Early in the season we gave as much as half a pint of rock salt to each bush, laying it so far from the stalk as not to interfere with it. This salt is in a state of decomposition until it is gone, and its effect is to keep the ground cool and damp—two essentials to the perfection of this kind of fruit. After salting, litter with any waste hay or leaves; these also tend to keep a uniform moisture and temperature around the roots. By managing in this way, we have restored our old bushes, so that last year we had as fine a crop from them as they ever gave in their most palmy days. When the mildew first appears, sprinkle the bushes over with brine, and it will check its progress.

Other remedies have been recommended, which we have tried with less success. One, for instance, says, if they are allowed to grow in grass-land, the mildew will not touch them. This we have tried, but with us it was no go; our berries were as fatally shielded over as when the ground was cultivated.

The prevalence of the disease undoubtedly depends much on soil and locality. In most cases they probably succeed best in moist, cool localities. It is in such we find them in a state of nature. At the

same time, the soil must be open, so that the roots will have ample means to extend themselves.

We have as yet been able to find no variety that is proof against this plague. Some are more subject to it than others. Those who are not willing to employ a little labor and a trifling cost to remedy the evil had better throw away their bushes, and done with it. But for ourselves, the crops of last year and year before were an ample remuneration for the labor we employed, and we have no doubt but others will find as good a compensation in the same way.

Yours truly, W. B.

May, 1850.

Remarks. — Foreign gooseberries are very liable to mildew, but Houghton's Seedling is free from this evil. We have cultivated this variety for several years, both on moist and dry land, also on a poor soil, and under high culture, and we have them both in sheltered and exposed situations, and we have never seen any mildew on them. It is a great grower and bearer, and the fruit is of the highest quality. This is perfectly healthy, while our foreign kinds growing in the same lot are blighted. But as it is desirable to cultivate a variety, the prevention recommended by our correspondent is important. — Ed.

For the New England Farmer.

MILDEW OR INSECTS ON GRASS.

Mr. Cole: In my letter to you to send me the Farmer, I forgot one thing; and that is, our herdsgrass, as it is beginning to head, is attacked by an insect, or the miller, and it is stopped in that state, and remains so until it starts at the bottom and comes up anew.

I have talked with a good many men about it, but I do not find any one that can give any information. They have noticed that it did not come up, but knew not the reason; they attributed it to the drought or some other cause. I have noticed after the larvæ hatched, as I suppose, as I have been walking along in the grass, the millers would fly before me like grasshoppers, when they are thick.

They are a very great damage to our crops of grass. They do not attack a field until the third year after seeding, and then they do not take more than half the heads, and the fourth year they take almost every head.

And now I wish that you would send out an inquiry in the Farmer, to find out whether other parts of our country are affected like this vicinity; and also to find, if possible, a preventive, for it is a very great injury to our grass crops.

INQUIRER.

Waitsfield, Vt., 1850.

Remarks. — Will some of our correspondents throw light on this subject, if it has come within their experience? Two years ago, we had a piece of herdsgrass that was affected with mildew, and we attributed it to very thick sowing on wet land; and we expected to see it again last season, but it did not reappear, although our grass was so thick that we had three tons of fine hay to the acre, at one mowing, on the very spot where it was blighted the previous year. But this blight might be different from that mentioned by Inquirer. — Ed.

For the New England Farmer.

BLUE FLAG.

Mr. Editor: Can you or any of your correspondents inform me of a method of eradicating the blue flag (*iris versicolor*) from grass land? We have a field in which it has obtained *roothold*, and is rapidly spreading. The ground is low, but not very wet, the superfluous water being taken off by a drain. The soil is very shallow, with a hard, stony subsoil, which prevents ploughing. The lot has received abundant top-dressings, and has, until within a year or two, yielded good crops of grass. The flag is now so abundant as nearly to ruin the crop. If you have met with similar cases, perhaps you can give some information on the subject to a

SUBSCRIBER.

Remarks. — We have destroyed blue flag, and almost every other worthless plant, by ploughing, thorough culture, manuring, and growing of crops. We have no experience in destroying blue flag where the land cannot be ploughed. Will some of our readers give the information desired? — Ed.

For the New England Farmer.

SELECTING FRUIT TREES.

Mr. Editor: Though the subject of this epistle comes a little out of season, yet, owing to its manifold importance, it may not come amiss to discourse upon it occasionally.

We would not recommend the farmer to select the thriftiest trees that he can find, because it is no uncommon thing for the nurseryman to have thrifty growing trees; he can manure his nursery well, and take all other necessary care, thus force them along with all possible means, get them in a short period large enough for sale, and looking very nice and handsome, will sell readily, and at a very high price. No, we do not recommend such trees, because, unless they are kept in equally as good cultivation as they have been, (and I hope and believe that it is not customary for farmers generally to force their orchards,) they will not last so long as those that *thrive chiefly in accordance with the laws of nature*. No, farmers, do not purchase a tree out of a nursery where they are tall, slender, sleek, and smooth as a candle, unless you wish to keep them in a high state of cultivation. Trees should not pierce the sky, like Cleopatra's Needle, or as once did the celebrated towers of Bologna. No, it is enough for the human masonic art to do this, but the vain intention should never be practised upon the productions of nature.

D. WARREN JOHNSON.

Winchester, *May* 25, 1850.

For the New England Farmer.

MILLET.

Mr. Cole: In your number of May 11, in an article headed "Work for the Season," I notice you mention millet, among other kinds of grain. I live in a section where millet is entirely unknown as a field crop. I should like to be informed how much seed it requires to sow an acre; how much an acre in good condition would probably yield; what it is worth per bushel, and what is its use or uses; also, if it should be sown on land rich enough to raise

wheat or corn, or if it will grow on poorer land to advantage. Any information in regard to the above inquiries, would be gladly received by a

SUBSCRIBER.

Ryegate, Vt., *June* 4, 1850.

Remarks. — Millet is a small grain. The seed is valuable for fowls, but rather dear for this purpose, when purchased in the market. A good crop yields from fifteen to twenty-five bushels. If sown in drills for seed, one peck of seed is sufficient; but if sown broadcast for the same purpose, nearly half a bushel is necessary; and when sown broadcast for fodder, about three pecks should be sown. Some cultivators say that a less quantity is sufficient, and others more.

Millet is often cut before ripe, and used for fodder, but it will not yield so much fodder as Indian corn. Millet requires land in high tilth, the same as for a good crop of wheat. It is rather uncertain in this climate, and though long known, and frequently tried, it is but very little cultivated. On rather poor land, buckwheat is a much better late crop. June is a good season for sowing millet. It should be sown as early as the 20th or 25th, and better for being sown before these periods. The usual retail price of millet, at the seed stores, is $2 00 per bushel.

For the New England Farmer.

CULTURE OF POMEGRANATES.

Mr. Cole: The generic name, *Punica*, of this tribe of plants seems to have arisen from the circumstance of the *P. granatum* being found growing in that part of Africa where ancient Carthage stood; the ancients called the fruit *Malum Punicum*, Carthaginian apple; and *Pomum granatum*, kernelled apple. The specific name, *granatum*, from *granum*, grain, on account of the grains of its fruit, was borrowed from the latter. The Grecians seem to have set very great store by this fruit. The tree was first brought to Rome from Carthage, in the days of Sylla; and Pliny informs us, that the color to dye cloth, called *Punicus*, is obtained from the flowers, and that the Romans used the rind, flowers, and every part of the fruit, in medicine. Sloane says, "The rind of the fruit, together with the bark of the tree, is still used in some parts of Germany, in the dyeing and preparation of red leather." The rind also produces as good ink as that made from galls. In its wild state it grows to a bush from sixteen to eighteen feet high, and bears profuse crops of fruit, something after the manner of hawthorn.

Wine made from this fruit was strongly recommended by Lord Bacon, Dr. Buchan, and others, for complaint of the liver, or, if the wine could not be had, newly expressed juice might be used in the morning, with a little sugar and a small piece of green citron peel. The Persians make a very favorite drink of the rind, with the addition of cinnamon. The *P. nana* is used as hedges in Jamaica and the Island of Cuba; its leaves are diminutive, and its red flowers, although not large, are pretty conspicuous: the fruit in such situations is highly ornamental, and of the most excellent sweet flavor.

Propagation and Culture. — The usual mode of propagation is by layers. Lay down the branches of the previous year's growth in May, merely pegging them, without making any incision, and by the autumn they will have made good roots, and may be taken off any time before the buds break, and planted either in larger sized pots, in a mixture of good rich loam and a small portion of sandy peat, or against a warm wall. They will also strike freely by well-ripened cuttings, taken off in the autumn, and planted in pots filled with equal quantities of light sandy loam and peat, covered over with a hand or bell glass, and set in a shady part of the greenhouse or stove, keeping them perfectly free from mould, or even dampness, until the following February, when they should be plunged in a bark or hot bed, where they will speedily strike roots; they should then be potted off separately, and again plunged in a brisk heat until they have established themselves; they may then be gradually hardened, until they will bear the temperature of the greenhouse, carefully repotting when required. The second year after they are struck, they may be turned out, under a south wall, in front of a stove or greenhouse. Where they are intended to be planted, take out the soil to about the depth of twelve inches, and lay at the bottom about four inches thick of broken stones, or other hard rubbish, to prevent the root from striking deep, and induce them to run near the surface; for if once they get deep, however suitable the soil may be for their growth, they will flower but very partially. Fill up the trench with a good strong, rich loam, mixed with a small portion of sand, if it is inclined to bind.

Pruning. — Proper pruning will greatly assist their flowering. All the flowers are produced at the extremities of the young branches formed the same year; care should therefore be taken to bring only the strongest buds into action, instead of filling the tree very full of weak shoots; to accomplish this, cut out all the weak branches of the former year, and shorten the others according to their strength; by these means, a quantity of flowering wood may be obtained throughout the whole tree.

Grafting. — The yellow, white, and double scarlet varieties are often grafted on stocks of the common one; the operation is performed in February or March, after the same manner of the apple, &c. To bring the fruit to perfection, it is indispensable that the tree be trained against a flued wall, where it will have a higher temperature to swell up and ripen.

BERNARD REYNOSO.

For the New England Farmer.

BLOSSOMING OF APPLE-TREES.

Mr. Editor: By the remarkable cold and cloudy weather during the month of May, just past, and the heavy rains, and north-east and easterly winds, the blossoming of apple, as well as other fruit trees, has been delayed to a later season this year than usual. You published my account of the time of blossoming of apple-trees, in the Farmer, in the number for June 23, 1849, p. 213. In that account, containing a table of their blossoming in Mansfield for fifty-two years, but one year they were delayed as late as June, and that was in the year 1812, when the blossoms were not out full till the 2d of June. The next latest was May 31, 1832. The earliest in said table was in May 8, 1830; — difference of the two extremes, twenty-four days — mean of which is May 21, which is exactly the mean of the said fifty-two years.

This year I consider apple-trees were not out in full blossom till June 3, one day later than known for the past fifty-three years. I noticed that many apple-trees of late varieties, the Russet, &c., for instance, were not fully out even on that day. And also, some trees, in cool and wet locations, were not fully expanded. My rule in determining the time is

to note when their petals had begun to fall to the ground; that is, as many petals had fallen as what remained to expand. The old red cherry were this year equally as late as the apple.

Most respectfully yours,

ISAAC STEARNS.

Mansfield, Mass, *June* 6, 1850.

WHEN SHOULD GRAIN BE CUT?

It has ever been the practice with most farmers to permit their grain crops to remain in the field until fully matured. This, it was thought, was indispensably necessary to secure the complete development of all those characteristic excellences upon which the value of most grains, used for food for man and beast, is found intrinsically to depend. To cut it, therefore, one day before its entire and perfect maturation, was supposed to detract to some extent from its nutritive powers, and consequently to diminish somewhat the value of the crop, without securing any advantages worthy of consideration in return. The assumption upon which this hypothesis is predicated, is, that the stalk acts merely as a conduit, or tube, through which, as the grain demands it, the nutriment is conveyed from the soil. No allowance is made for the action of the vitalizing fluid, or sap, which is supposed to act merely as a solvent, and is arrested and rendered incapable of operating any favorable action upon the grain, as soon as the crop is cut, though the stalk be replete with sap, and the grain unfilled, or immature. My own experience, however, aided by the experiments and observations of others who have made these phenomena a subject of critical and patient investigation, induces me to adopt an altogether different view of the case; and this, I find, is the fact with many of the most distinguished scientific writers both in this country and in Europe.

In the 2d volume of British Husbandry, pp. 136, 137, it is said, —

"The question has been for some time agitated, regarding the state of ripeness in which grain should be reaped; and it has been recommended as a general rule of practice, to cut down the crop before the uppermost grain can be shaken out. Taking all things into consideration, it seems to be the most prudent plan to have the grain cut before it is fully ripe; but in this a medium course should be adopted; for, although grain, if allowed to become too ripe, assumes a dull, husky hue in the sample, yet, if not ripened enough, it shrivels in the drying."

Cadet de Vaux asserts that "grain reaped eight days before the usual time, has the berries larger, fuller, and finer, and better calculated to resist the attacks of the weevil. An equal quantity of the corn thus reaped, with corn reaped at maturity, gave more bread, and of a better quality. The proper time for reaping, is that when the grain, on being pressed between the fingers, has a doughy appearance, like a crumb of bread just hot from the oven."

Mr. C. Howard, in the Report on Select Farms, says, "Wheat ought never to be allowed to remain uncut till it is fully ripe. Experiments, easily made, will prove to every cultivator of it, that by permitting it to stand until the straw has lost its succulency, he gains nothing in plumpness or bulk of grain, but loses much in color and fineness of skin; besides which, he incurs the risk of shelling, by the high wind, or by its being cut under the influence of a burning sun.

"When fully ripened by standing in the shocks, no dry hour should be lost in getting it well secured."

Landon observes, that "in harvesting wheat, the best farmers, both in England and on the continent, agree that it ought to be cut before it becomes dead ripe. When this is the case, the loss is considerable, both in the field and in the stack-yard; and the grain, according to Von Thaer, produces an inferior flour."

These extracts from the most distinguished theoretical and practical writers on agriculture, might be multiplied *ad infinitum;* but enough has been presented, I presume, to show what is the general belief upon this important subject. My own experience, also, goes to corroborate the correctness of the theory which proposes that all grain intended for human food, or for feeding animals, be cut at least five days before it becomes mature. In the summer of 1836, I had a piece of oats, about four acres, which were remarkably stout. As hay was that season rather short, and as less than a medium crop had been harvested, I wished to preserve the straw of this field in a condition which would render it in some measure an efficient substitute for English hay; and with this view, cut the whole of my oats at a period of their growth when the straw was perfectly green, but not before the berries had become somewhat hard to the touch, though by no means ripe. From appearances, I was induced to believe that about five days of dry, warm weather would be required to ripen the crop; and in this opinion I was afterwards confirmed by the time required fully to ripen a small strip which I caused to be left near the centre of the field, the produce of which was afterwards carefully threshed and weighed. The weather was favorable during the harvest, and the sheaves were stored without injury from the wet. On comparing the produce of that portion of the field to which the sickle had been introduced first, with the produce of that which had been allowed to become fully matured before cutting, there was no perceptible difference either in the size or weight of the grain; but there was a marked difference in the appearance and value of the straw. That which was cut first, retained its green, brilliant hue, and was eaten by my cows and young stock with the greatest eagerness and avidity; whereas that from the other section was rejected, and was used for littering horses, hogs, sheep, and other animals kept on the farm. Since then I have made it an invariable rule to cut my oats (of wheat I raise but little) as soon as the heads begin to turn. I allow the crop a fair time to make, and bind in small sheaves, which I expose for several days to the sun, if the weather be favorable; if not, I stack them a while before depositing them in the barn.

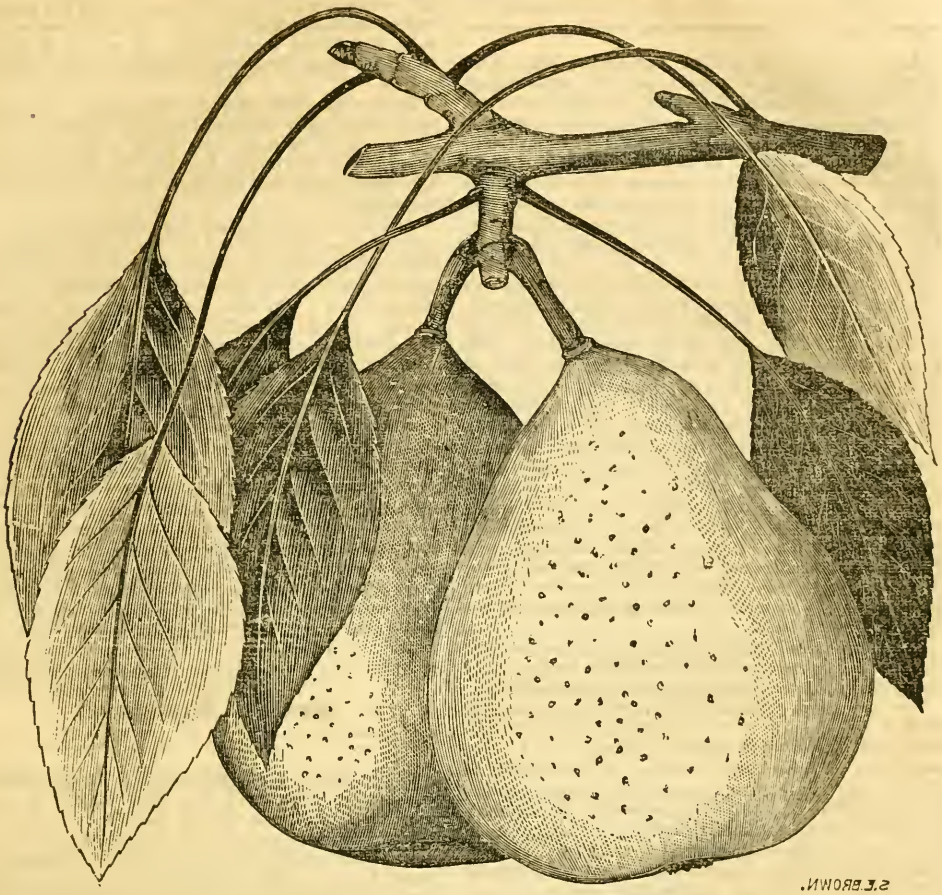
A COUNTY FARMER.

June 1, 1850.

— *Germantown Telegraph.*

Mathematics of Bees. — The warmest admirers of honey, and the greatest friends to bees, will never, I presume, contend that the young swarm, who begin making honey three or four months after they are born, and immediately construct these mathematical cells, should have gained their mathematical knowledge as we gain ours, and in three months' time outstrip Mr. Maclaurin in mathematics as much as they did in making honey. It would take a senior wrangler at Cambridge ten hours a day, for three years together, to know enough of mathematics for the calculation of these problems, with which not only every queen bee, but every undergraduate grub, is acquainted the moment it is born. — *Sidney Smith's Sketches of Philosophy.*

Flattery corrupts both the receiver and the giver, and adulation is not of more service to the people than to kings. — *Burke.*



ST. GHISTLAIN PEAR.

This pear is of a fine texture, and usually high quality. It is a native of Belgium, and ranks among the best pears for garden culture, under careful management. But notwithstanding the excellent quality of the fruit, it is not adapted to general orchard culture for the market, or for this market, as it is too small to sell for what it is really worth. We have seen them in the market, in fine condition, but the sale dull; and one cultivator of this fruit in this vicinity, who has about twenty trees, informs us that he shall change them to some other variety, as the size is too small for the market, though the quality is first rate. Sometimes a superior pear attains a high reputation, and sells well in market, though rather small. This is the case with the Seekel; but it comes in when pears are not usually very plenty, and it attained its high character when but few varieties were cultivated. With the great variety of excellent pears now generally known, and several ripening with this kind, and as the St. Ghistlain, like most foreign pears, is variable, it will never gain a notoriety that will cause it to sell for what it is worth in the market, — that is, in this market, with the present preference for large fruit.

Characteristics. — Size medial; pyriform, neck narrow and tapering; pale yellow, sometimes a red tinge; stem usually an inch and a half long, varying from slender to stout, and fleshy at the fruit; very shallow basin; flesh whitish, fine, melting, buttery, juicy, of a fine delicious flavor, first rate when in perfection, but occasionally varying to second rate. Ripens in September, and is better when gathered rather early, and ripened in the house. Growth upright and vigorous. Shoots light brown. Hardy and productive. It flourishes well on its own stock or as a dwarf.

Our drawing is made from specimens presented by our liberal friend, Mr. Andrew Lackey, Jr., Marblehead, where we saw, last season, a tree of this variety, grown on the English white thorn, and trained on a building, of large size, remarkable vigor, and well loaded with the finest looking fruit that we ever saw of this variety. It was sufficiently large to sell well in market.

Domestic Department.

It was a remark of Dr. Spurzheim, that "the physical education of woman was of more importance to the welfare of the world, than that of men."

Whether full assent be conceded to this or not, no one will deny that a proper development of woman's physical powers should attend that of the intellectual and moral. It has become a topic of common remark, as well as regret, that while the mental faculties of females are subjected to a wise and salutary discipline, their physical training is almost totally neglected.

It will not be for a moment doubted, that woman's happiness and usefulness are, in a great measure, proportioned to the health she enjoys, and that all other qualifications will be of comparatively little avail, if this precious boon is denied to her. It should then be a subject of special attention with parents and educators to secure to the daughters of our land the fullest amount of energy and comfort to be derived from an early and judicious regard to the demands of their physical constitution. Occupying, as woman does, a loftier position, as respects moral influence, in our own than in any other country,— and to which is justly ascribed our singular and growing strength as a people, — it is a matter of great practical importance, not only to her, but to society in general, that her training, in all respects, should be such as is adapted to the maintenance of her present exalted rank.

It is observed that girls at this day are far less efficient in whatever appertains to bodily strength and power of endurance, than were their grandmothers.

The privations with which the latter were familiar in their childhood and youth, taught them self-reliance and contentment under subsequent and more propitious circumstances; the free air they breathed purified the vital current, imparting health, animation of spirits; and the pure water they drank satisfied their thirst without vitiating the taste: reared amid such influences, strangers to those fashionable maladies which modern refinement has induced, they were companions worthy the patriots of the revolution. True, their means of education were limited; but a deficiency of books was supplied by a perfect mastery of the few they possessed, by a closer observation of nature, and the exercise of a clear and vigorous understanding.

That the *present generation* of the female sex is inferior to their predecessors in point of strength, health, and length of life, and fast deteriorating in those qualities which gave them energy and character, is a fact, it is believed, generally acknowledged.

Nor is this in any degree surprising. For while the brother is permitted to engage in all those invigorating pastimes which his nature and inclination demand, the sister is habitually admonished for indulging in those healthful amusements to which her disposition leads her. She is taught that all those natural impulses, arising from exuberance of spirits and the joyous hilarity of youth, are rude, boisterous, or ungenteel, and should therefore be repressed. If she goes forth to breathe the fresh and pure air of heaven, she must walk with the measured step and gravity of a funeral procession. Should her instructor permit her to trundle her hoop, to exercise her lungs beyond what is regarded as the standard of propriety, the fond and fashionable mother interferes, protesting that her daughter is becoming rude and unladylike.

Nor is this all; at a time of life when most capable of profiting by instruction, and when in seasons of relaxation, she should be allowed the freedom of the mountains, the hills, and the meadow, in order to impart the glow of health to her cheek, cheerfulness and animation to her spirits, strength to her memory, and vigor to her intellect, the daughter, *now a young lady*, is ushered into society. A round of gay and often frivolous amusements follows this important event.

Late hours, late suppers, stimulants, and excitement drive sleep from the pillow. Weary and disordered both in mind and body, she rises, idly to spend the hours of the day, till the return of evening shall bring her renewed scenes of gayety and pleasure.

A few years thus passed introduce her to the cares and duties of domestic life. Destitute of self-reliance and self-control, ignorant of her own powers and capabilities, with a constitution impaired, it is not strange that when the stern realities of life are to be met, she fades and sinks to an untimely grave. Would mothers, when visiting the burial-place of the dead, but read the inscriptions carved to record the age and worth of those who died at a period of life when, by a judicious training, they might have been the light and centre of the domestic circle, and would they reflect that a maternal pride, or possibly their own ignorance of the laws of health and of life, is hurrying their daughters to a like premature end, there would be hope for those to whom their education is intrusted, that these now young and beautiful daughters will be restrained from scenes of dissipation and folly; till, through the plastic influence of education, *physical*, intellectual, and moral, they "may be as centre stones polished after the similitude of a palace."— *Family Visitor.*

Youth's Department.

Sympathy. — A mother who was in the habit of asking her children, before they retired at night, what they had done during the day *to make others happy*, found her young twin daughters silent. The older ones spoke modestly of deeds and dispositions, founded on the golden rule, "Do unto others as you would they should do unto you." Still those little bright faces were bowed down in silence.

The question was repeated. "I can remember nothing good all this day, dear mother; only one of my school-fellows was happy because she had gained the head of the class, and I smiled on her, and ran to kiss her. So she said I was good. This is all, dear mother."

The other spoke still more timidly. "A little girl who sat by me on the bench at school, had lost a baby brother. I saw that while she studied her lesson, she hid her face in her book, and cried. I felt sorry, and laid my face on the same book, and cried with her. Then she looked up, and was comforted, and put her arms round my neck. But I do not know why she said that I had done her good."

The mother knew how to prize the first blossomings of sympathy. She said, "Come to my arms, beloved ones! To rejoice with those who rejoice, and to weep with those who weep, is to obey our blessed Redeemer."

Never laugh at those who do not dress as well as you do. They may know a great deal more than you. They probably are better far to their parents or little brothers and sisters. Treat them kindly. Don't look at their clothes, and then at yours, as if to say, "See how nice I am dressed." Such conduct is mean and ill bred. Don't be guilty of it.

Health Department.

No Excuse. — Our farmers never forget the barn, the corn-crib, nor the "spring house;" but a bath room, quite as necessary to the comfort and health of their households, rarely enters into the calculation. Even when it is impossible to convey a sufficient supply of the element directly into the house, a sponge and plentiful buckets of water will be found to answer the purpose admirably, where the city bath is unattainable. No person is excusable for neglecting a daily ablution with the common "wash-bowl and pitcher" apparatus within reach; and with them, a square of oil-cloth to protect the carpet or floor, he may gain comfort and increasing strength, with very little trouble and expense.

The only objection that can be urged against this healthful practice, is prompted by indolence — a cowardly shrinking from the trouble, and mayhap of the first plunge; but this grows less and less; habit steps in to aid us, and by rising a few minutes earlier, the busiest man or woman may secure the necessary time. Then the warm glow, and brisk and healthful circulation, that succeed the chill, is an ample repayment for all transient discomfort. The unshrinking use of a coarse crash towel, a short, quick walk in the open air, if possible, directly after, and our word for it, the most delicate of you all will return with such an appetite as you never know going from chamber to breakfast room without the application prescribed above; a prescription that we would enforce by earnest solicitations, for a trial at least, to those of our readers who wish for a long life and healthful one. — *Neal's Gazette.*

Mechanics' Department, Arts, &c.

Lithography. — Lithography is the art of printing from stone. This process is based upon the fact that printing ink, being largely composed of oil, will not adhere to any surface which is wet with water.

Every one knows how utterly impossible it is to mix oil and water. To lithograph, then, all that is necessary is, to draw on the smooth surface of a dry stone, with a greasy crayon, whatever is desired to be printed. A weak solution of nitric acid is then rubbed over the stone, which fastens the drawing so that it cannot be rubbed off. After this, a solution of gum-arabic is passed over the surface, and then the stone is ready for printing.

By means of a sponge, water is now rubbed on the stone, and while yet wet the inking roller is applied. The ink of course adheres to the lines of the drawing, because they are oily, but to the wet stone it does not stick. The paper is now laid on, and, with the stone, passed through the press; the result being a beautiful and exact copy of whatever is drawn.

Such is the process by which the lithographic prints, that are sold in all parts of our country, are made. The colored ones are painted with water paints after the printing is completed.

The stone employed for lithography is of a peculiar kind of lime and clay nature, resembling in appearance a smooth, yellow hone, yet possessing the quality of absorbing water. This stone is known as lithographic, or compact lime. It is found chiefly in Bavaria, one of the German states, though there are quarries of it in England.

The Bavarian stones, however, are those most universally employed, and their importation is a considerable object in commerce. In New York these stones are worth from five to ten cents per pound. — *The Student.*

Iron Houses. — A young man in New York has invented a new mode of constructing iron houses, of which the Tribune gives the following description:—

It embraces a rigid frame of cast-iron pillars, with other parts of sheet iron. Pillars of peculiar construction are placed at equal distances, and each interlocks with the girdles, and cross sills, as well as the lintels, doors and window frames, and all the parts which require to be firm, or to brace other parts. The panels are of sheet iron, as also are the floors, ceilings, and shutters for the doors and windows. To every part of the house there is an interior and exterior wall, leaving an air chamber between; this renders each room fire proof, and each, if desired, may be rendered air proof. The roof is also of iron, and couples to the walls and floors. The frame may be ornamented in the casting as taste shall dictate, and the whole may be painted to perfection, equal to the finest fresco work. The house will resist any kind of atmosphere in the most perfect manner, and when put together, is so strong that it may be turned over and back again without injury. These buildings will be more desirable than any other, and may be taken apart in a few hours, and re-put together on another site with entire facility. Having been taken apart, one may be packed in a small space, as the whole is in sectional pieces, so as to be fitted for rebuilding, and for changing the form, or extending in either direction, or in height, within a few hours, without preventing its use while being so altered or added to, and without loss of any of the material of the original building. — *Family Visitor.*

Remarkable Mechanical Talent. — There is a French Canadian boy at St. Hyacinthe, who has constructed a working model of a steam locomotive complete in all its parts, about eighteen inches in length, without any assistance or instruction even in the use of tools. He is only about fourteen years of age, and has had to make for himself every implement necessary for his work, with the exception of one or two files. Among these implements is a rude species of turning lathe, and the tools for making screws. His models have been the engines which he has seen on the St. Lawrence and Atlantic Railway. — *Montreal Herald.*

REMARKS ON BARK-BOUND CHERRY-TREES.

In the last February number of the Horticulturist appeared an article from Prof. Turner, of Illinois College, upon the disease of the cherry-tree; attributing it almost entirely to the trees becoming "*bark bound,*" and advising for its remedy the peeling of the outer corticle of bark entire.

I have the greatest respect and esteem for Prof. Turner as one of my own correspondents, and as one who is doing much to advance horticultural science at the west. Yet, not having perfect faith in his theory, I trust it will not be deemed uncourteous in me to state what I consider the primary cause and the ultimate remedy; provided, in so doing, I occupy not too great a portion of your columns.

With an eye to this subject, I have, during the four years past, examined a large number of cherry-trees of all ages and sizes, and growing upon varied soils.

As Prof. Turner says, writers have advised various specifics; one a blue clay, another light, thin soil, &c., and all, like unto Mr. Allen's system of orcharding, on a large scale, and laying his orchard down to grass — being only to diminish the annual growth of the tree by lessening the amount of ascending sap, and thereby producing a short growth of fine, close grain, fully ripened, and capable of enduring the sudden and exciting changes of our western climate. "Again, others have shaded the trunks from the hot sun in summer." This I have myself practised, not only in summer, but also in winter, and have seen the same practised upon trees of twenty years' age, and as Prof. T. remarks, "the remedy has as often failed as it has succeeded." The slitting with a knife was practised by a friend of mine, an amateur in fruit culture, many years since, and without success; coming at last to the conclusion which impressed the mind of Rev. H. W. Beecher, who, in a few remarks respecting this practice, says, he "should as soon think of slitting the skin on a boy's leg, or on calves or colts, as a regular part of a plan of rearing them, as to slash the bark of sound and healthy trees." Prof. Turner *does not* advocate the slitting of the bark, I am aware. Yet I allude to it here, from the fact of having noticed a large number of trees this season most unmercifully slitted and gashed — vertically, horizontally, zigzag, and waved: "Prof. Turner, of Illinois College, advises it, and we thought we would try it."

Every one who has ever tried it upon trees, knows that by slitting the bark of almost any tree when it is in vigorous growth, it will immediately expand, as though it had been compressed by a bandage. Artificial channels so produced are, however, soon filled up by new granulations or layers of bark, and of course as much "bark bound" as before the operation.

Prof. Turner would strip the entire outer corticle from the tree, and by this, check the accumulation of sap to the gorging of the vessels of the trunk as dead matter. This, I believe, is the practice as advised by him to be pursued. Prof. T. remarks that this dead matter accumulates upon "the *southern* side of the tree, to be frozen and torn off by the frosts of winter." The word *southern*, I presume, is placed rather to designate the side of the tree upon which the "dead matter" is most generally supposed to be found, than as decisive of the *only* side upon which the tree is affected.

But to my own observations and belief. And first, the bursting of the bark is not confined alone to the cherry, but may be found upon the apple, pear, peach, and linden-tree; possibly upon others, but not to my knowledge. The same exudation of sap or gummy matter does not follow such bursting, except in the peach. This bursting is also as rarely found upon trees of the common Mazard or the Kentish as upon the apple and pear; and therefore the trunks of these varieties are naturally as healthy and little subject to this bursting of the bark as other species.

To satisfy myself of this, I have examined numbers of large trees of Mazards, both growing upon the richest of clay loam soil, on moderate soil, and upon a sandy loam; and also have examined the trunks of large trees, the tops of which are yearly producing the Black Heart, White Heart, Bigarreau, &c. Many that I have seen were grafted or budded at about one half the distance up the trunk, leaving one half the trunk Mazard, and the other of the budded variety. In all cases, I have found the Mazards the most free from any bursting of the bark. The rage with purchasers of trees to procure "*large*, straight, and thrifty trees," has doubtless been an incitement to nurserymen to prepare the soil in which they are growing trees for sale, so that they could produce a growth of from eight to eleven feet in a season; and this urging of the soil too often aided by the strong roots of an old sucker, rather than the fibres of a young seedling. These trees, so produced, cannot have wood as firm and close as is natural to the cherry, because the growth is beyond its natural habit.

The trees, therefore, are not as capable of enduring our sudden changes of climate as they would be were they grown only about three and a half to four feet the first season — forming a close, fine grained wood, well ripened. That a close grained, well ripened wood endures our climate best, is allowed by all; and is proved by a notice of such trees as the Elm, Maple, and Seckel, or most natural pear-trees, contrasted with the Ailanthus, Willow, and many other rapid growing varieties.

That peeling the outer corticle of a tree entire *may not* produce a healthy plant out of one diseased from its birth, I do not assert; but as yet I am not inclined to such belief. I regard the tree so diseased from its infancy that if left to continue where first grown, or transplanted to even a richer or poorer soil, six years — nay, often two years will not have passed without the evidence of over-feeding in youth showing itself, by bursting of the sap vessels and exudation of its sap; this as often upon the north side of the tree as upon the south, caused not directly by the hot sun, but mainly from the coarse, spongy nature and early habit of the tree, easily acted upon by sudden changes of temperature.

If we advance the idea that some varieties are more hardy than others, that some will endure our climate when others will not, we should certainly attempt to build our support upon the evidence given by such trees as were of close grained wood, and moderate growers from the first. These may be found in the Dukes and Morellos; the Belle de Choisy and May Duke being rarely complained of as affected by the bursting of the sap, although of late I have heard of two instances of the latter variety, both, however, traced to the fact of being upon sucker stocks, and having been excessively stimulated during their first year's growth, afterwards in good strong soil.

The "fire-blight," or "frozen sap-blight," in the pear, is rarely found in the Doyenne or Seckel, but often upon the Bartlett and Duchess d'Angouleme; and it is argued by writers to be induced from the rapid growth and spongy texture of wood in the latter varieties. So, why not this bursting of the bark in the cherry be attributed to the same cause?

The pear, in "frozen sap-blight," does not exude a gum, because such is not its nature; but its blackened appearance upon the body often coincides with that upon the cherry, and have by the writer been removed in the same way.

To support my own views of the necessity of trees being not too much stimulated in early growth, I have examined in others' grounds, and have those in my own grounds — those that were grown slowly, say not over four feet the first season, in close proximity to others that were grown some eight feet the first year from bud. The result as yet has been, that while, of the trees grown slowly at first, as many are of the rapid growing varieties, as among those grown rapidly the first year; yet those of early slow growth have hardly shown any exhibition of bark bursting, while the others have abounded yearly in blackened spots, and bursting bark, and when cured in one place upon the body, has shown itself in others, and at last among the larger limbs.

That peeling the outer corticle entire may not aid the tree for a time when so diseased, I may not now say; but that it will promote it from a sickly to a healthy tree, I doubt. And if it will aid or resuscitate the cherry, why will it not the pear?

The recommendation to grow the limbs low upon the bodies of the trees, is one which I think I advanced in a communication to the Prairie Farmer some two years since, and therefore I of course coincide with Prof. Turner in that point; but beyond that, I would, to produce permanent healthy cherry-trees, have them worked (if low down) upon small seedling stocks, planted in ground that will not cause a growth the first year from the bud, of over four feet; or rather, I should prefer the bud or graft inserted just below the point at which the head is intended to be formed, as in that case a less amount of the tree is removed when cutting back to the bud, a less injury is caused to the stock, and less growth of that season the result. Trees so grown during the first two years from the bud, I think, may then be transplanted to *any* soil, and be no more liable to "bark bursting" than the pear or peach.

With those trees already planted that are subject to being affected with "bursting bark," I find no difficulty in healing diseased points, by simply cutting away all dead matter, washing the wound with strong soap-suds, and wrapping it up in fresh cow droppings. Very respectfully, F. R. E.

Cleveland, Ohio, *Aug.* 1849.

As nothing is easier than the culture of all the finest cherries on the Hudson, and throughout most of the Middle States, we know but little from our own observation of the difficulties which are largely experienced in Western States, and therefore welcome these intelligent discussions to our pages. The excessive luxuriance of growth caused by the fertility of many western soils, is undoubtedly the cause of many obstacles in the way of the fruit-grower, which must be met by a resort to various counteracting expedients on his part. But even here, bark-bound trees are occasionally seen. Our own remedy here is scraping the trunks, and washing them repeatedly with soap-suds; but we have also seen bark-bound trees restored to a sound normal state by the old and long-practised expedient of slitting the bark. — Ed. — *Downing's Horticulturist.*

Remarks. — Some varieties of cherries, generally those that are foreign, are rather tender for our climate. They are liable to be injured by the extreme heat of summer, and cold of winter. The Black Tartarean is among the most tender kinds cultivated in this section. In extremely hot days, young standard cherry-trees, that have only short limbs, and those up high, are liable to have their trunks destroyed by the hot summer.

We have noticed that some of our cultivated kinds were killed last summer, while Mazard-trees near them, with trunks equally exposed, were uninjured. Therefore, a good method of forming a large, durable tree, is to raise up a hardy Mazard, and then graft or bud into the limbs. But as we are now adding to our lists of valuable cherries several fine natives, we shall soon have twice as many as we need to cultivate, and we can exclude those that are tender in tree, also those that are so liable to decay in fruit, in case of wet weather when it is ripening.

Besides several hardy and excellent native cherries already introduced, many others, from our best native seedlings, are on trial, and we shall soon be able to make a choice list, sufficiently extensive for all seasons of the cherry, for all purposes, and to suit all tastes, after excluding every kind to which there is any serious objection, even if the excluded kinds should be more numerous than those retained.

The cherry is generally a very rapid grower, and a great error in cultivation is, setting on rich land, or manuring too highly. When the tree grows rapidly, the wood is soft and tender, and more liable to injury from the hot sun, or severe cold, or from the sudden changes from heat to cold, and the reverse. The limbs of the cherry should be trained so as to protect the trunk and main branches from the sun, particularly from the almost vertical noonday summer sun.

If we could raise some of the best varieties of cherries from seed, without budding or grafting, as we do many kinds of peaches, we should accomplish an important object, both in getting more hardy trees, and saving the labor and risk of budding and grafting, which processes are more liable to fail in the cherry than in other varieties of fruit, particularly that of budding. — Ed. N. E. Farmer.

CURIOUS FACTS IN NATURAL HISTORY.

It is but little more than forty years since the first crow crossed the Genesee River westwardly. They, with the fox, the hen-hawk, swallow, and many other birds and insects, seem to follow civilization.

The locust borer is not of more than thirty years' introduction into the United States, and has not yet reached the native groves of the locust-tree at the south and west. It commenced its ravages on the east side of the Genesee River in 1830, and it was seven years before it crossed to the west side.

The grain worm, or weevil, began its course of destruction in Vermont, about the year 1828, and it progresses in the course it takes from ten to fifteen miles a year. It has not yet reached Western New York to any extent; but the destroyer is on its march, and desolation will follow its track in this great wheat-growing region.

Rose-bugs have been so common in some of the Eastern States, that on the sea-shore they have floated in winrows on the sands, having been driven into the sea by winds, and drowned. They have only made their appearance in this region, in any quantities, within two or three years.

The cedar or cherry bird was first noticed west of the Genesee River in 1828, and now it is so great a pest as to induce many to give up the cultivation of cherries, especially if near woodland.

The plum-weevil, or curculio, which is indigenous to America, being unknown in Europe, was first discovered by Mr. Goodsell, the first editor of the Genesee Farmer, since which time it has disseminated itself over the whole continent.

The gopher, a species of ground squirrel, with pouches on the outside of its cheeks to carry the dirt from its hole, is very plenty on the west side of Mississippi, in Missouri and Iowa, but has never yet crossed the river into Illinois or Wisconsin. It only works in the night, burrowing in holes and run-ways under ground — subsisting on the roots of trees, grasses, and vegetables. There are persons who have suffered by their depredations for twenty years, who have never been able to catch, or even see one, of these nocturnal depredators.

The cut-worm is of recent origin. The first it was noticed as doing much damage, was during 1816 and 1817, noted as the cold years, when the whole northern country approached the very brink of famine. They are now universal.

The Hessian fly was introduced, it is supposed, by the foreign mercenaries in 1777, on Long Island, from their baggage, or in the forage for their horses.

It has proved the greatest pest on this continent, with perhaps the exception of the weevil.

That the recent appearance of depredating insects is to be attributed to a new creation, or the spontaneous production of existence, would be unphilosophical to admit; yet there is a mystery attached to their sudden ingress into our fields and gardens. They may have existed as rare specimens, and of difficult propagation, until civilization and luxury introduced the proper *pabulum* for their existence and multiplication. — *Selected.*

BUSHES AROUND CULTIVATED LANDS.

It is a very common thing, in some sections, to see the borders and corners of fields cultivated in cereals, and in grass, overrun with bushes. This is a bad practice, and no correct farmer will allow it to exist. The tendency of most bushes is to extend their roots, and send up shoots at a greater remove from the parent stock every year, and thus ultimately to overreach upon and occupy the field. A rod or so of good fertile land around a large field is of no small value, and should be cultivated, and made to produce something of value to the owner, instead of being a disgrace and an expense to him. When these occupants have been permitted to stand for several years, extending their roots, and acquiring annually new size and energy, they become formidable tenants, and most farmers contemplate their removal as a task too onerous and expensive to be attempted. But the best way is to cut them down close to the roots, and having removed or carefully burnt the tops, beat off, as fast as they appear, every sucker the roots put forth. This, in a short time, will utterly annihilate them, and the soil be cleansed for the action and amelioration of the plough. Old fields are often defaced by clumps of bushes in the open sections — generally around stumps or ledges, or heaps of stones. After attaining a size too large for the scythe, they are generally neglected, and permitted to occupy the soil, to the exclusion of profitable vegetation, without any attempt whatever to coerce or arrest their growth. No correct farmer will permit the existence of these evils. A COUNTY FARMER.
— *Germantown Telegraph.*

TEMPORARY SHEDS IN PASTURES.

It is not often the case that we find any accommodations for shelter provided for animals while confined in pasture lands; although such an arrangement appears to be indispensable to the comfort and health of most animals during a part of the year, and especially during the cool and bleak weather of the spring and autumnal months. Temporary sheds, which are erected at slight expense, conveniently situated, and supplied with litter, afford ample protection, and are always resorted to whenever the weather is inclement, or too cold or wet for the animals to remain comfortably in the open air, especially at night. Sheep, in an especial manner, are greatly benefited by this system of protection, as no animal experiences greater inconvenience from wet, and particularly from drenching rains, which saturate their fleeces, produce chills, and often eventuate in unpleasant, if not fatal diseases. My method of erecting such structures is, to insert four posts deeply in the soil, at the four angles of a parallelogram, twenty by fifteen feet; those on the front rising to the height of nine feet from the surface of the ground, and those on the back, five. This gives slope enough, and the animals can stand erect in the back part without interfering with the roof. No floor is necessary, as I keep the surface of the ground constantly covered with some absorbent matter, such as loam, rotten wood, chip manure, leaves, or rushes, to take up the urine, and thus become manure. Gypsum is occasionally sprinkled over the bedding to fix the ammonia, and thus contribute to render the material more efficient as a fertilizer of the soil. The walling up and roofing is accomplished with boards lapped at the edges, and securely nailed. In the interior, at proper distances, there are boxes secured to the walls for salt, salt and ashes, and provender. In order that the animals may have free access at all times to the shed, I have the front open to the height of six feet, and secure proper ventilation by opening several small holes in the ends and rear, which I provide with sliding shutters, so that in rainy weather they can be securely closed.

I have found that animals accommodated in this way are fain to resort to their sheds nightly, except during that part of the season when the warmth or heat of the weather renders it more comfortable to remain in the open air. The manure made in this manner by means of economizing the urine and solid excrements through the agency of the absorbent stratum and mineral fixers, more than compensates for all the trouble and expense involved in the erection of the sheds, to say nothing of the superior thrift and healthiness of animals thus treated, over those which are neglected and exposed. If the pasture is large, or the number of animals kept in it great, the number of sheds must be in proportion to the shelter required. For sheep, lower sheds are desirable — so constructed as to prevent other animals from entering. Where the pasture adjoins the barn-yard, sheds are not so essential, as the animals will come home for protection when the weather is cold or wet.

A MONTGOMERY CO. FARMER.
— *Germantown Telegraph.*

THE FARMER'S LIFE.

William Gilmore Simms, in his "Father Abbott, or the Home Tourist," thus beautifully represents the life of the farmer: —

"The principles of agriculture were simple, exceedingly. That they might be so, God himself was the great first Planter. He wrote his laws, visibly, in the brightest, and loveliest, and most intelligible characters every where, upon the broad bosom of the liberal earth; in the greenest leaves, in delicate fruits, in beguiling and balmy flowers! But he does not content himself with this alone. He bestows the heritage along with the example. He prepares the garden and the home, before he creates the being who is to possess them. He fills them with all those objects of sense and sentiment which are to supply his moral and physical necessities. Birds sing in the boughs above him, odors blossom in the air, and fruits and flowers cover the earth with a glory to which that of Solomon in all his magnificence was vain and valueless. To his hand we owe these fair groves, those tall ranks of majestic trees, these deep forests, these broad plains covered with verdure, and these mighty arteries of flood and river, which wind among them, beautifying the loveliest inequalities, and irrigating them with seasonable fertilization. Thus did the Almighty Planter dedicate the great plantation to the uses of that various and wondrous family which was to follow. His home prepared — supplied with all resources, adorned with every variety of fruit and flower, and checked with abundance — man is conducted within its present limits, and ordained its cultivator under the very eye and sanction of Heaven. The angels of heaven descend

upon its hills; God himself appears within its valleys at noonday; its groves are instinct with life and purity, and the blessed stars rise at night above the celestial mountains, to keep watch over its consecrated interest. Its gorgeous forests, its broad savannas, its levels of flood and prairie, are surrendered into the hands of the wondrously favored, the new-created heir of heaven! The bird and the beast are made its tributaries, and taught to obey him. The fowl summons him at morning to his labors, and the evening chant of the night bird warns him to repose. The ox submits his neck to the yoke; the horse moves at his bidding in the plough; and the toils of all are rendered sacred and successful by the gentle showers and the genial sunshine which descend from heaven, to ripen the grain in its season, and to make earth pleasant with its fruits."

VEGETABLE NUTRIMENT IN RAIN.

Gaseous as well as vegetable and mineral matters are brought by rain from the atmosphere. Nitrogen and hydrogen, in the form of ammonia and carbonic acid, — the two last forming the most essential elements in the food of plants, — are brought down by rain.

"The nitrogen of putrefied animals," says Liebig, "is contained in the atmosphere as ammonia, in the state of gas, which is capable of entering into combination with carbonic acid, and of forming a volatile salt. Ammonia, in its gaseous form, as well as all its volatile compounds, is of extreme solubility in water. Ammonia, therefore, cannot remain long in the atmosphere, as every shower of rain must effect its condensation, and convey it to the surface of the earth. Hence, also, rain water must at all times contain ammonia, though not always in equal quantity. It must contain more in summer than in spring or winter, because the intervals of time between the showers are in summer greater; and when several wet days occur, the rain of the first must contain more of it than that of the second. The rain of a thunder-storm, after a long protracted drought, ought for this reason to contain the greatest quantity conveyed to the earth at one time."

As regards the quantity of ammonia thus brought down by the rain, — as 1132 cubic feet of air, saturated with aqueous vapor at 59° Fahrenheit, should yield one pound of rain water, if the pound contain only one fourth of a grain of ammonia, — a piece of ground of 26,910 square feet — 43,560 square feet being in an acre — must receive annually upwards of 80 lbs. of ammonia, or 65 lbs. of nitrogen, which is much more nitrogen than is contained in the form of vegetable albumen and gluten in 2650 lbs. of wood, 2500 lbs. of hay, or 200 cwt. of beet root, which are the yearly produce of such a piece of ground; but it is less than the straw, roots, and grain of corn, which might grow on the same surface, would contain.

Snow water yields ammonia as well as rain water, and the snow which is next to the ground, and which fell first, yields more than what lies above it. The ammonia contained in snow and rain water possesses a smell of perspiration and putrefying matter, a fact which leaves no doubt of its origin; for "the ammonia received from the atmosphere by rain and other causes is as constantly replaced by putrefaction of animal and vegetable matters. A certain portion of that which falls with the rain evaporates again with the water; but another portion is, we suppose, taken up by the roots of plants, and, entering into new combinations in the different organs of assimilation, produces, by the action of these and of certain other conditions, albumen, gluten, &c. The chemical characters of ammonia render it capable of entering into such combinations, and of undergoing numerous transformations."

TREATMENT OF HORSES.

Proper management in their feeding, exercise, and dressing will promote the health and act as a most salutary preventive against many disorders, and prevent most, while they will keep unimpaired in strength and vigor of constitution, this noble animal in his domesticated condition. For it must be remembered that the simplicity of the horse's diet, when good in kind, and dispensed with judgment, secures him from the complicated disorders which are the general effects of injudicious treatment.

Mastication does much to prepare the food of the horse to undergo the digestive process; but the evidences which are afforded by the substances voided by this animal, indisputably show that it fails to no inconsiderable extent in the performance of this important work. Hence, we hold it as a truth, that all the alimentary substances, to be profitable to the stomach of the horse, and consequently conducive to a healthy condition, should be not only nutritious and bland, but should be eaten in that state in which it is *best* calculated to afford the most nutriment, and easiest of digestion. If this principle be true, the plan of cutting the hay and bruising the corn and oats before they are put into the manger, is decidedly better than when given in a whole or unbrushed state, putting the saving out of the question, which would be no small item in the account; and besides, the horses are kept in much better condition.

No general directions can be laid down for the feeding of horses but this: horses that work regularly should be fed in proportion to the amount of labor performed, and not kept to certain regular feeds, whether they work or not. A due degree of exercise is of the utmost importance to maintain a horse in vigor and a healthy condition. It is, perhaps, obvious to every one, and should be observed, that a horse should not be put on any violent exercise when he has a full belly; move him moderately at first, and he will gradually increase his action.

Grass is often necessary, more particularly to horses glutted with food, and use little exercise; but a month or two running to grass is proper for most, those especially that have been worked hard and have stiff limbs or swelled legs. Horses that have been impaired by quittors, bad shoeing, or other accidents, are also best repaired at grass, and where the muscles or tendons are contracted, require turning out to pasture, for by the continual gentle exercise in the field, the limb again recovers its usual tone and strength.

When horses are taken up from grass, if they should become hot and costive, mix bran and chopped hay with their feeds, and give alternately a feed of scalded wheat bran for a week or two; let their exercise and diet be moderate for some time, and increased by degrees. It is a certain evidence of a healthy condition when on exercise his sweating abates, and does not turn white like soap lather, but runs off like water: this is a sure sign that the juices are in a healthy condition. — *Dollar Newspaper.*

When old pastures are broken up, and made arable, not only has the soil been enriched by the death and slow decay of the plants which have left soluble matters in the soil, but the leaves and roots of the grasses having at the time, and occupying so large a part of the surface, afford saccharine matters, which become immediately the food of the crop, and the gradual decomposition affords a supply for successive years.

NOTICES OF PUBLICATIONS.

Hovey's Magazine of Horticulture. — Among the interesting miscellany in this valuable work, is an article on the Curculio, and the Codling Moth, or Apple Worm. We are pleased to find so many waging war against the insect tribe. Hovey & Co., Merchants Row.

The Horticulturist, by A. J. Downing, is a very interesting work. Among the prominent subjects are rural architecture and landscape gardening. The leading article in the June number treats of laying out and embellishing rural villages. Luther Tucker, Albany; Jos. Breck & Co., Boston.

Illustrated Botany, by Dr. Strong, New York, is a very useful work, and most beautifully embellished with numerous engravings.

Illustrated Natural History, by the same author, is adorned with many representations of animals, remarkable for their accuracy.

These two works are a second edition, with improvements. The present is a favorable time for subscribing, as only a part of the first volumes have been issued. Specimens may be seen at our office. Hotchkiss & Co., Agents, Boston.

The Farmer's Guide. — This work, by the celebrated English agricultural writer Stephens, embraces, in a concise form, his very able, elaborate, and expensive work, "The Book of the Farm." Notes will be added by Professor Norton, of Yale College, adapting it to this country. New York, Leonard Scott & Co. Boston, Fetridge & Co., 20 State St., and 132 Washington St.

Think. — Thought engenders thought. Place one idea upon paper, another will follow it, and still another, until you have written a page. You cannot fathom your mind; there is a well of thought there which has no bottom. The more you draw from it, the more clear and fruitful it will be. If you neglect to think yourself, and use other people's thoughts, giving them utterance only, you will never know what you are capable of. At first your ideas may come out in lumps, homely and shapeless; but no matter; time and perseverance will arrange and polish them. Learn to think, and you will soon learn to write: the more you think, the better you will express your ideas.

Hidden Fountains. — In order to discover fountains under ground, before digging for them, people were formerly accustomed to go out at sunrise and ascend some hill or high place, and there lie down on their stomachs, with their chin touching the ground. If, from any spot in the landscape, a mist of exhalation were seen to arise, they made sure that by digging there, they should find a spring of water.

Depravation of morals or manners spreads like leprosy over a whole nation.

A COTTAGE SCENE.

BY MRS. SIGOURNEY.

I saw a cradle at a cottage door,
Where the fair mother with a cheerful wheel
Carolled so sweet a song, that the young bird,
Which timid near the threshold sought for seeds,
Paused with a lifted foot, and turned his head
As if to listen. The rejoicing bees
Nestled in throngs amid the woodbine cups
That o'er the lattice clustered. A clear stream
Came leaping from its sylvan height, and poured
Music upon the pebbles — and the winds,
Which gently 'mid the vernal branches played
Their idle freaks, brought showering blossoms down,
Surfeiting the air with sweetness. Sad I came
From weary commerce with the heartless world!
But when I felt upon my withered cheek
My mother Nature's breath, and heard the trump
Of those gay insects at their honeyed toil,
Sparkling like winged jewelry, and drank
The healthful odor of the flowering trees,
And bright-eyed violets: — but most of all,
When I beheld 'mid slumbering innocence,
And on that young, maternal brow, the glow
Of those affections which do purify
And renovate the soul, I turned me back
In gladness, and with added strength, to run
My thorn-clad race — lifting a thankful prayer
To Him who showed me what there was of heaven
Here on the earth, that I might safer walk,
And firmer combat sin, and surer rise
From earth to heaven.

THE OLIO.

A voter, deficient in personal beauty, said to Sheridan, "I mean to withdraw my countenance from you." "Many thanks for the favor," replied the candidate, "for it is the ugliest mug I ever saw."

Paradoxical. — The Sons of Temperance are united in love and harmony, and yet new divisions are springing up every day.

"It is very curious," said an old gentleman a few days since to his friend, "that a watch should be perfectly dry, when it has a *running spring* inside."

Men are very frequently like tea — the real strength and goodness is not properly drawn out of them until they have been for a short time in hot water.

It is the hardest thing in love to feign it where it is not, or hide it where it is; but it is easier counterfeited than concealed.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

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BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, JULY 6, 1850. NO. 14.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

CONGRESS OF FRUIT-GROWERS.

[Concluded from p. 202.]

IN our last number we gave a list of apples selected by the Congress for general cultivation; also a rejected list. We now proceed with other fruits.

PEARS.

List selected by the Congress in 1848.

Madeleine, Dearborn's Seedling, Bloodgood, Tyson, Golden Beurré of Bilboa, Bartlett, Seekel, Flemish Beauty, Beurré Bosc, Winter Nelis, Beurré d'Aremberg; *and for particular localities*, White Doyenné, Gray Doyenné.

Additional List selected in 1849.

Rostiezer, Belle Lucrative, Fulton, Andrews, Buffum, Urbaniste, Vicar of Winkfield, Louise Bonne de Jersey, Uvedale's St. Germain, for baking.

New Varieties, which give promise of being worthy to be added to the list for general cultivation.

Duchesse d'Orleans, Brandywine, Chancellor, Doyenné d'Eté, Beurré d'Anjou, Manning's Elizabeth, Brande's St. Germain, Pratt, Ott, Striped Madeleine, Ananas d'Eté, Jalousie de Fontenay Vendée, Van Assené, Doyenné Boussouck.

Rejected List.

Croft Castle, Swiss Bergamotte, Sousreine, Thompson of New Hampshire, Tucker's Seedling, Trubshurdy Dulle, Whitfield, Winter Orange, Wurtzer d'Automne, Yutte, Crassane, Winter Crassane, Citron of Bohemia, Madotte, Frederic of Prussia, Famenga, Forme Urbaniste, Fantasie Van Mons, Lederbirne, Louis Bonne, Lansac, Madame Vert, Miller's Seedling, Marquise, Marcellis, Navez, Alexander of Russia, Admiral, Aston Town, Autumn Bergamot, D'Amour, Angers, Beurré d'Angleterre, Beurré Seutin, Beurré of Bolwiller, Forme des Delices, French Iron, Green Fair, Grise Bonne, Garnstone, Green Catharine, Green Sugar, Gros Blanquet, Green Chisel, Hays, Hawthorne's Seedling, Horticulture, Hastiveau, Ipswich Holland, Jargonelle, (of the French,) Kramelsbirne, Lincoln, Louis of Bologne, Orange, Orange Tulippe, Phillips, Pitfour, Platt's Bergamotte, Passe Long Bras, Prince's Portugal, Pope's Scarlet, Cuvelier, Chat Grille, Chair à Dame, Charles Van Mons, (old,) Cassolette, Compte de Fresnel, Copea, Caillat Rosat, Clara, Bon Chrétien d'Espagne, Bon Chrétien of Brussels, Bergamotte Sylvange, Bergamotte Fortunée, Beauty of Winter, Belmont, Bezi Vaet, Bruno de Bosco, Blanquet à Longue Queue, Burgomaster, Elton, Royal d'Hiver, Rouslette St. Vincent, Swan's Egg, Saint Bruno, Clapp, Citron de Sirentz, Dearborn of Van Mons, Downton, Duquesne d'Eté, Doyenné Mons, Deschamp's New Late, Dumbarton, Doyenné Doré, Endicott, Pitt's Marie Louise, Rouse Lench, Sans Pepins, Surpasse Meuris, Fondante d'Eté.

List proposed for Rejection, but retained agreeably to a rule which is in our last number.

Ambrosia. — Mr. Elliott objected to its rejection.

Amande Double. — Mr. Manice, of Long Island, N. Y., objected.

Beurré d'Elbec. — Mr. Hovey objected.

Boucquia. — Mr. Hovey objected.

Bergamotte Parthenay. — Mr. Mantell, of New York, objected.

Cumberland. — Mr. Manice objected. He considered it a good baking pear.

Colmar d'Eté. — Mr. Hovey and Mr. Mantell objected.

Infant Prodige. — Mr. Parsons, of Flushing, N. Y., objected.

Gilogil. — Mr. Reid, Elizabethtown, N. J., and Mr. Mantell, objected. With them it was good on the quince.

Dodge. — Dr. Brinckle, of Philadelphia, Pa., and Mr. Hancock, of Burlington, N. J., objected.

Valle Franche. — Mr. Hovey objected.

Windsor. — Mr. M'Intosh, of Cleveland, O., Mr. Reid, Mr. Hovey, and Mr. Saul, of Newburg, N. Y., objected.

Rousselet de Stuttgardt. — Mr. Barry, of Rochester, N. Y., objected.

Belle de Brusselles. — Mr. Barry objected. With him it was a fine and beautiful fruit. Mr. Hovey objected. He said it was a very handsome, showy pear, but a third-rate fruit. Mr. S. Walker, of Boston, said the fruit was handsome indeed, but utterly worthless.

Sugar Top. — Mr. M'Intosh objected.

Sugar of Hoyerswerda. — Mr. Manice objected.

Princess of Orange. — Col. Hodge, of Buffalo, N. Y., objected.

Hessel. — Mr. Saul and Mr. M'Intosh objected.

Heriecart. — Messrs. Hayes, of Newark, N. J., Manice, Hovey, and Saul, objected.

The committee having submitted their list of rejected fruits, Mr. Hancock proposed the *Dumortier* and the *Passans de Portugal*. Mr. Hovey objected to the former, and Messrs. Hovey and Walker objected to the latter.

Mr. Miller, of Carlisle, Pa., proposed to add *Prince's St. German* to the rejected list. Messrs. M'Intosh, Monson, of New Haven, and Terry, of Hartford, Ct., Manice, Hovey, and Col. Little, of Bangor, Me., objected.

The pears in the selected list are among the best in this section; but the foreign kinds are usually better adapted to the garden of the amateur, than to general orchard culture. They are rather uncertain, in the best locations, and with extra care. Further experiments will bring forward a larger list of native fruits; and on these we must rely mostly, especially for the north.

PEACHES.

List selected in 1848.

Grosse Mignonne, George IV., Early York, *serrated*, Large Early York, Morris's White, Oldmixon Freestone, Cooledge Favorite, Bergen's Yellow, Crawford's Late; *and for particular localities*, Heath Cling.

No list of peaches was selected in 1849. We have native peaches of the north, that are better for the market than the above, which, with one exception, are natives of a warmer climate.

PLUMS.

List selected in 1848.

Jefferson, Green Gage, Washington, Purple Favorite, Bleecker's Gage, Coe's Golden Drop, Frost Gage, Purple Gage; *and for particular localities*, Imperial Gage.

The Washington is rather insipid, very liable to rot, and a poor bearer. There are other kinds that are more profitable.

New Varieties of Plums, which give promise of being worthy to be added to the list for general cultivation.

M'Laughlin, Rivers's, Favorite, Quetsche, St. Martin's.

GRAPES. — *Selected in* 1849.

Under Glass.

Black Hamburg, Black Prince, Black Frontignan, Grizzly Frontignan, White Frontignan, White Muscat of Alexandria, Chasselas de Fontainbleau.

Native. — For open Culture.

Isabella, Catawba.

New, native and promising.

Diana.

NECTARINES. — *Selected in* 1849.

Elruge, Early Violet, Downton.

APRICOTS. — *Selected in* 1849.

Large Early, Breda, Moorpark.

RASPBERRIES. — *Selected in* 1849.

Red Antwerp, Yellow Antwerp, Franconia, Fastolff.

New and promising.

Knevette's Giant.

STRAWBERRIES. — *Selected in* 1849.

Large Early Scarlet, [or Early Virginia. — Ed.] Hovey's Seedling, Boston Pine.

New and promising.

Burr's New Pine, Jenney's Seedling.

We have made experiments which show that the Large Early Scarlet of New York is the same as the Early Virginia of New England. It is evident that the Early Virginia of New York is a different fruit.

CURRANTS. — *Selected in* 1849.

Red Dutch, White Dutch, White Grape, May's Victoria, Black Naples.

GOOSEBERRIES. — *Selected in* 1849.

Houghton's Seedling, Woodward's Whitesmith, Crown Bob, Red Champagne, Early Sulphur, Laurel, Warrington, Green Gage, Green Walnut, Ironmonger.

The Congress adjourned to meet in Cincinnati, in 1850.

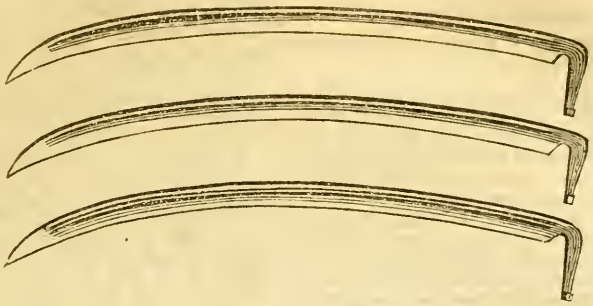
QUINCE STOCKS FOR THE PEAR.

The editor of the New England Farmer gives it as his opinion, that pears will flourish as well on quince stocks in New Hampshire (lat. 43° 15′) as in a more southern clime. We have always supposed this was not the case, as many trials have been made to raise quince-trees in that vicinity, and so far as our knowledge extends, they have invariably winterkilled. At any rate, we should prefer pear stocks. — *Plymouth Rock.*

The editor of the Rock mistakes in his supposition that quince-trees will not endure the cold of the north. There may be some tender kinds that are liable to injury. We have seen quince-trees growing in Maine, (lat. 43° 45′) without injury from the winter. The Shakers in Alfred, Me., used to raise about fifteen bushels of quinces annually; and quinces have been raised on the Kennebec, in Maine. We cultivate several kinds of quinces, and they appear to be as hardy as other fruit trees. We should prefer pear stocks, (excepting for dwarfs,) as is remarked in the above article; but that was not the subject. The question was as to the hardiness of the quince for stocks in that climate. Its utility, compared with the pear stock, is another question, and much depends on the purpose for which it is cultivated, whether for large standard trees for the orchard, or for dwarfs in the garden.

The Bee-Moth. — It will be seen by the advertisement of Mr. Whalen, on our cover, that he calls the attention of the public to a new mode of preventing the depredations of the bee-moth. We have no knowledge of this mode. Mr. W. is said to be known as a writer on agriculture, and as the presiding officer of the Saratoga Agricultural Society.

Magnolia. — In a former number of the Family Visitor, we described some of the species of this genus of trees, and recommended their cultivation as an ornament to our parks and door-yards. At this time, (May 7,) the *M. Purpurea, Conspicua*, and *Sololangiana* are in full bloom with us. Their showy and beautiful flowers attract much attention. — *Family Visitor.*



GRASS-SCYTHES.

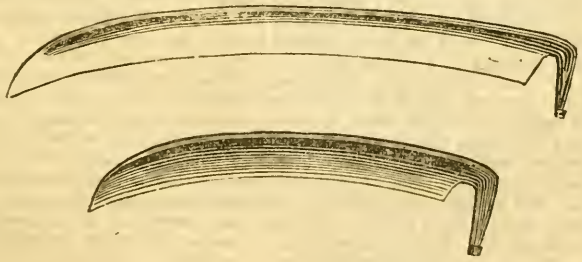
The scythe is a very valuable implement, as by its aid one of our most important crops is secured; and as it is used at the most busy season of the year, it should be of the first quality, and kept in the best condition. In some cases a farmer would better pay the price of a scythe for its use only one day, in order to have a first-rate tool, rather than use a poor one. A good implement not only saves strength, but it makes a great gain by expediting labor. The ton of hay that is left standing in consequence of the slow progress of the mowers, from the use of poor tools, may stand too late, and lose in quality enough to pay for several scythes.

Of late years, less improvements have been made in the scythe than in most other farm implements. When a boy, we used to admire the workmanship in the construction of the scythe, by which a tool of so much extent was made very neat, light, and frequently so well tempered as to preserve its firmness, give it a keen edge, and yet avoid breaking or turning against hard substances, unless some luckless wight, who had more strength than judgment, occasionally spent the former in bringing his scythe against a granite stone.

Within a few years past, there have been great improvements in the manufacture of scythes, by the use of superior machinery, by which the work is both greatly expedited and facilitated. Some improvements have also been made in the form of this implement. Formerly the scythes were generally made very long, and much curving at the heel; recently, they are usually made a little shorter, (and of course they are hung out further,) and they are less crooked at the heel, but they have a gentle curve from the heel to the point. This construction makes the scythe lighter, and the labor of using it less, as the mower has better command of the scythe, particularly on rough land.

A great deal depends on the right use of the scythe. We have known a man of only moderate strength to mow all day with one of double the strength, and do as much labor. At the close of the day the weaker man would be much less fatigued than the stronger. The mower who is skilful, swings his scythe gently, and injures it but a trifle if he strikes an impediment, while one who depends more on strength than skill, will strike with all his might against a stone, dulling his scythe so that there is much delay in grinding; and perhaps by twisting it out of shape, and such rough usage, it is soon worn out, or it becomes misshapen, and its firmness and elasticity are destroyed.

To mow with ease, the scythe should be swung gently, in a horizontal line, or parallel with the surface of the ground, entering the grass nearly on the right of the mower, and leaving it, or cutting the last part nearly on the left; so that the standing grass in the swath will be nearly in a semicircular form.



GRAIN-SCYTHE—BUSH-SCYTHE.

The grain-scythe is broad, and is peculiarly constructed for the purpose of cutting grain. With the use of this scythe, in a cradle, one man will cut grain as fast as four men with sickles.

The bush-scythe is an implement necessary for almost every farmer; though some may be so neat as to have their farms free from bushes. In many cases the grass-scythe is used to its injury, in cutting up bushes in the field, which should be done by a stouter tool, well adapted for that very purpose.

For the New England Farmer.

THE RADIATION AND CONDUCTION OF HEAT.

Mr. Cole: No meteorological phenomena are so pregnant with interest, or of such preëminent import to the farmer, as the transit of heat from one substance to another, and from terrestrial bodies to the atmosphere. And yet, speaking generally, there is scarcely a cultivator who can clearly explain their nature, or definitively state how they are accomplished. Many most ridiculous notions concerning them are rife in the world of horticulture, a few of which have even been supposed to receive confirmation from professedly scientific sources; so that it is incumbent on some one to place the subject in so simple a light, that no further mistakes may be justifiable.

Philosophers have long since determined that changes of temperature, in common with all other procedures of nature, are regulated by certain unvarying laws. Of these, one of the most prominent is the transition of heat from a warm body to any cold one that may be contiguous, till the temperature is equalized. Now, although air is too seldom regarded as a refined and subtile substance, such is its unquestionable nature. Hence the process termed *radiation* is, in point of fact, though to a limited extent, a kind of *conduction;* the small particles of matter of which the atmosphere is composed being the media through which, when brought into contact with objects on the earth's surface, their heat is abstracted.

The above position does not, however, wholly hold good; since heat is said to be capable of pervading a vacuum, and matter cannot consequently be a necessary auxiliary to its dispersion. For all practical purposes, therefore, and likewise to facilitate the inculcation of the precepts of science, a very proper distinction is made between radiation and conduction. Both are the result of expansion — one of the most striking properties of heat; but the former is the means through which the temperature of a body is lowered by diffusing itself into a colder *air*, while the latter term is applied to the passage of heat from a warm *solid* substance to a cold one, when placed in immediate contact therewith.

Radiation, as the very word implies, is the divergence of a number of heated atoms, in the forms of rays, from a body thoroughly warmed; or, as some assert, it is the mere emission of calorific rays, causing a greater or less undulation in the constituents of the atmosphere, whereby an increase of temperature is occasioned. Thus the sun radiates heat perpetually, some of its rays being transmitted through our air to the earth, by which they are received, and from which, during the absence of that brilliant luminary, they again emanate in a similar manner. It is very frequently confounded with refraction, which is quite another process, and most markedly different; radiation being the simple issue of heat from any surface, and refraction the interception of its rays by an interposed screen, and their re-radiation from thence towards the point from whence they originally proceeded. For example, the earth *refracts* many of the rays that reach it from the sun; and it is chiefly from this cause that the geniality of our atmosphere arises. But it also *imbibes* other rays, and the *radiation* of these serves to prevent a coldness during the night, that would be wholly destructive to both animal and vegetable life.

Having thus laid the basis of the application of artificial coverings to plants on the principles of science, the following hints on protection will not be misapprehended. Plants, being formed of earthy and atmospheric elements, combined and concentrated according to their peculiar powers, have, in proportion to their porosity, and with a slight reduction on account of their vital energy, the same tendency to radiation as soil. Unless, then, this be duly interrupted, the more susceptible kinds must be subjected to irremediable injury; whereas, if radiation can be effectually suspended, they will be perfectly safe in the most severe weather.

It follows from these premises, that the old method of supplying fire heat to plant-houses, where the sole design is to exclude frost, is radically wrong; indeed, it is a positive and total waste, expended, too, on an object that cannot sometimes be realized by such a practice, and the failure of which is more or less likely to be fatal to the plants. If it be demanded what I would substitute for it, I would suggest — *prevent the escape or radiation of heat*, and there will be no need to essay the supply of a deficiency that does not exist.

If these hints on radiation have received half the attention which their subject demands, the reader will be ready patiently to pursue the investigation as it concerns conduction. I have distinguished the two processes by showing that the first phrase characterizes the transmissions of heat to the superincumbent air, while the topic now to be discussed embraces the deprivation of temperature which a body suffers on being touched by a colder one. On the extent to which the latter circumstance is obviated, the merits of any system of covering plants, whether in houses, frames, or the open ground, must to a very great degree be wholly dependent.

It is notorious to every inquiring person, that heat is much more speedily dissipated when the substance containing it is in direct connection with some less highly heated material. But the more humble members of our profession find it difficult to comprehend or believe this fact; let us then, adduce an easy illustration. If a bar of cold iron (which, perhaps, is one of the most rapid conductors of heat) be placed within an inch of a person's hand, the diminution of caloric, (heat,) which its vicinity occasions, is scarcely perceptible; but if the same substance be grasped, or laid on the hand, the abstraction of heat is so sensibly felt, that without a strong effort of volition, the iron would be immediately dropped. Again, the atmosphere of an apartment may be exceedingly comfortable as regards temperature, and altogether consonant with the appetencies of a sensitive person, while by pressing the hand against glass of which the outer side is exposed to a severe external air, considerable pain will be experienced from the loss of caloric consequent on such an act.

I have chosen these commonplace examples the more completely to demonstrate the position, although the experience of the cultivator of extensive practice might at once decide this point. There is the most apposite analogy, in respect to heat, between an individual in a confined room, and a plant in a sort of tent-like, or any other protective frame. Both may be kept from perishing by frost if situated in the middle of the area, but both must undergo the loss of those parts which are in contact with a thin covering closely communicating with the outer air, if frost be sufficiently severe. Proofs of this have often been furnished in the case of plants whose shoots touched the glass or mats by which they were surrounded.

Herein, therefore, lies the art of protecting plants. They must first be enveloped in a material which is known to be an imperfect radiator of heat, so that their own temperature may, for the most part, be retained within or around them. And secondly, that material should be so disposed that no part of it be nearer than about two or three inches to the exterior shoots. The importance of confining and tying in

the outer branches of shrubs that are wished to be covered, will thus be plainly discernible.

Plant-houses and frames have yet to be treated of. It is generally imagined that no resemblance is traceable between the operation of sheltering these, and that of protecting isolated plants, because specimens in the former are already guarded by a sheltering surface. The principle, however, remains unaltered and unalterable, whatever may be the conditions in which the plants exist; and is as applicable in the one instance as in the other. Glass, it is well known, radiates heat with astonishing rapidity, and the temperature which a glazed surface derives from the house or frame beneath it is so great, that were the additional covering made use of allowed to lie flatly upon it, heat would be conducted from the entire apartment with very little less celerity than if the glass were exposed, or this last removed, and mats substituted for it; the only difference of result from the cases before mentioned being, that the *whole plant* would be rather more slowly robbed of its caloric, instead of at once merely having a single member frozen. BERNARD REYNOSO.

For the New England Farmer.

WILD CHERRY POISONOUS.

Mr. Cole: I noticed, in a late Farmer, an article copied from the Berkshire Culturist, of a number of cattle killed by eating the twigs of the wild or black cherry. I never have personally known of an instance of cattle having been injured by eating the wild cherry twigs or leaves in their green state; though when the leaves are wilted, they are known to be poisonous. I should not suppose that cattle would browse enough of the cherry twigs to kill them, though this might be, and in this instance was probably the case. This circumstance reminds me of a note which I addressed to the Albany Cultivator, on this subject, a few years ago. A reply was given, which was, no doubt, from the pen of the late and lamented Willis Gaylord. It reads thus: —

"It is known that the leaves of the wild cherry, if eaten by cattle, when they are just wilted by the sun, will kill them; whereas when they are green, and also after they are dried, they are not at all hurtful to cattle. Can you give us the reason why just at the wilt of the leaf, they are poisonous?

"L. Durand."

"Reply.—The poisonous qualities of the cherry are owing to the prussic acid which they contain; and of the various kinds of cherry, the laurel or bird cherry is the most dangerous. It was from the leaves of this tree that the poison was formerly obtained. While the leaves are fresh, the poison is so diluted with the juices, that it loses most of its energy; and besides, animals cannot eat the same quantity of fresh leaves that they will of wilted ones. The consequence is, they obtain from the wilted leaves a much larger quantity of poison, and that in an undiluted state. In drying the leaves thoroughly, the poison is lost with the other juices; for of all poisons, prussic acid is the most difficult to confine or retain in purity. The numerous instances of the death of animals from eating wilted cherry leaves, should render farmers cautious how they allow cattle to have access to them in that state, or, indeed, to any extent in any other. — Ed."

If this will benefit you or your readers, you can give it room in the Farmer. It may be found in the Cultivator, Sept. 1843, p. 140.

Yours, &c., L. DURAND.

Derby, Ct., *June* 11, 1850.

Remarks.— We copy the following from the American Veterinarian, but we do not now recollect the authority for stating that green cherry leaves are poisonous; but it is stated on some authority which we considered reliable.

"It has been stated that cherry leaves are free from poison until they have wilted; but cases have occurred in which the green leaves have poisoned animals. It is said that they contain *prussic acid.* Peach leaves contain prussic acid also, and they are supposed to be poisonous."

In regard to the peach, it should be considered that it is strongly allied to the almond, and that prussic acid is made from the bitter almond.

As to green leaves being poisonous, they may be less so than the wilted, and yet be injurious in large quantities. Some comparatively mild liquors are regarded as not intoxicating, as they contain so small a percentage of alcohol that but few have a stomach of sufficient capacity to hold liquor enough for the alcohol to seriously affect the brain. We once heard an old toper say (as he was pouring down cider, resting occasionally, and fetching a long breath, as the perspiration ran down his face) that he could get drunk on cider, but it was *hard work.*

Cattle and horses will feed by the side of yew, as it is growing, and will not eat it. Left to nature, they shun poison; but when the leaves are dried and mixed with hay — prepared by art — they will eat them, and often die suddenly from their poisonous effects. — Ed.

For the New England Farmer.

WINTER WHEAT.

Mr. Cole: I have pursued the following plan in the growing of wheat: —

1st. Spread manure, and plough in.

2d. With the first harrowing, spread a little *more* manure, and ashes or slaked lime.

3d. Ash or lime the grain when sowed.

4th. *Plough* in if possible, or *cultivate* in. Deep planting (say two inches) protects the roots from being broken off by spring thawing and freezing.

5th. Turn over old mowing stubble. The heat of the second crop, with the manure to aid it, produces better wheat than old, rich, cultivated soil.

6th. Get in the crop by the 1st September, and should it make too much growth, (little danger of this,) let in the calves, and keep it down.

7th. Roll hard, and should the sod appear hard as a pavement, the grain readily springs up.

8th. *Spring rolling* packs the roots, and spreads the grain. This process is of vast benefit to newly laid down grass lands.

Now, a word for the consideration of farmers. Winter wheat, like winter rye, yields a third more than spring wheat, is far superior in quality and color, ripens earlier, is less liable to *rust.* It *ripens* three weeks earlier, the *labor* is performed in a less busy season, (August and September,) and to crown all, our crop is as sure as in Ohio, or any western state, and averages as large.

They raise ten to twelve bushels to the acre, average, for a term of years, as recently stated by a gentleman from that state. We *can* and *will do better.*

There are wheat fields now, in Essex county, of great luxuriance and promise. Referring to one in particular, is a piece belonging to Rev. Mr. Loring, North Andover, which was sown and stocked down

to grass last September. The wheat is in fine condition, and the grass is also doing well. It was sown on *sod*, or mowing land. Winter rye was sown alongside, on old, rich, cultivated ground, under much more favorable circumstances, apparently; the rye is almost a total failure, while the wheat is of much promise.

But when *prejudice* ceases to be tolerated, when groundless *fears* shall be overcome, when pugnacious editors shall yield to facts, and allow *experience the benefit it would impart*, we trust the "Old Bay State" may yet be made "to bud and blossom like the rose."

In bringing this notice thus early in the season before the farmer, it is for the object of his casting about the farm for a *little patch* for an *experiment* in wheat growing; and should you prosper, ask your legislature to give you a bounty of ten cents a bushel, more or less; and should you succeed, my word for it, the oxen would be yoked, the plough set in motion, and it would become an onerous tax to the state before five years had expired. Would not its direct benefits accrue, it being a product of our own soil, and from our own labor?

Yours respectfully, H. P.

Boston, *June* 15, 1850.

Remarks. — As this article is from one who has good success in raising winter wheat in this region, we hope that his recommendation will be duly considered by our farmers. We know of cultivators who raise winter wheat with almost invariable success. Why will not others, with equal advantages, try and see what they can do, and not be discouraged without even making the attempt?

We have on hand a small quantity of Koss Blue Stem winter wheat, which we received of Hon. Rufus M'Intire, of Parsonsfield, Me., for distribution. We should be pleased to supply those who would try it. See our first volume, pp. 11, 320, 327. — Ed.

For the New England Farmer.

OF WHAT IS INDIAN CORN COMPOSED?

Mr. Cole: In your paper of June 3 is a communication from A. W. Dodge, referring me to the essay of Mr. Flint, published in the Transactions of the Essex Agricultural Society; where it is stated that Indian corn contains 17 per cent. of phosphate of lime. I think the table in which this statement is found is an analysis of the ashes of Indian corn, not of corn before it is burnt; for in the table which he gives from Dr. Dana, he says that all the salts amount to but 1.31 per cent. It appears to be the object of Mr. Flint to show that corn abounds in fat-forming principles, not in phosphates. It cannot be a correct explanation of his essay that Indian corn contains 17 per cent. of phosphate of lime; accompanied, as that table is, by Dr. Dana's, in which it is stated that the salts, including phosphate, sulphate, and carbonate, amount to but 1.31 per cent. Corn, when compared with other grain, is found wanting in phosphate; the same analysis which finds 17 per cent. in the ashes of corn, finds 40 per cent. in oats.

In Professor Hitchcock's report on a reëxamination of the Economical Geology of Massachusetts, p. 45, it is stated, that Indian corn, by the analysis of the late Professor Gorham, of Harvard College, contains 1.5 per cent. of phosphate and sulphate of lime.

If chemists can find but little more than 1 per cent. of phosphate of lime in corn, and if our hens cannot find enough in it to form the shells of their eggs, is it strange that our cows, whose bones, when in a healthy state, contain 50 per cent. of phosphate of lime, should suffer for the want of it when they are giving milk? WM. R. PUTNAM.

North Danvers, 1850.

For the New England Farmer.

TO PREVENT THE PEACH-BORER.

Mr. Cole: I have long been much interested in every thing pertaining to the culture of fruit, though hitherto I have not been in a situation to accomplish much at it *practically*. And among those matters of interest which have attracted my attention particularly, the "peach-borer," its ravages, and remedy, have occupied a prominent place. I have tried, during a course of years past, almost every means of relief and protection that seemed to promise success, and was within my reach; but all to very little purpose, until about a year since, inasmuch as my trees would invariably fall victims to that destructive pest, by the time they attained sufficient age to begin to produce fruit. A little more than a year since, I noticed, in some publication, a hint that *crude horse manure*, packed around the collar of the tree, might probably prove useful as a preventive. Accordingly, in the spring of 1849, (having left that part of my trees naked and exposed to the influence of the previous winter,) I applied the horse manure, closely packing it around the collars of the trees, and covering an inch or two deep with the ashes of hard coal. My trees were unmolested during the season, and upon a partial examination last fall, and a more thorough one this spring, they were all found in excellent condition, except one; and that contained but one solitary grub, which, from its size, had probably summered and wintered there, having escaped detection at the time of originally packing the tree. I have repeated the process this season, and hitherto not a sign of the borer appears. From my experiments thus far, I am inclined to think that this, if *faithfully applied* every spring, will prove a very effectual protection against this troublesome enemy.

Yours, with much respect,

T. M. DWIGHT.

Weathersfield, Ct., *June* 18, 1850.

Remarks. — As the experiments made by Rev. Mr. Dwight promise that he has discovered a very simple and convenient remedy for a great evil, we hope that many of our readers will make the application at the proper season, and report the result, that its efficacy may be fairly tested, and the question of its utility settled. — Ed.

For the New England Farmer.

THE CURCULIO.

Mr. Cole: Much has been said as to the habits of the curculio, and modes of destroying it. I have tried two modes this season, viz., — First, with sulphur water; and rather thinking it of no avail, I adopted the second mode, by spreading a cloth under the trees, and shaking them; and think this the only sure remedy, as I have destroyed more than one hundred the past ten days; first commenced destroying from fifteen to twenty per day, the last two days only four or five, on plum-trees. I found two on a cherry-tree. I have not tried this class of trees much.

My object in writing you now, is merely to know

what species of *bugs* or *insects* those large ones are, in a vial I have sent you for inspection, in company with a few curculios. I send them to you, thinking they might be of some use, for you to show to some of your friends.

I have found that I did not commence soon enough destroying the curculio on the plum-trees, as you will find by the punctures on some of the plums and cherries I have sent to you. Yours, respectfully,

BENJAMIN BOYNTON.

Stoneham, *June* 18, 1850.

Remarks. — Among the common curculios which our correspondent has sent to us, are a few about six times as large, or about twice as long, and twice as large in diameter. We have examined these insects through a magnifying glass; but as the large ones were dead when we examined them, we could not have so good an opportunity to judge of their appearance.

The larger ones appear to be precisely of the same form and color as the smaller, but it is rather surprising that the same insects should be together, of sizes so widely different. A question arises whether they are of the same species. A few years ago, a friend sent to us some curculios of different sizes, precisely like these. It was then stated that the larger insects did not do any damage, though found in company with the smaller kind, that were destroying the plums. A question may arise whether the larger insects were mere spectators, or did their mischief unperceived by our friend.

For the New England Farmer.

MILLET.

Mr. Cole: We have sometimes grown this grain for the purpose of feeding to milch cows, when green. It may be sown as late as the 10th of July: it does not rust like oats and barley when sown late, but it requires a fine, well-pulverized soil, and fine manure. When there is a prospect of the hay crop being light, it is well to mow a piece of land early in July, and plough and harrow it well, and sow millet for the purpose of curing it for winter fodder. It does not yield so much as corn for green food, but it is much easier cured, and makes better dry fodder than corn.

If the present hen fever should rage long, it may become an important crop for feeding young chickens, as they are very fond of it, and thrive well upon it. WM. R. PUTNAM.

WHY ARE ASHES MORE VALUABLE THAN LIME OR GYPSUM AS FERTILIZERS?

Our neighbors of Long Island have become famous for their trade in ashes. They send their boats the entire length of the Mohawk valley, and they would push their enterprise as far as the Black River valley, if the Black River Valley Canal was complete; and they could well afford to transport not merely the live ash, but the refuse ash, which has been exhausted for its potash. They have been in the habit of buying the refuse of the asheries of Albany and Troy, and paying as much for it as the soap-maker paid originally for the live ash. In looking about for a fertilizer, the Long Islanders have found by experience, that they form the best which they can employ. The question which we have propounded demands an answer; we therefore proceed to state, that ashes owe their value to their composition. Our reader will, perhaps, say that he knew this before. Very well. We say again, and more to the point, that ashes, spent and unspent, owe their principal value to the potash in the first instance, and to the phosphates, and to lime and magnesia, in the second. We design to speak mainly of spent ashes; though we believe farmers had much better keep all their ashes for their corn and wheat lands, rather than sell them for one shilling per bushel.

Spent ashes, then, we repeat, are valuable for the phosphates they contain, together with the lime and magnesia, which are in a state of great subdivision. Besides the foregoing elements, silex, both soluble and insoluble, is present. The amount of the former will vary in the quantity, by the intensity of heat to which the vegetable may have been subjected; and both will vary according to the plant from which they may have been obtained. Thus the yellow pine, which grows on the sandy lands west of Albany, contains in its ash of bark nearly one half of its weight of silica.

When the value of ashes is sought for, it may with propriety be said, that they rank next to bone-dust, — containing, as they do, phosphate of magnesia and iron, together with a large percentage of lime. The ash of the forest, as well as fruit-trees, is as various as their own products; scarcely two agreeing either in the amount of ash they yield, or in the elements which compose it. — *Farmer and Mechanic.*

TURNING IN GREEN CROPS.

During the last ten years, the practice of turning in green crops has been extensively adopted; and, so far as my observation extends, it has been attended with the most flattering results. Old, worn-out fields, which had become so thoroughly emasculated as scarcely to repay the cost of cultivation, have, by this process, been thoroughly renovated, and at a less cost, probably, than they could have been in any other way. In passing through the country, our attention is often drawn to farms which have been impoverished, by an enormous and emasculating system of cropping, to the state of barren karro fields. Nothing can be more forbidding than the appearance of barrenness which they exhibit; yet even those are not hopelessly barren. By ploughing under the slight vegetation they produce, and following up the undertaking by a liberal application of lime, unless the soil itself is of a calcareous nature, and then sowing buckwheat, peas, or clover, to be turned in when in blossom, a degree of energy will be communicated which will secure the continuance of increased and increasing fertility, and, under a judicious system of rotary cropping, insure good crops for a period of many years.

> "'Tis folly in the extreme to till
> Extensive fields, and till them ill;
> Shrewd common sense sits laughing by,
> And sure your hopes abortive die;
> For more one fertile acre yields,
> Than the huge breadth of barren fields."

Some have recommended millet as an excellent article for turning in; but, of all cultivated crops, with the exception, perhaps, of red clover, I consider buckwheat the best. By commencing early, three crops of this grain may be turned in in one season, a dressing which will be found sufficient, under ordinary circumstances, for the most exhausted soil, and which is by no means objectionable on the score of expense or cost.

A PRACTICAL FARMER.

Bald Eagle Farm, *May* 22, 1850.

— *Germantown Telegraph.*

TREATMENT OF HAY.

Hay, in England, is scarcely ever put in barns. It keeps well in stacks, made up as they are in the neatest manner, and carefully thatched with straw. Nothing can be more beautiful and workmanlike than the manner in which these are made up; and for hay, the long stacks are decidedly preferable to those of a round form, as it is cut down for use, in such case, with more advantage. The formation of a stack, which is often done by women, is a work of much skill, which is the fruit only of practice; the thatching of a stack in the best manner requires both art and experience, and there are men who make it a profession. When well executed, the hay for years is impervious to wet. During the formation of the stack, — which, when intended to be large, must sometimes wait for several days the progress of the haymaking, — the most careful farmers have a large tarpaulin or canvas covering, to suspend upon poles over the stack, in order to protect it from the rain. I refer to these minute circumstances, to illustrate the extreme carefulness with which many of the operations of husbandry are here conducted. When the hay is to be used, a whole stack is never removed to the stables at once, but is carefully cut down as a loaf of bread might be cut, and always done up and bound in trusses, intended to be of fifty-six pounds each, and in that way carried to be distributed to the animals. This requires some extra labor; but the farmers find their account in it. How different this is from the careless and wasteful manner in which things are managed with us, where I have often seen horses and oxen standing knee deep in the litter of the very best hay, which has fallen and been tossed out of the mangers! The consequence of this extraordinary painstaking is the most economical management of their products. The animals have a regular allowance, and are not at one time surfeited, and at another time starved; and not a handful of hay is wasted. I have never been quite able to understand the old proverb, that "a penny saved is twopence earned;" but I quite understand the folly of wasting that which is the product of severe toil and expense, and the immorality of throwing away that which the bounty of Heaven bestowed for the comfort and sustenance of man or beast. I once heard a minister say, in his sermon, that some persons were charitable in spots. I think, in a similar sense, it may be said that some persons are economical in spots; and that many persons who will chaffer and higgle half a day, to save a sixpence in the price of an article, will often throw away shillings in their neglectful or wasteful use of it. — *Colman's European Agriculture.*

ADVANTAGES OF FORESTS.

The Honorable G. P. Marsh, in his address before the Rutland County Agricultural Society, makes the following excellent observations in regard to the advantages of forests: —

"The functions of the forest, besides supplying timber and fuel, are very various. The conducting powers of trees render them highly useful in restoring the disturbed equilibrium of the electric fluid; they are of great value in sheltering and protecting more tender vegetables against the destructive effects of bleak and parching winds, and the annual deposit of the foliage of deciduous trees, and the decomposition of their decaying trunks, form an accumulation of vegetable mould, which gives the greatest fertility to the often originally barren soils on which they grow, and enriches the lower grounds by the wash from rains and melting snows.

"The inconveniences resulting from a want of foresight in the economy of the forest, are already severely felt in many parts of New England, and even in some of the older towns in Vermont. Steep side hills and rocky ledges are well suited to the permanent growth of wood; but when, in the rage for improvement, they are improvidently stripped of this protection, the action of sun, and wind, and rain soon deprives them of their thin coating of vegetable mould; and this, when exhausted, cannot be restored by ordinary husbandry. They remain, therefore, barren and unsightly blots, producing neither grain nor grass, and yielding no crop but a harvest of noxious weeds, to infest with their scattered seeds the richer arable grounds below. But this is by no means the only evil resulting from the injudicious destruction of the woods. Forests serve as reservoirs and equalizers of humidity. In wet seasons, the decayed leaves and spongy soil of wood lands retain a large proportion of the falling rains, and give back the moisture, in time of drought, by evaporation, or through the medium of springs. They thus both check the sudden flow of water from the surface into the streams and low grounds, and prevent the droughts of summer from parching our pastures, and drying up the rivulets which water them. On the other hand, where too large a proportion of the surface is bared of wood, the action of the summer sun and wind scorches the hills which are no longer shaded or sheltered by trees, the springs and rivulets that found their supply in the bibulous soil of the forest disappear, and the farmer is obliged to surrender his meadows to his cattle, which can no longer find food in his pastures, and sometimes even to drive them miles for water. Again, the vernal and autumnal rains, and the melting of snows of winter, no longer intercepted and absorbed by the leaves or the open soil of the woods, but falling every where upon a comparatively hard and even surface, flow swiftly over the smooth ground, washing away the vegetable mould as they seek their natural outlets, fill every ravine with a torrent, and convert every river into an ocean. The suddenness and violence of our freshets increase in proportion as the soil is cleared; bridges are washed away, meadows swept of their crops and fences, and covered with barren sand, or themselves abraded by the fury of the current; and there is reason to fear that the valleys of many of our streams will soon be converted from smiling meadows into broad masses of shingle, and gravel, and pebbles — deserts in summer, and seas in autumn and spring."

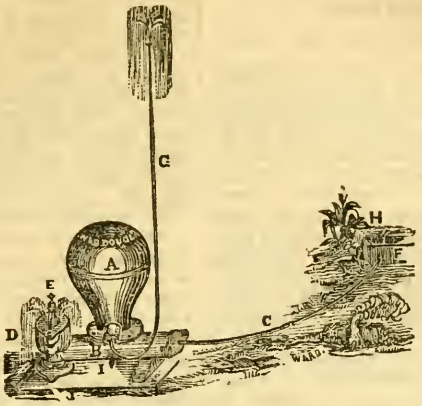
HOW TO DESTROY MOLES.

Mr. Bateham: I see several articles in the Cultivator respecting moles, and the most easy way to destroy these pests of the garden and cornfield. Several years ago, I cleared my ground of them almost entirely, by the use of the castor oil bean. My practice was to take a handful of the beans in my pocket, and wherever I found one of their roads, I just thrust my forefinger through the crust, dropped in from six to ten beans, and covered up the orifice. The next time the mole comes along, he eats the bean, and is thus destroyed. We think this a much safer and easier method than any we have seen, as most poisons lose their strength in a very short time, when put in the ground. A single plant in a garden, well cultivated, would produce beans enough to poison moles for a number of years. It grows easy, and is a fine-looking plant. I have always succeeded in raising as many as I wanted.

Yours, &c.,

SAMUEL BLACK.

— *Ohio Cultivator.*



IMPROVED HYDRAULIC RAM.

H, spring or brook; C, drive or supply pipe, from spring to ram; G, pipe conveying water to house or other point required for use; B, D, A, E, I, the ram; J, the plank or other foundation to which the machine is secured.

This is a perfectly simple and effective machine for forcing a portion of a brook or spring to any required distance or elevation, where a proportionate fall can be applied. The various uses of the ram are at once obvious, viz., for the purposes of irrigating lands, and supplying dwellings, gardens, farms, factories, villages, engines, railroad stations, &c., with running water.

The simplicity of the operation of this machine, together with its effectiveness and very apparent durability, renders it decidedly the most important and valuable apparatus yet developed in hydraulics, for forcing a portion of a running stream of water to any distance and elevation proportioned to the fall obtained.

We will briefly explain the operations of this machine. A small stream of water — say of one or two inches diameter — has a descent of four feet, passing through this machine. As it passes with increasing rapidity, it soon lifts up a valve that closes the place of its discharge from the machine. The velocity of the water in its descent gives it an impetus or force which, when the valve is closed, forces the water up the pipe G, until its force from its velocity is spent; then the valve at the place of discharge falls, and allows the water to pass on again through the machine, as at the beginning; at the same time, a valve in the bottom of the pipe G closes, and sustains the water in that pipe. These operations and changes are repeated in rapid succession. A represents an air chamber, communicating with the pipe G, which, by the pressure of the air, keeps a constant stream flowing up the pipe G, as in a fire engine.

A stream one or two inches in diameter, with a fall of four feet, will throw a small, constant stream up a bank fifty or seventy-five feet elevation, in a direct line or obliquely, which stream will be sufficient to supply a house, a barn, and a surplus for use in the garden, or for other purposes. These machines may be used where there is only two feet fall. The quantity of water raised depends on the size of the stream and the fall, and the height it is to be raised. It is estimated that a stream of given dimensions and fall will raise one twelfth of the water ten times the height of the fall. Say, if the main stream falls five feet, and discharges twenty-four gallons per minute, it would throw up a small stream fifty feet, discharging two gallons per minute.

These machines are very durable, being made of substantial materials; and they are not liable to get out of order. They are of various sizes, and they vary in prices from seven to twenty dollars. Where a house is on an elevation, and there is a valley near by, with a small stream of water and a moderate fall, these machines are admirably adapted to throwing water to the elevation for various purposes. These rams may be seen in the Agricultural Room adjoining our office, and they are in operation in many parts of the country.

HAY CAPS.

We hope that farmers will pay sufficient attention to this subject, to obtain a few caps, say enough to secure a ton of hay or more, and try them. Various substances are used, such as old canvas, mats, cotton cloth, &c. Cotton cloth is very cheap, costing but little for the material and making. Take two pieces of cotton cloth, (a yard wide or more,) two yards, or, better, two and a quarter yards long, and sew them together. Turn up the corners, and sew them to make loops, through which sticks may be put and run upward in the hay, to prevent the wind from blowing the caps off.

Some prefer making a loop for the stick by tying a piece of large twine into the loop in the cloth. We prefer cloth about one yard and three to five inches wide, so that the caps may be about two and a quarter yards wide, and the same in length.

In some cases the saving of hay from the use of caps will pay all the expense of the caps in one season; and there have been instances in which the saving by the use of caps during one storm, has been equal to the cost of the caps.

Domestic Department.

Training of Children. — The most essential qualifications for training a child well, are not of a nature to be communicated by books, or lectures on education. They are, first, the desire to be right in the matter; second, sense; third, kindness; and fourth, firmness. Where these are wanting, the wisest admonitions in the world will be of no other use than to relieve the mind of the person who throws them away. The doctrine of an eminent writer, (of a generation now nearly gone,) that a child should be reasoned into obedience, had, in its day, more of a misleading efficacy than might have been thought possible; and many a parent was induced to believe that a child should be taught to give its obedience, not because it *was* obedience, but because the thing ordered was reasonable; the little casuists and controversialists being expected to see the reason of things as readily in real life as in the dialogues between Tutor and Charles. The common sense of mankind has now made an end of this doctrine, and it is known now, as it was before the transit of that eminent person, that obedience — prompt, implicit, unreasoning, and almost unconscious — is the first thing to be taught to a child, and that he can have no peace for his soul without it. That first and foremost rule of exacting obedience is so far from being subject to the condition of showing reasons, that I believe a parent with a strong will, although it be a perverse one, will train a child better than a parent of a reasonable mind, tainted by infirmity of purpose. For, as "obedience is better than sacrifice, and to hearken than the fat of rams," so an authority which is so absolute by virtue of its own inherent strength, is better than one which is shaken by a reference to the ends and purposes, and by reasonable doubts as to whether they are the best and most useful. Nor will the parent's perversity, unless it be unkind or ill tempered, occasion the child half so much uneasiness in the one case, as the child will suffer from those perversities of its own which will spring up in the other. For habits of instant and mechanical obedience are those that give rest to the child, and spare health and temper; whilst a recusant or dawdling obedience will keep it distracted in propensity, bringing a perpetual pressure on its nerves, and consequently on its mental and bodily strength.

To preserve Beefsteaks. — As the warm season is fast approaching, when meat cannot be kept for more than a day or two in a fresh state, it will be of no inconsiderable benefit to many, to be informed, that if fresh meat is rolled up in Indian corn meal, it will keep fresh for four or five days. The steak should be laid down in pieces from one to three pounds, and each covered entirely with the meal. — *North Am. Farmer.*

Youth's Department.

Bees. — The honey-bee surely deserves the first place. Its abode is like a palace, compared with most other insect houses; indeed, from the number of its inhabitants, we may more properly call it a city. The industry, too, of this little creature is such, as to give it a strong claim upon our attention; and I dare say you have often watched it, flying from flower to flower, and returning home heavily laden with yellow dust. The bee has many good qualities besides diligence, to render it a favorite, and these we shall see as we go on with its history.

You most likely have seen a honey-comb, and tasted the sweet liquid it contains. Do you not think it very wonderful, that small insects should be able to make wax and honey, neither of which men have the power of making? How much labor, too, must it cost to build and fill the numerous cells! Let us follow a colony of bees through the various tasks they have to perform, and we shall see with what surprising instincts they are endowed.

Many countries abound with *wild* bees, and these form their own nests; but here we keep them under an artificial covering called a hive, which is made of straw. These hives have a little opening on one side, for bees to go in and out at; they generally stand upon a wooden bench, and in cold weather are placed under some sort of shed.

A swarm of bees, on entering a new hive, immediately want cells or little chambers, in which to store up their honey, and bring up the young. These cells cannot be made without wax; the first business, therefore, is to obtain that substance. You probably suppose that the bees collect it from flowers, and that they will go out and fetch home a store. But no, they seem to be quite idle, and hang in long rows, like garlands, or strings of beads; one at each end taking hold of the roof, the rest clinging to each other's legs; and so they remain for four-and-twenty hours, without moving.

This does not proceed from laziness, however, nor are they waiting to think what must be done: you will never guess why they hang thus; so I must tell you. Wax, instead of being found in flowers, as some people imagine, is formed in thin cakes, under the scales which case the bee's body. It appears that it is made best while they are quite quiet; and this is their way of taking rest. While they are clustering, the wax is forming; and when they have hung a number of hours, it may be seen under their scales, which then appear edged with white.

And now, at last, a bee comes out from the crowd, cleans about an inch, by driving away the others with his head, and settling in the middle of this space, begins to lay the foundation of a comb, which is a flat piece of wax, composed of a great number of cells. These cells are joined to each other's sides, and placed in a double row, end to end, so that each side of the comb is full of holes, fit for containing eggs or honey. The bee we have just mentioned pulls out the little cakes one by one from its wax-pockets, holds them in a pair of pincers, with which its legs are furnished, and works them about with its tongue, which is as useful as a trowel. When these are fixed to the roof of the hive, it disappears among its companions.

Other bees follow this example, adding their little store of wax, until a lump is formed large enough to work upon. The cells are then shaped by another set of laborers, and a third party finish and polish the work, by drawing their mouths, their feet, and their whole bodies over it again and again, until it is quite smooth. Some, in the mean time, collect food, and bring it to those which are working at the cells, that they may not be hindered. When a laborer is hungry, he bends down his trunk before the bee which is to feed him; this trunk is a movable mouth, like what you must often have seen in the fly; a few small particles of honey are poured into it by his companion, and he then goes on with his work. Though there are many thousand laborers in a hive, they do not begin in several places at once, but wait until a single bee has laid the foundation, as I have just described to you. Each bee has only a certain quantity of wax; so they must make it go as far as possible. If the cells were made round, a

great deal would be wasted in filling up the spaces between, as you may see yourselves, if you lay a number of marbles together. If they were square, they would not suit the form of the young bees which are to be placed in them. They are therefore made with six sides, so as to join together exactly, and are very convenient, besides consuming the least wax, and filling the least space possible. Now, the cleverest men might have spent years in discovering this admirable plan; but, taught by God himself, the little insect, without study or contrivance, has adopted it from the hour of its creation. — *Family Visitor.*

Health Department.

Asthma. — There is no complaint more harassing than asthma. The Newark Daily Advertiser, a reliable paper, pledges himself to cure this distressing disease with the following simple remedy: Take one and a half ounce sulphur; one ounce cream-tartar; one ounce senna; one half ounce aniseseed; pulverize, and thoroughly mix the same, and take one teaspoonful in about two tablespoonfuls of molasses on going to bed, or at such time through the day as may best suit the patient; the dose once a day may be increased or diminished a little, as may best suit the state of the bowels of the individual.

Half a spoonful of *citric acid*, (which may always be bought of the apothecaries,) stirred in half a tumbler of water, is excellent for the headache.

Mechanics' Department, Arts, &c.

How Axes are made. — The process has been greatly simplified within the last two years. The iron is rolled out in bars the proper width and thickness of an axe, and six, eight, and ten feet long; it is heated, and cut off by a large pair of shears, propelled by water power; another workman picks up the piece, and places it between a die and the punch, and the punch comes down and forces a hole for the handle by punching out a piece. An iron mandrel is then inserted into the hole, and it is immediately put under another press, which forms one side of the axe; it then goes into another die, and forms the other side, and is then placed in an upright position, and a chisel comes down and splits the "bit" of the axe ready for the steel; it is then thrown aside. All this is done at one heat, and in less time than it takes to write the *modus operandi*. The blade of the axe is then put in and welded, passed along to the forger, tempered, and is cast upon the ground to cool. As soon as cold, it is taken up and planed down to an edge by a planing machine, and finished up with emery wheels — painted, labelled, stamped, and is ready for market. — *Bath Advertiser.*

Charcoal melted. — The possibility of melting charcoal has at length been satisfactorily proved by the experiments of M. Despretz. Up to the present time, chemists have considered this an impossibility; M. Despretz, however, not only melts this refractory substance, but solders one piece to another, and even volatilizes it. The heat to effect this purpose is generated by a powerful galvanic battery; the light and heat evolved is so great that, even in approaching it only for an instant, there is danger of violent headache and pain in the eyes; and moreover, the face may be burnt as by a powerful *coup de soleil*. To avoid this, the operator conducts his experiments under the shades of thick blue glass. Platinum clippings, and other metals difficult to fuse, are readily converted into a solid mass. This will prove of great service in the arts.

New Uses for Granite. — The Dublin Evening Post states that a Mr. McDonald, in Scotland, has discovered a method of calcining granite to a fine clay, of extraordinary strength for pottery, especially for making water pipes, some of which are as large as eighteen inches bore. — *Farmer and Mechanic.*

DRAINING WARMS THE SOIL.

It is reported that in a garden in Hampshire, the *temperature of the soil* has been raised fifteen degrees by draining heavy land four and a half feet deep. This, if true, is a prodigious gain — beyond any thing that we could have anticipated as a permanent result, even in summer. Winter is of course excluded from the statement. Circumstances prevent our examining the statement in the case alluded to; but, allowing for some exaggeration, there can be no doubt that a result sufficiently approaching it to be of the greatest value, is attainable.

It is now for the first time that the public attention has been drawn, in the Gardener's Chronicle, to this highly important subject. On the contrary, we have, on several previous occasions, pointed out the undoubted fact that an increased temperature is one of the most valuable results of deep drainage; a more probable cause of the immediate improvement of the health of crops than the mere renewal of water, or introduction of air into the soil. The nature of deep draining is in fact such as to render additional access of air to the roots of plants too inconsiderable to be appreciable. It is only when deep draining and deep trenching accompany each other, that any great access of air to roots beyond what is customary, can be anticipated. Where both are secured, the effect is certainly magical.

We have now before us a piece of land, which in 1845 was trenched and drained to the utmost depth which the nature of the situation would permit. The trenching was through London clay down to gravel, to about three and a half feet; the draining was the same. It could be no deeper. In the winter of 1845–6 it was planted, and the following is now the height after four seasons' growth: Ashes, thirteen to fifteen feet; elms, twelve to thirteen feet; oaks, twelve feet; alders, fifteen feet; larch, thirteen to fifteen feet; mountain ashes, eleven to thirteen feet. Yews have made from eleven to twenty-four inches growth; Douglas firs, *transplanted between August and October*, 1848, fifteen to thirty-one inches; cryptomerias, twenty-one to twenty-four inches; and hollies, eight to twenty-four inches, during the last summer; and what is not a little remarkable, a fuchsia has lived in this place without any protection, only dying annually down to the ground level. All the plants now measured were common nursery stuff when planted. Of course the whole plantation does not consist of trees that have grown at the same rates as those just mentioned; such a thing never occurred; but the trees are in general in the highest possible health and vigor, in a cold, tenacious clay, which before being trenched would hardly bear grass enough to make it worth cultivation.

The improved condition of the land has no doubt contributed to this result; but we think it impossible to doubt that a considerable increase of temperature of the soil must have mainly contributed to produce such exuberant growth. Unfortunately this cannot now be made matter of proof, because no register was kept of the temperature before the trenching and draining were resorted to.

There exists in Essex, not a hundred miles from Brentwood, an orchard of apples, pears, plums, and cherries, which was planted about twenty-two years ago, in a heavy clay trenched down to an iron pan, on which it lies. For a few years the trees grew pretty well, that is to say, as long as their roots were near the surface, and received the warmth of the summer's sun; but as they advanced downwards, the growth became "small by degrees, and beautifully less," till at last it ceased, and nothing flourished but an abundance of gray lichens, with which the branches were covered. The owner was advised to drain it three feet below the pan. In the first year afterwards, vitality was roused so effectually that the lichens began to disappear, cast off by the swelling bark, and the last stage of decrepitude had been exchanged, by the end of the first six months, for youthful vigor. In the second and third seasons after the draining, the trees made shoots from four to five feet long.

We have no doubt that the main cause of this remarkable and sudden change was the elevation of temperature consequent upon every deep drainage. Rain becomes heated by the surface soil, and carries its temperature with it as far as it sinks into the soil. The gain in this way is variously estimated at from ten to fifteen degrees in summer — an enormous gain, which places plants on a hotbed — for soil heated ten degrees above the ordinary temperature is nothing else. Deep draining, therefore, not only offers considerable security against the introduction of roots into water channels, but has the great and unsuspected advantage of considerably raising the temperature of the earth which is in contact with the drains, deep as they may be, for water cannot sink rapidly into earth without carrying warmth along with it. This is now so well understood by men of intelligence, that it is superfluous to dwell upon it. — *London Gardener's Chronicle.*

THROWING BREAD AWAY.

We hear complaints, on all sides, that money is scarce, the times hard, and that it is difficult for the poor, in these dull times, to get a living. We suppose that by the word "living" is meant the prime staple of life, or, as it is sometimes called, the "staff of life," — bread. Now bread is so plenty, that we throw half of it away. In order to show wherein this is done every day, let us "reason together" a little. The principal material of which bread is made, in New England, is flour; and this, you all know, is made of wheat. The good old days of corn bread, and "rye and Indian," have gone by. Times have changed; and we may well say, that we have changed most essentially with them. People may say what they please about the "hardy New Englanders." There used to be such a race; but they are disappearing, and an effeminate race growing up to supply their places. There are many causes for this deterioration of the strength of the people, but the principal cause is the present mode of living. We throw away the best half of the wheat, and eat only the finer parts. Every body must have superfine flour upon their table. Well, to make superfine flour, the wheat must be ground fine; the meal must then be bolted through the finest bolts or sieves; and the bran and other coarser parts are carefully separated, and consigned to the pig trough or cattle manger. What did the Almighty make these parts of the wheat for? For the nourishment of man; but man has become so "*unco*" wise, that he throws them one side, and picks out only the finer particles; and he dearly pays the penalty of his folly, in decreased health, strength, and general stamina of constitution.

Let us inquire into the ingredients of wheat; and, that we may not rest wholly on our own individual authority, we will call others in who have carefully examined the physical and chemical nature of wheat. Prof. Johnston has done this pretty thoroughly, and so we will draw upon him for a few facts.

First, we will take into consideration some of the materials of our bodies; and, second, what is needed to keep up the repairs or supplies of these materials as fast as they are wasted or spent in the course of life.

The solid parts of the human body are fat, muscle, (flesh,) and bone.

The liquid or fluid parts of the body contain also the fat, and muscle, and bone ingredients, in a fluid state, whereby they are conveyed to different parts of the body, to be deposited where needed.

Now, every body knows that these three substances are liable to constant waste, and require to be renewed constantly. To renew them, we must eat food; and if we eat food that contains fat-making, muscle-making, and bone-making materials, and the food is digested in a healthy manner, this waste is repaired with ease and pleasure. As we commenced with the article bread, we will confine ourselves to that. Vegetable food contains these three ingredients or materials, and especially wheat.

That food must be the most nourishing that supplies all the ingredients of the body most abundantly, on the whole, or in proportions most suited to the actual wants of the animal that eats it.

Now, the grain of wheat, you know, consists of two parts, the inner grain, and the skin that covers it. The inner grain is your superfine flour, and the covering is the bran.

The miller is not able to peel the outer part perfectly away from the inner, and so a little of it is always mixed with your flour; but by the process of bolting it is removed more completely than in any other way, and it may be considered as wholly separated.

According to Prof. P., of the *fat-making materials* whole grain contains twenty-eight pounds in one thousand; fine flour, twenty pounds; bran, sixty pounds.

Thus you see, that, while a thousand pounds of whole grain will give you twenty-eight pounds of fat, a thousand pounds of fine flour will give you but twenty, and a thousand pounds of bran will give you sixty.

If, therefore, you grind the wheat all together, you get nearly half as much again of fat-making material.

Well, how is it with *musele*, or *flesh-making* material? Whole grain contains one hundred and fifty-six pounds in one thousand; fine flour, one hundred and thirty pounds. So you see that wheat, ground all together, gives one fifth part more muscle material than fine flour.

Our muscles, you will allow, are very serviceable, and their strength of great importance to us. Ought we not to supply them with right materials? But when we bolt our wheat, and use only the fine parts, we throw away about two pounds of such out of every ten.

Of the *bone-making* material, whole grain contains one hundred and seventy pounds in one thousand; bran, seven hundred pounds; fine flour, sixty pounds.

You will certainly allow that bones are a very im-

portant part of your bodies; and you will see, by the above, that, as it regards them, the whole meal is nearly *three* times more nourishing than the fine flour.

Now, let us sum the whole together, and see if we have not made out a clear case, viz., that we are daily actually throwing a vast quantity of food away.

One thousand pounds of whole meal contain —		
Muscular matter,	156	pounds.
Bone matter,	170	"
Fat matter,	28	"
	354	
One thousand pounds of fine flour contain —		
Muscular matter,	130	pounds.
Bone matter,	60	"
Fat matter,	20	"
	210	

Now, deduct 210 from 354, and you have 144 pounds of matter very essential to nourishment thrown out. Who, then, will say that we are not throwing away food every day of our lives? Is it any wonder that we are growing up a delicate and an effeminate people? Our children, instead of being fed upon coarse bread, and turned into the open air for exercise, whereby lungs and limbs may be exercised and expanded, are fed on flour cake, of the finest kind, and *mewed* up in air-tight houses, like plants in a hot-bed, which wilt on exposure.

We do not wish to be ultra in our notions or expressions, but we honestly believe that the man who invented the bolt to a flour mill, cursed the nation. — *Maine Farmer.*

THE MOST PROFITABLE BREED OF SHEEP.

There is much discussion upon the question as to the most profitable breed of sheep. One party asserts that the true breed is the finest and purest Saxony; another is equally certain that it is the hardy, gummy Merino; a third is opposed to all fine-wooled sheep, and can only grow the South Down; while still another can see no profit in any but the long-wooled and stately Cotswold or Leicester; while a great multitude are in favor of the mongrels obtained by a cross from a part or all of the kinds mentioned.

The object of raising sheep, as of any other kind of farming, is to make money, — to turn the annual herbage into cash. The best breed of sheep for the farmer to adopt will depend, in a great degree, upon his locality; whether near or at a distance from a good market for live stock, as large towns, or upon railroads leading thereto; whether in a grain-growing or a grazing district, or in a warm or a cold climate.

It is settled that a fine staple of wool cannot be grown upon a profitable carcass for the butcher. A large and early-maturing sheep, like the South Down and Cotswold, cannot be made to produce a fine clothing wool; but the wool they do produce is valuable, and brings a remunerating price, especially the long wool of the Leicesters. Then coarser and larger bodied sheep require a larger amount of pasture, and cannot be kept in large flocks. For the farmer who keeps but a few, say from fifty to one hundred, we should recommend the coarse-wooled sheep. Many a farmer who can keep his fifty or sixty head could make his two dollars annually, clear, upon each, with very little trouble. It would require care; and that is what a great many farmers complain of, though constantly grumbling about hard times. In a warm climate, and especially at the south, fine-wooled Saxons should be preferred. The experience of years demonstrates that, in the growing of fine wool, the south need have no competitor, and we feel fully satisfied that it would now be the most profitable branch of their agricultural industry. There are flocks in that region which produce wool that cannot be surpassed by any in Germany. Among them, and perhaps the very first, is the flock of M. R. Cockrill, Esq., of Nashville, Tennessee. For evenness, firmness, and strength of staple, his flock has not yet been outdone by the very highest-bred German flocks. Though there is little encouragement for growing fine wool any where, yet we should advise our friends south not to abandon it, but to keep steady along; for it will not be many years before they will have the fine wool market entirely to themselves; for the amount of strictly fine Saxon wool grown this side of the Ohio River will grow less and less every year. Some men who have superior flocks, like our friends Reed, of Dalton, Ohio, and Ladd, of Richmond, Ohio, and who are fond of, and understand, breeding, will continue them, and make them profitable; but we fear that, unless there is some great change soon, the Saxon will not spread north and west.

The great belt of our country lying north of the Alleghany Mountains and the Ohio River, and extending clear up to the Rocky Mountains, seems admirably adapted for the Negretti and Infantado branch of the Merino families, as south of that line does for the Escurial and Electoral branch. The best representative of this branch is found in what is now termed the *Vermont Merino.* They are a hardy race, with thick, heavy fleeces, full of gum and yolk, and formed to withstand well the rigors of our hard winters. Like their congener, the Saxon, they delight in a dry soil, and will thrive upon pastures where larger sheep would starve. In Vermont, objections are made to this breed of sheep by wool dealers, because the wool is so heavy by reason of its gum and yolk. It may not be so profitable for them, but it shows the great value of the breed for cold and bleak regions. But as this sheep travels west, it loses this objection; for in this state, and throughout the west, the wool retains its firmness, but loses much of its superfluous gum and oil, but none of its vigorous constitution. Crossed upon the common breeds of Ohio, Michigan, and the other western states, it produces a valuable breed, giving a finer and heavier fleece, and a stronger and more healthy habit. This breed is not confined to Vermont, but may be found, in great purity, in this state, and Connecticut, and Massachusetts. Among the best now in our mind is the flock of our friend, Mr. Dickinson, of Victor, whose communication on the subject of his flock can be found in the last volume.

It is not necessary here to particularize the various mongrel breeds which have grown out of these great leading families. We believe that one great cause of controversy has arisen from not taking a true view of the great and natural division of our country into northern and southern wool-growing sections. Around large cities, and upon small farms, coarse-wooled sheep will be found the most profitable; while in the milder climate of the south the Saxon, and in the colder regions of the north the Merino, will be found the true breed. — *The Wool-Grower.*

POULTRY RAISING.

Having had some experience in breeding poultry, I will state a few facts that have come under my observation, presuming, however, that they will be of little interest in comparison to the writings of the able pens that have preceded me on this subject. There appears to be felt a considerable interest in regard to the numerous breeds of foreign fowls that now begin to be common among us; and the only

important question is, Are they any better than our common breeds?

Allow me to make a few remarks on the *Poland Fowl*, to begin with. Some few years ago, I purchased a pair of this breed, for which I paid *four* dollars. They were of a shining jet black, with white tufts, or topknots, on their heads, of great beauty. I was told that they were great layers, and that they never sat for incubation, or hatching their young. If these facts were true, I considered a great difficulty overcome to the successful keeping of fowls as a matter of *profit*. In brief, I found that my hens of this breed, after a fair and full trial, did not lay any more eggs during the year, in the aggregate, than our ordinary fowls, that sit once in a season, and rear but one brood of chickens! Three, and sometimes four, eggs a week, per hen, were the average number laid by them. The chicks were raised under other hens.

In regard to *sitting*, it is true that they do not sit; but it is rather a disadvantage, since they will frequently make a mock attempt at it, and cover their eggs a few days, a part of the time, render them addle, and leave them. They are, also, diminutive in size. Their flesh is of a poor flavor, and it is very hard fattening them; and, in fine, as a market fowl, or for the table, they do not begin to compare with some of our domestic breeds, that can be purchased for fifty cents or less per pair, the country over. They are greatly subject to diseases; so much so, indeed, that I think I may safely say, that a hundred of them would employ constantly one person skilled in the "Materia Medica" of dunghill tribes. They are very tender, fit for a southern latitude only, one would suppose, from the effect of a severe winter upon them.

I found that, in order to breed these fowls in pure blood, they must have a yard by themselves, and not even be allowed to *see* other fowls! It is, indeed, a fact, that the mere act of witnessing other fowls, in adjoining enclosures, will destroy the purity of the breed. [This is new to us. Can it be explained? — Eds.]

I crossed the breed with success. I placed a Poland cock with a half dozen hens of the *Dominica*, or blue-spotted breed. This amalgamation produced a beautiful black hen, with a close coat of feathers, and a fine, black tuft of feathers upon the head. The color was invariably a perfect jet black in hens, while the cocks were also black, but with a white tuft upon the head, less full, and more upright, than the pure breed. The hens were fine, constant layers, seldom wishing to sit. Their flesh was well flavored, and the degree of fattening that they attained, when well fed on corn, oats, &c., was astonishing. Indeed, on one occasion, I had to put them on a short allowance, even in the season of incubation, when fowls are generally poor, fearing that I should lose them through extreme fatness or obesity.

If one desires a fowl for its singularity and beauty, it is well enough to buy Polands; but he who purchases in the expectation of finding them a more profitable fowl than our common breeds, will find himself sadly mistaken. It is probably true, that, on some occasions, there have been great layers of this breed; and the same of any other kind. If a gentleman should chance to get a large number of eggs from any single or specific number of fowls, on some particular occasion, it is no criterion of what *every* man may do. They have their years of prolific abundance, and they have their seasons of sterility. Food and good management, in the rearing of fowls, have their beneficial results, but the same person seldom succeeds alike during a series of years.

T. B. MINER.

Clinton, Oneida Co., N. Y.
— *American Agriculturist.*

PULVERIZED WOOD FOR CATTLE.

The following new thing, in the way of food for cattle, is furnished by a Mr. Daniels to Chambers's Journal. He says, "About three years since, I had occasion to send my cart-horses frequently through a piece of coppice wood, and whenever it happened that they stopped within reach of the rods, they would greedily devour every bough they could come at. This I noticed many times. At last I was led to examine the rods on which I had seen them feeding, and found them completely stripped of their branches, some of which were of a very considerable thickness. This led me to suppose that there must be some good qualities in the wood; and this consideration induced me to get some pulverized, and given to my cart-horses, which experiment was repeated at several different times, until I was fully satisfied that it had no injurious effect on them. After this, I was led to give it to my gig-horses with their corn; and, having ascertained that it did them no injury, I had machinery prepared for reducing the wood for the purpose of food, and began to feed both cart and gig-horses, as also my cows and pigs, mixing a portion with all the food which was given them. This practice I have continued for the last ten months. Previous to feeding my horses in this way, they had each three quarters of a peck of oats and beans given them per day, for which are now substituted three pints of barley per day. They are in equally fine condition as when fed in the usual way, and more playful and free in their work. Soon after the wood was mixed with the fodder given to the cows, their milk, as well as their condition, was much improved. For several weeks past, I have been feeding sheep with the pulverized wood, together with crushed Swedish turnips; and they also appear to improve by it. I have likewise fatted four pigs successively, mixing this food with barley meal, and the results have proved most satisfactory."

This statement, however strange it may sound, is not so startling, when we remember that the woody matter of trees is, in its chemical nature, nearly allied to starch, and that it always contains some nitrogen; so that, in reality, it furnishes the ordinary materials of food, in another form. We presume, however, that white-wooded, and not resinous, trees are those which furnish Mr. Daniels's cattle with the ligneous pulp they thrive so well upon.

THE CODLING MOTH.

We copy from Hovey's Magazine of Horticulture part of a communication upon the insect which is the parent of the apple worm, that is so destructive to our fruit. It is by M. H. Simpson, Esq., Saxonville, Mass.

The other insect to which I alluded is the codling moth. This little moth deposits her egg in the eye of the apple; they commenced last year about the 15th of June, and were so destructive on my trees, as to take about all the curculio spared, and many of the Bartlett and Passe Colmar pears. They are about all the season, or until the middle of September. There are two or three crops of them. I produced them from the egg in about five weeks. They were two weeks eating before they were ready to go into the chrysalis state, and three weeks before the perfect moth appeared. They are a small gray moth, with a distinct mark upon the hind part of the wings, of a brown color, edged with copper; they do not extend their wings more than seven eighths of an inch; they are very lively at night, and entirely at rest in the daytime, from which I infer that they fly only at night. I have never been able to find one

upon the trees. After the egg is hatched, the worm eats to the centre of the apple, and then out at the side, and are the cause of the windfalls, or *moth-falls*. I saved a number of apples by placing a piece of beeswax over the eye; but the plan, for practical purposes, is to syringe the fruit with whitewash. This will fill the eye, and thus prevent the moth from laying her egg. I am happy to state, that I discovered a trap for the larvæ of this insect, by which an orchard can be cleared of them with little labor. Noticing two or three of the larvæ creeping upon a piece of *cotton cloth*, which was thrown accidentally into the crotch of an apple-tree, my curiosity led to further examination, and, to my surprise and pleasure, I found thirty of the larvæ in their silken homes, going through their chrysalis state. They knit the folds of cloth together with silken ties, and there quietly change from the loathed worm to the perfect insect, which is perhaps as beautiful, under a microscope, as any production of the insect tribe. I again placed the cotton cloth in the crotch of the tree, and examined it in three weeks, and found another encampment of them in the same state, and hence concluded they were quite in my power with very little labor. The cloth should be placed in the tree about the 25th of June, and should be examined every three weeks, as it requires about this time to go through the chrysalis state. In one or two seasons, they must be destroyed, if this operation should be followed up. They find their silken web very readily attach to the little fibres of cotton, and, by tying the cotton cloth to the tree, the wind will not disturb them.

There is still another insect which does some damage to the foliage and fruit of trees. The perfect insect is a long, dark, slender fly, with long feelers and two steerers behind; they were found on the trees as early as the 15th of March, mating; they lay their eggs in the young bud.. As soon as it opens, the egg hatches, and the young larva commences eating the young leaves, and curling them up, in which he makes his home. They are destroyed by applying the whitewash to the limbs of the tree. The whitewash also kills a very destructive little insect, the eggs of which are contained in little muscle shells, on the bark of the apple and pear trees; [a species of coccus. - - Ed.] I will communicate the effect of syringing the trees with the wash before the buds break, in July, when the whole effect of the experiment will be known.

THE RAVAGES OF INSECTS.

Such insects as Hessian and wheat flies, curculios, weevils, army and boll worms, annually destroy crops to the amount of twenty millions of dollars. If a pirate on the high seas, or an Indian savage on land, injures the property of a citizen to the amount of a few dollars, millions are expended, if need be, to punish the offender. This is right. But when public enemies of a different name do a thousand times more injury to a whole country, are its citizens under any necessary restraint which forbids their making a common effort to protect their property from insect devastators? Parasitic plants, such as rust on wheat, and many fungi, as well as injurious insects, are on the increase. To attempt to explain the reasons *why* this is so, would lead at once into questions in animal and vegetable physiology, out of place in this brief synopsis of such rural topics as are believed to be of general interest. It may not be amiss to remark, however, that many boys are apparently educated to kill all small birds that subsist mostly on insects, so soon as these youngsters are large enough to shoulder a gun.

Government can do much to check the ravages of insects, by collecting and diffusing useful information as to their habits, times of transformation, and the best means of destroying or avoiding them. If farmers fold their arms, and say that nothing can be done by the science of entomology, nor by any other means, what but an increase of the evil is to be expected? Not to *try* to escape the infliction, is treating one's enemies with unmanly forbearance, and evinces a belief in fatalism worthy a disciple of Mahomet. — *Patent-Office Report for* 1849.

ANALYSIS OF SOILS, MARLS, AND FERTILIZERS.

Something should be done in reference to the analysis of soils, fertilizers, marls, and other minerals constantly sent to the patent-office for that purpose. For many years, chemists and philosophers have been investigating the affinities and other peculiarities of "molecules," or ultimate indivisible particles of matter. These scientific researches have revealed many important truths and natural laws, which have a direct bearing on all the economical purposes of agriculture. Some pains should be taken to impart a knowledge of these laws to all practical farmers. When we consider how little opportunity the mass of agriculturists have to study the chemical composition of their soils and crops, it will readily be seen that information of this kind is greatly needed in all operations which aim to feed cultivated plants with their appropriate aliment.

Prof. Henry, the distinguished secretary of the Smithsonian Institution, has authorized me to say that the extensive chemical apparatus and excellent laboratory of the institution will be at the service of any reputable chemist, to make investigations for the increase and diffusion of knowledge in this branch of science.

I have compiled for this report about one hundred analyses, embracing most of the cereals, several grasses, clovers, legumes, roots, cotton, tobacco, flax, and the ash of fruit and forest trees, from the latest European and American authorities. These analyses will be found valuable for reference.

An elaborate paper on the "Study of Soils," giving the chemical composition of their parent rocks, the amount of the elements of crops in a cubic foot of earth available as food for plants, together with researches into the annual production and consumption of mould, the variation of the temperature and hygrometric properties of soils, has been deferred, to keep this document within a moderate size. For a similar reason, no space has been allowed for mere *guesses* at the quantity of grain and other crops grown in the year 1849. — *Ibid.*

Tax on Farming. — The county commissioners, for some years past, have assessed upon farmers a tax for their occupations, for county purposes. Objections having been made against this as illegal, a case was stated for the opinion of the court, and argued before his honor Judge Gordon, by Messrs. Filbert and Sallade for the county commissioners, and Henry W. Smith, Esq., on behalf of the farmers. On Friday last, the court gave judgment for the defendants, thereby deciding that it was illegal to tax farmers for their occupations. — *Berks Co. (Pa.) Press.*

A Fact for Dairywomen. — I. B. Philbrook, says the Vermont Chronicle, kept three cows on his farm last year, from which his mother, a lady ninety years of age, with his assistance, made, in nine months, nine hundred pounds of butter, eight hundred pounds of which were sold in the town of Hardwick. This is a fact worthy of record and emulation.

NOTICES OF PUBLICATIONS.

Gallery of Illustrious Americans. — This work contains the portraits and biographical sketches of twenty-four of the most eminent citizens of the republic, since the death of Washington. It is a very splendid and beautiful work, published semi-monthly, on imperial folio drawing-paper, in a new and magnificent style. These portraits are very skilfully executed, and do great credit to the artists, Brady and D'Avignon. The letter-press, or biography, by the editor, C. Edwards Lester, is brief, comprehensive, and appropriate. No. six contains the portrait and history of Col. Fremont, senator elect from California, and one of the most illustrious men of the age. New York: G. P. Putnam; D. Appleton & Co.; C. S. Francis & Co. — Boston: Redding & Co., 8 State St.

The Illustrated Domestic Bible, by Rev. Ingram Cobbin. — We have examined the specimen number of this work. The mechanical execution is remarkably neat, the print of good size, clear, and distinct; the illustrations are prepared for instruction rather than decoration; and the commentaries and practical reflections are judicious, interesting, and well adapted to edify and instruct the reader; and they are apparently free from sectarian bias. The editor has long been distinguished for his sound evangelical writings and anti-sectarian principles. This work is published by Samuel Hueston, 139 Nassau St., New York, at 25 cts. a number; to be completed in twenty-five numbers. It will contain seven hundred engravings, and three finely executed steel maps. It will be issued on the first and fifteenth of each month.

He who swallows up the substance of the poor, will, in the end, find that it contains a bone which will choke him.

THE GRAND EXHIBITION OF 1851.

BY MARTIN FARQUHAR TUPPER.

Hurrah for honest Industry! hurrah for handy Skill!
Hurrah for all the wondrous works achieved by Wit and Will!
The triumph of the artisan has come about at length,
And kings and princes flock to praise his comeliness and strength.

The time has come, the blessed time, for brethren to agree,
And rich and poor of every clime at unity to be,
When Labor, honored openly, and not alone by stealth,
With horny hand and glowing heart may greet his brother Wealth.

Ay, Wealth and Rank are Labor's kin, twin brethren all his own,
For every high estate on earth, of labor it hath grown;
By duty and by prudence, and by study's midnight oil,
The wealth of all the world is won by God-rewarded toil!

Then hail! thou goodly gathering, thou brotherhood indeed!
Where all the sons of men can meet as honest labor's seed;
The tribes of turbaned Asia, and Afric's ebon skin,
And Europe and America, with all their kith and kin!

From east and west, from north and south, to England's happy coast,
By tens of thousands, lo! they come, the great industrial host, —
By tens of thousands, welcomed for their handicraft and worth;
Behold! they greet their brethren of *the workshop of the earth.*

Right gladly, brother workmen, will each English artisan
Rejoice to make you welcome all, as honest man to man,
And teach, if aught he has to teach, and learn the much to learn,
And show to men, in every land, how all the world may *earn!*

Whatever earth, man's heritage, of every sort can yield,
From mine and mountain, sea and air, from forest and from field;
Whatever reason, God's great gift, can add or take away,
To bring the worth of all the world beneath the human sway;

Whatever Science hath found out, and Industry hath earned,
And Taste hath delicately touched, and high-bred Art hath learned;
Whatever God's good handicraft, the man He made, hath made;
By man, God's earnest artisan, the best shall be displayed!

O, think it not an idle show, for praise, for pride, or pelf;
No man on earth who gains a good can hide it from himself:
By any thought that any thing can any how improve,
Who help along the cause of all, and give the world a move!

It *is* a great and glorious end to bless the sons of man,
And meet, for peace and doing good, in kindness while we can;
It is a greater and more blest, the human heart to raise
Up to the God who giveth all, with gratitude and praise!

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own. — JOHNSON.

VOL. II. SATURDAY, JULY 20, 1850. NO. 15.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

STRAWBERRIES.

REMARKS ON DIFFERENT VARIETIES.

The strawberry crop is becoming an important one, both to the cultivator and consumer. It is a very delicious fruit, admirably combining rich acid and saccharine qualities, which render it very welcome in hot weather; and its being the earliest fruit in the season gives it an additional importance.

Every family in the country should have a good supply of strawberries, they are so delicious, and so much more palatable and wholesome than meat, butter, rich cake, &c. We would rather have for supper a piece of good bread, with fine-flavored strawberries, tempered with sugar, than the most costly and richest dishes that the wide world can afford.

So valuable is this fruit, that every farmer, and every one who has room in his garden, should raise it for his own family, at least, unless he is fortunately in a region where the delicious wild strawberry abounds. And we trust that so much attention is now given to the cultivation of this fruit for the market, that every family can have a supply at moderate prices.

The farmer should consider that a bed of strawberries, two rods long and one wide, yielding a fair crop, will give him two quarts a day for twelve days, and twice that quantity if the yield be very large. A gardener informed us that from less than one square rod he had twenty quarts. But little land, manure, and time, is required to afford this most delicious and healthful luxury — to children a most delightful treat. Who will neglect to cover their bright faces with smiles of joy as they partake of the delicious feast, or lose the opportunity of illustrating the beneficence of our heavenly Parent in his bountiful gifts, and the kindness of friends in providing such fine delicacies to cheer their grateful hearts?

With these preliminary remarks on the importance of the strawberry, and the advantages of extending its culture, we proceed to give an account of a number of the most prominent varieties in general cultivation, or which seem to have claims to this distinction. We have often said that the cheapest of all improvements in the cultivation of vegetables, or rearing of animals, was the selection of the best varieties; for, although this may cost a little more at first, a beginning may be made, and soon enough will be produced for one's own supply, and perhaps a surplus that will bring an extra price, and make an ample return for the original stock.

We cultivate strawberries for our own use, also for the purposes of experiment, that we may test all the varieties that have claims to excellence, in order to learn their hardiness, vigor, the quality of fruit, time of ripening, and various other habits; and to supply a few plants with other nursery productions. In addition, we have examined for years the principal strawberry plantations in this region, also our market, and we confer with the principal cultivators and dealers in this fruit. If these advantages can enable us to give to the cultivators of this fruit any useful information, we do it with pleasure.

Whether we cultivate fruit for our own use, or for the market, the time that each variety ripens is worthy of consideration, in order that we may have fruit in succession, or have it for the market when it will bring the highest price. Our strawberries are on a fine loam, tolerably dry; the immediate location is rather warm, having a southern aspect, but not forward, as it is not far from the water.

The following are the times of ripening of several varieties, which, in regard to comparing one with another, will not differ much from an average of seasons: —

Early Virginia,	June 22
Large Early Scarlet,	" 22
Boston Pine,	" 26
Willey,	" 26
Jenney's Seedling,	" 27
Black Prince,	" 27
Hovey's Seedling,	" 28
Fay's Seedling,	" 28
Wood, or Alpine,	July 1
Newland's Mammoth,	" 1
Milford Native,	" 4

The time named is when the fruit began to ripen, and, generally, it continued about one week. Jenney's continued in use nine or ten days. This table

agrees very nearly with previous experiments, and with the experiments of many other cultivators, in the comparative time of ripening, which is the main subject in view, as it shows the inexperienced how to select so as to have a succession of fruit.

Early Virginia. — This is the best early strawberry generally known in this section. It is one of the principal kinds for main crops, and some cultivate it almost exclusively. The plants are very strong, vigorous, and hardy, enduring the cold of winter, and succeeding well on dry soils, as well as on those rather strong and heavy. The fruit is medial size, very handsome, and of excellent quality, which it retains well after picking. It sells well in the market the next day after it is picked. It is very productive. We have accounts of its yielding some of the largest crops ever produced from any variety. It is nearly perfect in its blossoms, and is a good variety to fertilize pistillate kinds.

Large Early Scarlet is the same as the above.

Boston Pine. — We say in our Fruit-Book, "cultivators give various accounts of it," and we still say the same. Its merits as a market fruit are not well tested. Some extol, others condemn it. This fruit seems to be peculiarly adapted to strong soils, and under high culture, planted in hills, or the plants well thinned, it yields large crops; but if the plants are thick, it sets more fruit than it can perfect. The plants are strong, vigorous, productive, and hardy, enduring our cold winters well. The fruit is quite large, beautiful, and of a sweet, pleasant flavor, as taken from the vines. Some prefer it for its mildness; others give a preference to sub-acid fruits, which in the hot season are admirably adapted for the table, with a little sugar. This fruit becomes insipid soon after it is picked, and does not appear well in market the day after gathering. Some persons think that this fruit will take the place of the Early Virginia; but we think that it is a great mistake, for its quality is not so good for a market fruit, and it ripens so much later, that half of its crop, or more, comes in with Hovey's Seedling, and other late varieties. On the contrary, the Early Virginia comes so early that it is nearly or quite gone when the late kinds come in.

Some say the Boston Pine is *about* as early as the Early Virginia. Now, let us see what a wide difference this little word makes, though it seems to mean almost nothing. The first boxes of Early Virginia brought into this market this season, sold for more than one dollar per box; and when several cultivators brought them in, they sold at fifty cents per box. But when the Boston Pine was ripe, good strawberries sold at twenty cents a box. The Boston Pine is nearly perfect in its flowers.

Willey. — This is a famous strawberry in Ohio, producing large crops of excellent fruit. The plants are remarkably vigorous, hardy, and productive. The fruit is tolerably large, and of excellent quality. We have had but little experience in this variety, having had fruit from it this season only, and have not seen it in cultivation by others. It is very promising, and worthy of trial. Mr. F. R. Elliott, Cleveland, O., a well-known pomologist, raised of this variety 1345 quarts on one fourth of an acre of land. The Willey which we have is pistillate, staminate, and some blossoms are nearly perfect. We have selected pistillate plants, and set them by themselves, and some of them produced staminate plants the next season. This is contrary to the opinions of some horticulturists.

Jenney's Seedling. — This is a new variety, not yet cultivated to much extent, but it is very promising indeed. The plants are strong, vigorous, productive, and hardy, enduring our winters without injury. The fruit is large, very handsome, and of a very high quality. It is sub-acid, and to this some persons object; but as the strawberry is usually used with sugar, and in hot weather, when a little acid mingled with sweet is very acceptable, we think that this will be a very popular fruit. There is no strawberry that we should prefer to this to come immediately after the Early Virginia, for our own use. Time must determine its merits for the market. Mr. Jenney raised, on one fourth of an acre, at the rate of more than 4000 quarts to the acre. This plant is mostly pistillate, but we believe that it yields good crops without a fertilizer.

Black Prince. — Some praise this highly, others condemn it with severity. It has a peculiar flavor, that is pleasant to some, and to others it is offensive. Some amateurs will cultivate it, but we do not think it will be valuable for the market.

Hovey's Seedling. — This is one of the most valuable of strawberries. It has not the vigor and hardiness of the Early Virginia, Willey, and Jenney's Seedling, but it usually endures our cold winters well. When it produces a very great crop, the plants are sometimes rather thin the next season, either from the effects of the winter, or from exhaustion. The size of the fruit is extremely large, the color is beautiful, and the flavor is mild, rich, and excellent. While some persons admire its mildness, others prefer more acid, like Jenney's Seedling, Early Virginia, Willey, &c. This variety is remarkably productive, and, owing to its large size, and the readiness with which the fruit parts from the hull, it is picked with less expense than any other variety. One cultivator in this vicinity had several hands that picked seventy boxes each per day. One acre of land, mostly of this variety, produced 4000 boxes, and the yield was largest from this kind.

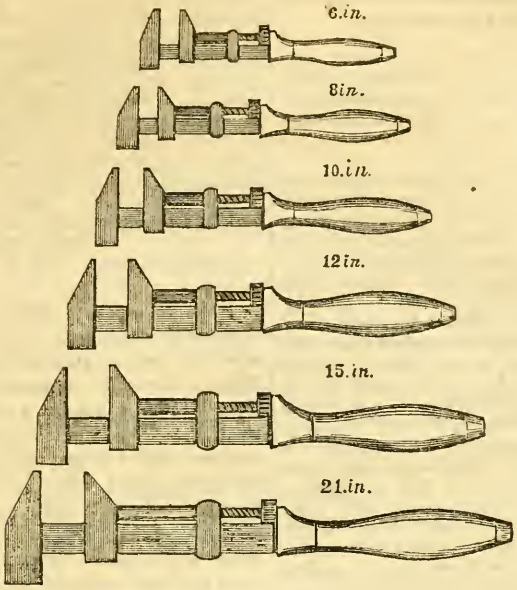
Fay's Seedling. — We prefer Hovey's or Jenney's to this, and they ripen about the same time.

Wood, or Alpine. — This is an old variety, which held an important place as a late strawberry before the introduction of Hovey's, and other late varieties.

Newland's Mammoth. — All the mammoth about this is the *mammoth humbug* which George Newland, of Palmyra, N. Y., played off in selling the old Wood strawberry for a new and superior variety.

Milford Native. — A good fruit, and very late, but neither vigorous nor productive.

Richardson's Seedlings we have not thoroughly tested. His Late promises to be valuable, as it ripens after most others are gone.



ADJUSTABLE SCREW WRENCHES.

The above cut represents the Patent Adjustable Screw Wrench, invented by L. Coe, of Worcester, in its various sizes. By the arrangement, combination, and proportions of the several parts, these wrenches are remarkably convenient, efficient, substantial, and durable. As the jaws are movable, they are adapted to general use, as they may be readily applied to a broad or narrow substance. The farmer and mechanic will find it the most convenient article of the kind, from its application to all purposes to which various wrenches of a different construction are adapted.

The screw that moves the sliding jaw is very easily operated and properly adjusted to any nut, screw, or other substance, by the thumb of the hand that holds the wrench, while the other hand may be engaged. This article is very neatly finished, is very handy from its size, and the price is moderate. The prices range from $1,12½ to $3,50. This wrench is taking the place of all other screw wrenches. They are sold, wholesale and retail, by Messrs. Ruggles, Nourse, Mason, & Co., Quincy Hall.

STACKING HAY.

In many portions of our country more than one half of the hay is "stacked out;" especially is this true of the newer portions of this state. Now, effectually to secure this vast amount of fodder is an object greatly to be desired. For thirty years I have been in the habit of stacking hay. I have observed also the method by which others put up their hay. The common way is to build a stack, top it up, and let it remain a week or two, until it has become somewhat flattened by settling; then put another top upon it, and still, perhaps, the third, before it is left to remain for winter use. By this method, from half to three quarters, and even a ton, is spoiled for the use of stock. The philosophy of the thing is this: The sweat of the hay rises to the surface of the stack, and lodges on the outer or upper surface; putting on the second top shuts this moisture in, and the hay of the first top is spoiled in consequence of it. The second top is spoiled by its exposure to the weather; thus a double loss is sustained by the over-careful farmer to protect his hay. My method is to make but one top. If the weather is fair, build the stack to the "shoulders," (that is, to the point where the top begins to form,) let it remain a day or two to settle, then finish up the stack; a little swamp is best for the top. When built in this way, I have found, on removing the first lock in winter, the hay below as bright as when it was first put up. If there is a prospect of storm, some boards may be placed on the stack so as to protect it while it is being settled, as farmers say. If no boards are to be had, and bad weather is at hand, top up your stack; or, if you get a tolerably fair top, never touch it again; if not, throw off your whole top when the weather becomes fair, and finish out your stack. In this way, you need not have any hay injured in the least, only just so much as is exposed to the weather. R. R., Jr.

Clinton, Lenawe Co., Michigan, 1850.

— *Phil. Dol. Newspaper.*

VIRTUES OF SMART WEED.

It is almost a sure remedy in a case of colic. Steep and drink the same as in any other herb tea. In the next place, it is worth five dollars per hundred for a stock of cattle, if it is cut and well cured when in full bloom. Give an ox, cow, or horse one pound per week during the time they are up to hay, and it will keep their bowels and hide loose. It is an excellent physic. If a horse has one pound per week, there is no danger of his having bots or worms of any kind; and they will eat it sooner than they will the best of hay.

A righteous man regardeth the life of his beast.

For the New England Farmer.

STONE-RAKES — A NEW POTATO DISEASE — GUM FROM PEACH-TREES.

Mr. Cole: Permit me to address you a very miscellaneous letter, though upon topics distinct in their character, and which would admit of much more full consideration. My object is to elicit information from those qualified to give it, trusting it would be prized by others as well as myself.

Stone-Rakes. — For about two years I have bestowed no small labor to clear a garden, of about a quarter of an acre, of stones. The greatest portion of the ground consists of what are usually called cobble stones, of all sizes, from those of fifty or sixty pounds, to those no larger than a pea. Indeed, close examination shows that stones constitute the mass of the earth. Every ploughing brings to view a new crop. One of my oldest neighbors insists that since commencing the cultivation of his garden, he has lowered the ground about two feet, simply by removing stones. Now, I inquire if there is, or, if not, whether there should not be constructed, a strong stone-rake, with teeth projecting forwards, to be drawn by oxen, which would both loosen and draw together the stones, upon land of this description. Let there be different sets of teeth racks, with teeth at different distances, according to the size of the stones to be loosened up and collected, and means provided for inserting them as they shall be needed. A loaded common harrow, to follow a subsoil plough, (provided such a plough could be made to penetrate sufficiently deep in such soil,) might throw up many of the stones; but I ask for the means of not merely loosening, but of gathering them. But what shall we do with the stones? I venture to say, draw them off upon stone-boats, and make them into *dobie* fences, as they make dobie houses at the west, or build houses with them, if you please.

A New Potato Disease. — Last year some bulbs of my potatoes, called Sand Lakes, at an early stage of their growth, showed disease in the stalk. The lower leaves turned brown, and decayed and died first, and then the other leaves successively did the same, and the tops of the stalks, though green, refused to expand naturally, and grew only in a curled, dwarfish form, and all the stalks, after a sickly, stunted growth, prematurely died, while the hills adjoining flourished, and continued growing with a healthy appearance, generally, through the season. I found the dwarf and diseased hills, when I dug them, yielded a very few and small potatoes, but free from rot. I had manured well with stable manure. This season a far larger number of the hills are struck with the same disease, and are going the same way. I have just pulled up and examined one of them, but can detect nothing peculiar in the seed planted, and find no evidence that the effect is produced by insects. My Mercers and other kinds do not yet show signs of this disease. If any explanation of it can be given, I would be glad to obtain it. It should be remarked that, lacking stable manure, I have manured with the best deposit I could get from the road, and put a half pint, perhaps, of unleached ashes, mixed together with the soil, in each hill. Has any trace of this disease, unattended by rot, hitherto attracted attention? It is sure very much to diminish my little crop. I would know if planting, year after year, the same ground with potatoes, has any thing to do with the effect in this case. I doubt it, because, in a newly-turned piece of turf land, I find one or more hills similarly affected.

Gum from the Peach-Tree. — Wounds of insects I know let out gum; but it seems certain to me that there must be another cause. I have a young tree, a blood peach from Long Island, and it has a wonderful propensity to gumming, where I can find no trace of any insect. In the fork of the two principal branches, it exuded largely last summer, and the bark adjoining died. I cut out the dead bark, and found gummy juice lying between it and the wood. The edges of living bark healed over, but they are propense to send out gum. The tree has set with a few peaches, and vigorous new shoots are growing, but gumming is going on at the parting of the branches, and here and there gum appears upon the body, and just around, the bark is sure to be loosened from the wood, and dead or dying. The cause and cure I would gladly learn. Had I your Fruit-Book, Mr. Editor, I might, perhaps, not need to ask.

Truly yours, J. LEE.

Salisbury, Conn., *July* 2.

Remarks. — *Stone-Rakes.* — In removing small stones from the soil, caution is necessary, as in many cases the soil is greatly injured by their removal. This is shown by numerous experiments. In one case, all the stones on a piece of land down to a small dimension, and to a certain depth from the surface, were sold for the purpose of making a road; and the consequence was, that land which was before productive became poor. Small stones are constantly decaying from exposure to the air, from the action of the soil, as, by deep ploughing or subsoiling, fresh and new elements are brought in contact with them; and by the application of manures, particularly such as ashes or potash, the stones become corroded, and furnish fertilizing ingredients as food for plants.

In tillage, stones are a great inconvenience; but in mowing, small ones, if not extremely thick, may be pressed into the earth by the use of the roller. It is difficult to determine how far small stones should be removed from tillage lands. Where there is a plenty of gravel or sand, small stones are less useful than they are in soils where clay, marl, or mud abounds.

New Potato Disease. — We have Peach Blow potatoes that have been affected in the same manner as named by our correspondent. The Sand Lake potato resembles the Peach Blow, and what he calls the former may be the latter. The first year we planted the Peach Blow, they were on new land, and they were healthy. The next year they were on old land, but which was not in potatoes the previous year, and they were much affected by disease. The next year we planted them in several places, mostly where potatoes had been raised the previous season, and of the early-planted on dry land, nearly half of the hills failed, while by the side of them other hills, of the same variety, were perfectly healthy and productive. We planted some late on wet land, and about one tenth part failed.

We examined carefully for insects, but could discover no cause of the disease. The tops grew very slowly soon after they came up, the leaves curled up, and the most of them died; yet they lingered along, and produced a few potatoes about the size of robins' eggs. We found this effect from planting large and small seed, cut and whole.

We planted about fifty kinds of standard potatoes, and one hundred and fifty seedling varieties; and none were affected with this disease but the Peach

Blow, and we have excluded it from our list, as unworthy of cultivation. Others have given the same account of this potato.

Gum from Peach-Trees. — Sometimes gum runs from peach-trees by reason of insects, as the worm, for instance, eating around the tree, between the bark and wood, at or just below the surface; but gum often runs from peach-trees from causes not distinctly known. Trees that seem perfectly healthy in early spring, and are very smooth, and apparently in a vigorous condition, are soon seriously affected by the gum running from various parts of the body and branches, which indicates a decline or speedy death of the tree.

In this climate the peach is far from its native and peculiar home, if we regard its origin; and it is seriously affected by our cold or changeable winters, and by our cool springs, constantly varying in temperature, or remaining constantly cool and uncongenial to plants originally from a much warmer clime. The best remedy for this evil is the same as we should recommend for the potato disease which has been named: Examine carefully, and cultivate the most hardy varieties of fruits and vegetables. Information on these subjects from our correspondents will be acceptable. — Ed.

For the New England Farmer.

VALUE OF LIME IN AGRICULTURE.

Friend Cole: As yet we hardly know whether to count lime on our list of manures or not. We do not know how, and when, and where it will be beneficial and *profitable* for us to apply it. I notice that A. J. Downing, in his Fruit and Fruit-Trees of America, has thrown some light on the use of it in the orchard; and, as every farmer may be supposed to have an orchard, it may not, perhaps, be amiss for me to note here a few of his remarks.

Speaking of fruits, (p. 558,) he says, "We are not without remedy for varieties that have partially decayed in a certain district. If the trees have once been productive of excellent fruit, and are still in a sound condition, though enfeebled, a thorough renewal of their powers will again restore them to health. To effect this, a heavy top-dressing of lime, and, if the soil is light, of loamy clay, should be repeated a couple of seasons. The bark of the trunk and large branches should be well scraped," &c., &c. On p. 328, he says, "The use of lime in strong soils as a fertilizer, instead of manure, is worthy of extensive trial, because lime has a tendency to throw all fruit-trees into the production of short-jointed fruit-spurs, instead of the luxuriant woody shoots induced by animal manure." This is a hint worth remembering. Again, on p. 35, alluding to a work by Dr. Schultz, of Berlin, he writes, "The author, who has devoted considerable time to the subject, states that common salt and chloride of lime contribute greatly to the flowering of most plants, to which, however, they can only be applied with safety in small quantities. 'Salts of lime,' he continues, 'appear to produce so nearly the same effect as those of potash and soda, that it is only necessary to place lime within their reach, if there is no deficiency of manure in the shape of general food. Lime will, in the main, promote in an astonishing degree the fruiting and flowering of most plants, because calcareous salts promote evaporation and the concentration of the sap.'" Of this Downing remarks, "Although we cannot coincide with many of Dr. Schultz's views as expressed in this work, yet the remarks just quoted agree so entirely with facts that have come under our own observation, that we gladly place them before the cultivator of fruit-trees." But I will not quote more now from a work which every one may read for himself.

According to Dr. Emmons's analysis of the ash, the pear contains,

	Potash.	Phosphate of Lime.	Lime.
Sapwood,	22.25	27.22	12.64
Bark,	6.20	6.50	30.36

The apple contains,

Sapwood,	16.19	17.50	18.63
Bark,	4.93	2.42	51.57

If this be correct, it will readily be seen that a strong growing tree will exhaust the soil within its reach of a large quantity of lime in a few years. The soil may contain at first a sufficient quantity; but a tree that has grown fifteen or twenty years in one place will usually be found feeding upon short allowance, unless lime, as well as other food, has been supplied. Small crops and poor fruit commonly testify to some neglect on the part of the cultivator.

According to Professor Johnston, the different crops of grain, turnips, &c., carry away lime nearly as follows: —

25 bushels wheat,	9 lbs.	25 tons turnips,	140 lbs.
38 " barley,	15 "	9 " potatoes,	270 "
50 " oats,	9 "	2 " red clover,	126 "

No doubt that we often apply, at great expense, large quantities of animal manure to exhausted soils, when, at the same time, a small part of it, with a proper addition of lime, would produce a far more beneficial effect. But there are unexhausted soils, even in Massachusetts, which lime would greatly benefit; some heavy, sour, cold and wet, and swampy soils, to which it would be the best manure that could be applied to render them productive. The particular action of lime on soils has been well stated in the first volume of the N. E. Farmer, p. 100. But what is the best kind of lime to be used? Although all kinds may be beneficial, when properly applied, still all kinds may not be equally so. We know that, in some cases, lime thoroughly air-slaked is better than the caustic, and that old lime plastering is better than either. This, of course, depends upon circumstances. On page 275 of the Farmer, vol. i., I see it quoted from an English paper that "the best lime, for agricultural purposes, is that which is lightest, whitest, and softest to the touch; the purest and strongest lime is always the lightest."

I am inclined to think that oyster-shell lime is by far the best for agricultural purposes generally. I have never seen an analysis of it, but I have heard it stated from good authority that it contains a much greater percentage of pure lime than the common stone lime; also, that it is very white and very light. It is the opinion of most fruit-growers, I believe, that oyster-shell lime is much the best. If it contains more pure lime, why may it not be better adapted than any other to render cold and swampy lands productive? Oyster-shells in abundance may be procured in our cities, where it is usually a bill of expense to get them out of the way. If they could be collected and burned cheaply enough to make them available as manure, (as no doubt they could be, if there was a sufficient demand,) farmers and fruit-growers might be supplied with an article which they very much need, and the place of which it is not easy to supply with any other manures. An analysis of shell lime would be useful as a starting-point in the investigation of its agricultural value. It is said to contain other ingredients in addition to the lime, which are useful to vegetation. Of the amount

or value of these I have as yet no positive information. I wish to see in the Farmer an article on the value and proper use of oyster-shell lime; and if these remarks shall be abridged, or left out altogether, to make room for it, I will not complain.

Respectfully thine, N.

Danvers, *7th mo.* 1, 1850.

For the New England Farmer.

FOWLS.

Mr. Cole: The poultry mania still continues to rage; it has caused considerable excitement and speculation, has been carried on to a great extent, while at the same time it is our humble opinion that there has been "more cry than wool." Will some one tell us how or in what time will a purchaser who pays from ten to fifteen dollars for a pair of fowls be remunerably compensated?

It is an old adage that "money makes the mare go." So in this case with fowls, at the present time, a few persons have imported a new breed, some, perhaps, of superior size, and, after a considerable "puffing and blowing," they have got the "wind up," and thus induced some with whom "tin" is plenty to purchase them at an exorbitant price. What superior qualities are there about the Cochin China fowls, which have been sold at twelve dollars per pair? Certainly it did not cost near that sum to import them; and as to the size of their eggs, they are no larger than many of our common native breed; but from the external appearance or color of their eggs, they may be filled with some rich and valuable lucre — who knows? Again, the size of the Cochin China does not vary much from that of some native fowls, which may be purchased from a dollar and a half to two dollars per pair.

The Shanghae fowls are very large; but is their difference in size so much more than that of our common fowls as to augment their price from two to fifteen dollars per pair? We like to see consistency used in all things; but it seems evident that glittering gold is the chief desire with some persons.

Correspondents are considered the bone and sinew of an agricultural paper, because experience is their teacher; but with them it sometimes happens that "chaff is mixed with the wheat."

MIDDLESEX.

Winchester, *June* 27, 1850.

For the New England Farmer.

GRAFTING CEMENT—ITS APPLICATION.

Friend Cole: Having derived much useful information through the medium of agricultural papers like the Farmer, I sometimes venture to throw some of my ideas into the public fund; and if any thing can be gleaned from them of any worth, I shall feel rewarded for any thing I can do.

For two years past we have made grafting cement as follows: One pint of linseed oil, five pounds of rosin and one of beeswax, which we apply warm with a small painter's brush. It requires much less labor to put it on, and not so much cement is used as when applied cold in the ordinary way. In addition to the saving of time and cement, it is preferable on account of adhering more closely and remaining longer. Our success in grafting is better in this way than with clay or cement applied as formerly.

D. TABOR.

Vassalboro, *6th mo.*, 1850.

For the New England Farmer.

GOOSEBERRIES.

Mr. Cole. Sir: I send you some specimens of gooseberries that were grown on new land, in a cold situation, the soil not more than six inches deep; it has been under-drained, and, in the three years that it has been under cultivation, it has in all never had more than at the rate of four cords of good manure to the acre. The cultivation of all the specimens was alike, and, with the exception of No. 2, grew within a few feet of each other.

No. 1 is an English variety, and the best I ever raised.

No. 2 is a great bearer, and the bush a thrifty grower; it was taken from the woods five years ago.

No. 3 I got, sixteen years ago, in the garden of Richard Harbank, in Newtown, near the Kenrick nurseries; this bush grows large, is a great bearer, good only for cooking. It is bad to pick on account of thorns.

No. 4 was taken from the woods in the fall of 1848, and from many different bushes, and is no better than hundreds of others in the nursery, where they stand in rows three and a half feet by one foot in the row. I never saw any mildew, on No. 1, before this year, and this, I suppose, is owing to the bushes being so thick.

No. 5 is one of a different variety, which I brought from the Crawford Place, at the White Mountains; they are not near as good as the specimens I had last year, and for eating I think are better than any of the others. The bush grows long; it bears well generally; but there has not been much more than half a crop this year on any kind. This last kind grew on hard, gravelly land, not very favorable for this fruit, and the bushes were more than twice as thick as they should be.

Yours, &c.,

B. F. CUTTER.

Pelham, N. H., *July* 10, 1850.

Remarks. — We are much obliged to our friend for his box of gooseberries. The general injury to this fruit of foreign origin, and the remarkably healthy appearance of our native varieties, shows that we must rely on seedlings of our wild gooseberries, or crosses of them with the foreign. Houghton's Seedling is such a cross, and it is doubtless worth more than all the foreign kinds that have been tried in this country.

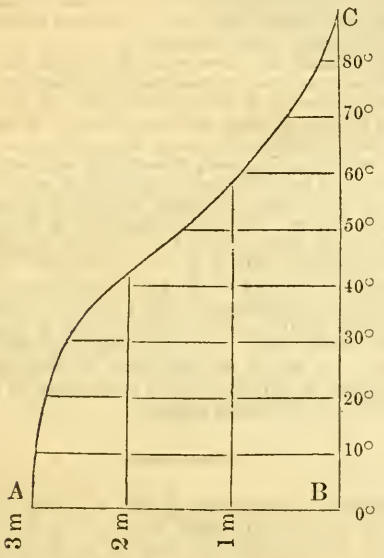
The experiments of Mr. Cutter show, that, by cultivation, our native wild gooseberries may be increased in size and production; and, as to quality, they generally rank much higher than the foreign, being of a finer texture, thinner skin, and of a milder and superior quality.

The varieties Nos. 2 and 3, sent to us by Mr. C., appear to be great bearers; and they are nearly as large as gooseberries generally sold in this market, and of superior texture. We have no doubt that superior varieties of our wild fruit would be profitable to cultivate for the market.

The Wheat of Ohio. — In many parts of the state the wheat harvest has commenced, and the promise for an abundant harvest has never been better. In the south part of the state, much of the crop is already safe. It is too late now to have the crops affected by blight. The heads are well filled, and the kernel plump. — *Ohio Journal, July* 1.

THE TERM OF PERPETUAL CONGELATION.

As we ascend in the atmosphere, the temperature of the air diminishes with our altitude, by a rate somewhat affected by seasons, hours of the day, &c., but which is generally one degree of Fahrenheit's thermometer for every 343 feet of elevation. This is the average rate, for it is not uniform. Near the earth, the diminution of temperature, as we ascend, is very rapid; then again, more gradual; and again, at very lofty elevations, accelerated. By ascending, therefore, at any latitude, we reach a point where moisture is always congealed. This point is of course highest at the equator, and lowest at or near the poles; and for other latitudes, at intermediate points of elevation. An imaginary line, extending from the equator to the pole, forms the curve of perpetual congelation. In the accompanying diagram, AB represents the height of the term of perpetual congelation at the equator, — about three miles, — and the line BC represents the line of latitudes, while AC represents the curve alluded to.



It meets the surface of the earth before reaching the pole, as it is well known perpetual frost surrounds the poles. In our latitude, the altitude of the term of perpetual congelation is about nine thousand feet. The cirrus cloud, as we have before stated, consists of the frozen vapor above this limit, while the other varieties of clouds float below it.

The cause of the intense cold of the upper regions of the atmosphere is not at first view obvious, since the general law respecting heat (or hot air) insures its elevation. The upper portion of air in a room is warmer than the lower strata: and the atmosphere is heated by conduction, coming in contact with the heated earth. It is so transparent that the sun's rays are not absorbed by it, in their passage through it. Another general law, however, is here interposed to prevent the escape of this genial atmosphere, so essential to the existence of animated beings. That law is — Rarefaction causes a diminution of temperature — an increased capacity for caloric. Intense cold is produced in the vacuum of an air-pump! Sir John Herschel has recently proposed a practical application of this principle, — in which, however, he was anticipated by one of our own countrymen, — maintaining a uniform, low temperature, in an isolated space, as a room, freezing water, &c. The atmosphere decreases very rapidly in density, as the altitude increases; the heated air, rising, expands; this rarefaction causes diminution of temperature, and hence an equilibrium is soon reached. Local circumstances frequently modify the application of this principle. The frost or snow line is not always at the same elevation, in the same latitude, on different sides of the equator. In Chili, latitude 41° south, the lower limit of perpetual snow is six thousand feet. The air is sometimes very mild in elevated districts. Valleys are warmer than level plains of the same altitude, as the hills reflect and radiate heat to them. In Switzerland, spots of verdure may be found in the midst of perpetual snow and ice. The Glacier of Grindenwald, in the canton of Berne, covering twelve hundred square miles, has upon its borders not only trees of hardy growth, but delicate verdure. It is also said, that upon the Himalayah mountains, extensive pastures exist in valleys which are fifteen thousand feet above the level of the sea. — *Family Visitor.*

TO PRESERVE FLOWERS.

Procure a flat dish of porcelain, into which pour water. Place upon it a vase of flowers, and over the vase a bell glass, with its rim in the water. The air that surrounds the flowers, being confined beneath the bell glass, is constantly moist with water that rises into it in the form of vapor. As fast as the water becomes condensed, it runs down the side of the bell glass into the dish, and if means be taken to enclose the water on the outside of the bell glass, so as to prevent it evaporating into the air of the sitting-room, the atmosphere around the flowers is continually damp. The plan is designated the "Hopean Apparatus." The experiment may be tried on a small scale, by inverting a tumbler over a rose bud, in a saucer of water. — *Selected.*

PARSNIPS.

A correspondent has written to inquire "whether we know, by our own experience, the quality of the parsnip for feeding and fattening pigs." In answer, we beg to state that at our farm at Catlands Bingmen, we have been in the habit of employing parsnips for that purpose, for some time. Upon reference to our books, we find that on the eleventh of October, 1847, we put up two shoats of eleven weeks old, and fed them on skim milk and parsnips, for three months, when they were killed, weighing two hundred and thirty-one pounds. They were well fattened, firm in flesh, and the meat of excellent flavor. The quantity of parsnips consumed by them was nine bushels each. — *Sussex (English) Express.*

We have often wondered that no account is made of this valuable root. All the world is alive to the value of the carrot, while this esculent is entirely overlooked. That the parsnip contains more saccharine matter than the carrot, or even any of the beets, we are satisfied. A very excellent wine is made of it, which we venture to assert cannot be made from any other of the whole root crop. Its estimation, as an edible for the table, also tells in its favor. And a herd of hogs, turned into a field containing bagas, beets, carrots, and parsnips, would not be long in settling the question which they like the best; and as they cannot read the *Genesee Farmer*, and are not influenced by any of our blundering theories, and trust alone to experience, and that unerring guide, instinct, in the place of reason, we are disposed to give them the credit of being very capable judges — very. — *Genesee Farmer.*

For the New England Farmer.

HAYING.

Mr. Cole: The weather is fine for haying, and we farmers are improving the time, as we think, to the best advantage. The question is often asked, What is the best method to cure hay? Some think it best to expose it to the sun until it is perfectly dry. I think it best to cut and cock it the same day, and cure it in the cock. This is preferable, as it is less work, and the hay is heavier. The crop is unusually large this season, in this vicinity.

A PRACTICAL FARMER.

Amesbury, *July* 15, 1850.

Remarks. — Hay is better for being put in cocks after partially cured; and this mode protects it from the dew. It may be opened to the air a short time, to finish drying. When opened in the usual way, but a small part of the hay is exposed to the sun, and that only a short time, as the most of it dries from exposure to the air and winds. Hay, like herbs, is injured by much exposure to the sun; and when it is nearly dry, it should be raked up immediately. The sweet fragrance wafted from the field of drying hay upon the gentle breeze, tells plainly that the fine aroma is given to the winds.

FINE TURNIPS.

Mr. Samuel Pierce, of Malden, has for many years generally raised large and fine crops of early turnips; so that he has acquired a high reputation for this crop. This season, he has the largest and finest crop of turnips of any one in this section. We have seen many loads which he has brought to market, and they have been remarkably fair and smooth. For days and days in succession, he has brought in 500 or 600 bunches, and one day last week he brought in 1000 bunches, which sold, on an average, at 87½ cents per dozen; a nice little sum for one day's product of a crop that continues long in succession.

MASS. HORTICULTURAL SOCIETY.

This association has exhibitions every Saturday, which are open to the public, without charge, from 12 to 2 o'clock. These shows are very interesting. Of late there have been fine displays of flowers; and the smaller fruits also make a prominent part of the exhibition. There is usually on the tables a variety of fruits from the hothouse. Those who exhibit fruits should have them arranged by 12 o'clock, and they are requested to let them remain until 2 o'clock.

Some years ago the weekly exhibitions of this society were free to the public, but since they have been held at the society's new hall, pay has been required of visitors, until this season. We have ever regarded the rule requiring pay of visitors to the weekly shows as a narrow policy, that would defeat its object, and have an unfavorable influence; and we are pleased that this rule is abandoned. Throw open the doors to the public weekly, and it will call in many an exhibiter, who does not wish to be charged for going to see an exhibition partially his own, nor beg the privilege of a free pass; and when comes the annual or semiannual show, there will be a large attendance. The public will be liberal in return

CHARCOAL FOR ROADS.

We had an opportunity last week of passing over a portion of the charcoal road between this place and Oconomowoc.

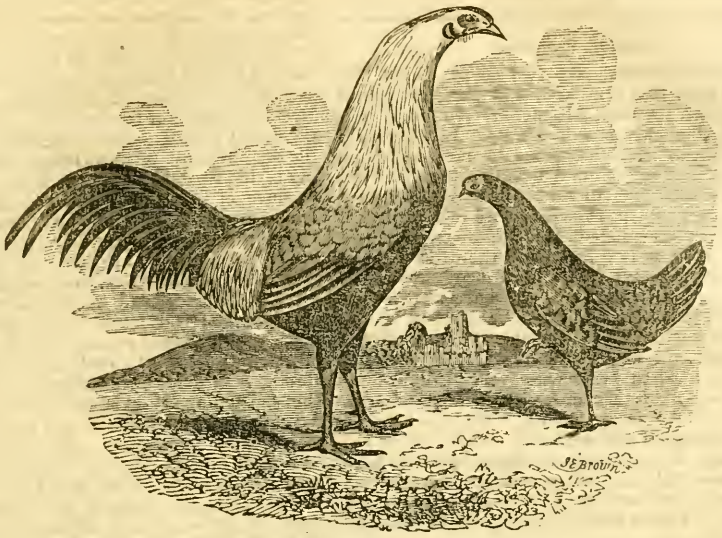
The road is now being built by chopping the wood four feet in length, and stacking it in the centre of the road bed, to the width of about six feet. It is then covered with dirt and straw, and fired in the usual manner. At first, the timber was cut into logging lengths, rolled and piled in the centre of the road. This manner of operation has not proved satisfactory, the larger timber not charring with sufficient facility to produce the necessary quantity of coal, and has therefore been abandoned for the mode of operations above mentioned.

It is found that three cords of wood to the rod is sufficient to cover the road to the requisite thickness. After the wood is well charred, the pit is opened, and the coal is raked towards the sides of the road, leaving it eighteen inches in the centre, and twelve at the sides. The road thus formed soon settles into a compact bed. The piece of finished road that we saw had not been travelled much, but it was hard and solid, and left little impression of hoof-marks. The recent rains have had a tendency to increase its compactness, while it is left entirely dry. If these roads wear as well as we have every reason to expect, in our opinion, coal will prove to be the best material known for the construction of substantial and durable roads. The contractor has nearly sufficient wood cut for the completion of three miles, and calculates to have it all ready for burning by the first of July. — *Watertown Register.*

Wheat. — The Rochester (N. Y.) Daily American is informed by Mr. John Park, of Gates, that the heads of wheat this year contain about twenty-five per cent. more kernels than the usual average.

GREAT YIELD OF HAY.

One of the handsomest residences, with one of the best, if not the best mowing lot in this state connected with it, is owned by H. W. Clapp, Esq., of this town. It is at the east end of Main Street, fronting on Main, Franklin, Church, and High Streets. It was accurately surveyed in 1845, by Osias Roberts, Esq., and found to contain eight acres and one hundred and fourteen rods. The buildings, pleasure grounds, and garden, occupy one acre and fourteen rods, leaving in the mowing lot seven acres and one hundred rods. On Monday last, Mr. Clapp, with a large number of men, commenced cutting the grass on the mowing lot, and cut and housed it all last week, in beautiful order. On weighing the hay, the product of the seven acres and one hundred rods was found to be, *twenty-nine tons, four hundred and ninety-seven pounds; or over four tons to the acre.* If there is another lot in the state that will produce the same amount of hay, we should like to hear of it. The hay was all of the best quality. — *Greenfield Gazette and Courier.*



SUMATRA GAME FOWLS.

For the New England Farmer.

Mr. Cole: Herewith you have the portraits of the above-named fowls, engraved, by Mr. S. E. Brown, No. 50 Cornhill, from a drawing made by him of a pair in possession of Mr. John Fussell, Jamaica Plain, Mass.

The progenitors of this race of fowls were, several years since, brought from the Island of Sumatra. The utmost care has been used to prevent the possibility of a cross in this stock.

This breed of game fowls is, in my opinion, equal, if not superior, to any other in the New England States. The hens are good sitters and nurses, and, for the size of the fowls, produce large eggs. The cocks have a brilliant plumage, and the hackles on the neck are very long and full-feathered, making a "perfect shawl." The body is round and plump; the neck is long and powerful; the breast full; the wings are long, and cover the thighs. The beak is hooked and stout. The thighs are large and sinewy, and well set to the body; the legs are dark-colored and long; and the claws are strong, and, with the legs, exhibit great muscular power. The belly is compact, so as not to interfere with the agility of the fowls, which they possess to a remarkable degree. The tail is very long, and by its beauty adds much to the appearance of these birds. The chickens are easily reared, and bear the climate of New England as well as those produced by any other stock.

The flesh of the game fowl is considered by all persons who have eaten it as equal, if not superior, to that of other breeds, and, for the size of the fowl, there is less offal than in any other.

For the incubation of eggs of rare and valuable breeds of fowls, game hens are to be preferred to all others. Amateurs and fanciers will find it much to their advantage to employ game hens as incubators of the eggs of the different breeds of Bantam fowls, as they are not so heavy or so clumsy as to break the eggs, and at the same time are most careful mothers, rarely or never injuring their chicks by their impetuosity, as hens of other breeds sometimes do. Game hens will most fearlessly attack cats and dogs in defence of their chicks; and I have known instances where full-grown rats have been killed by them.

Many persons are deterred from keeping game fowls by the reputation the cocks have acquired, unjustly I think, of being quarrelsome. The true bred game cock is not, my experience teaches me, quarrelsome or vindictive. He resents the interference of any cock with his vested rights and privileges, and requires an instantaneous apology for an insult, and, if his antagonist demurs, a battle is commenced without the least delay. If the opposing cock retreats, the true game does not follow, but with a loud, exulting, and derisive crow expresses his triumph; but when game meets game, death to one or both is inevitable, as true game "never retreats." This often occurs at the first flirt. I have known an instance where both cocks were instantly killed by a "brain stroke."

For the rearing of chickens a constant and regular supply of small grains is required. The best kind is wheat, being preferable to barley or buckwheat. Indian corn, of course, is not to be used, on account of its great size. I do not approve of giving to chicks any moist food, particularly Indian meal, as it will ferment in a short time and become sour. Chicks should not be compelled to fast. Their crops are small, and the power of digestion is so great that, if the food is not constantly within their reach, they are soon exhausted by the growth of feathers and bone, lose their strength, and death is the result. I have used the "screenings" of wheat for feeding chicks, and find them quite as good as wheat, although costing much less. Wheat screenings of superior quality can be procured of Earle & Thornton, No. 1 Railroad Avenue, Commercial Street.

Yours, &c.

S. BRADFORD MORSE, Jr.

To destroy Blue Flag. — A correspondent, of Pawtucket, R. I., in reply to an inquiry as to the best method of killing blue flag, recommends covering the flag four to six inches deep in common sand; then add a small quantity of manure mixed with loam. The grass will increase, and the flags disappear.

Domestic Department.

CHEESE MAKING.

I milk four cows and make two curds. I run the milk up as soon as it is milked, and put just rennet enough to fetch the milk; if there is too much it is apt to give the cheese a bad taste. Let the milk stand one hour after it has come to curd, and then cross it off about an inch and a half square, and let it stand until it begins to settle; then dip it into a cloth to drain, and stir the cloth once in a while till it is quite dry; then slice it into scalding water, and let it stand until it is quite cool; then I keep it in cold water till the next day, when I make my cheese. Then put it into warm water till warmed through, then let both the curds get almost cold before breaking. I break it with my hands quite fine, and squeeze it as dry as I can with my hands before putting it into the hoop. Then press with very little weight for three hours, then turn and put on more weight. Let it press till the next morning, then turn it into a dry cloth, and rub it well with salt, and put on all the weight I can. Turn it again at night, and rub with salt, and press till the next morning. Take it from the press and rub it with pork fat, and set it in a cool place to dry. I use a teacup full of ground rock salt for a peck of cheese.

MARY M. MACOMBER, *Hanson.*

The milk is set warm from the cow, and when turned to curd and slowly and thoroughly drained, sliced into water as warm as you can bear your hand in it. When cold it is placed in a cloth for draining, and drenched with cold water; and when well drained, placed in an earthen vessel of cold water in the cellar till the next day, when another curd is made in the same way, which, while scalding the first, is laid in upon it, when both are drained off together, and drenched as before. When dry, it is made fine and the salt well stirred in, and to twenty-five pounds of cheese add five ounces of salt, and it is ready for pressing. When it has pressed twenty-four hours, it is taken out and covered with thin cloth, snugly sewed at the edges, and put back for another day's pressing; when done, it is rubbed over with lard or fish butter, and turned daily till ripe. The cloth protects it from the flies and mould, stays it while the rind is tender, and prevents it from sticking to the shelf; and it is not a quarter the work to tend cheese made in this way as without covering. A free use of cold water in drenching the curd, removes all wheyey substances, which tend to rancidity, and much less salt is necessary; consequently the cheese is softer, especially when lightly scalded.

ELIZABETH HAYWARD, *Plympton.*

My method of making cheese is as follows: I strain my night's milk into a tin kettle, which I use to warm it in. In the morning I take off the cream that rises during the night, and add warm milk to it, stirring until it mixes. I then put it into the kettle, and while warming, stir it all together until it is as warm as when first milked from the cow. I then put in my morning's milk, and a sufficient quantity of rennet to curdle the milk in a short time. After separating the curd from the whey, I hang it in a cool place till the next day. I then put warm whey to it, and let it remain until I have scalded my second curd; I then put it together, and drain it till it is quite cool before I chop and salt it. I use ground rock salt.

ANNIE W. WOOD, *Bridgewater.*

-- Plymouth Co. Agricultural Transactions.

WHY WOMEN ARE UNHEALTHY. — Many of the physical evils — the want of vigor, the inaction of the system, the languor and hysterical affections — which are so prevalent among the delicate young women of the present day, may be traced to a want of well-trained mental power and well-exercised self-control, and to an absence of fixed habits of employment. Real cultivation of the intellect — earnest exercise of the moral powers — the enlargement of the mind by the acquirement of knowledge, and the strengthening of its capabilities for effort, for firmness, for endurance of inevitable evils, and for energy in combating such as they may overcome, are the ends which education has to attain; else weakness but becomes infirmity. The power of the mind over the body is immense. Let that power be called forth; let it be trained and exercised, and vigor both of mind and of body will be the result. There is a homely, unpolished saying, that it is better to wear out than to rust out; rust consumes faster than use. Better, a million times better, to work hard even to the shortening of existence, than to sleep and eat away this precious gift of life, giving no other cognizance of its possession. By work or industry, of whatever kind it may be, we give a practical knowledge of the value of life, of its high intentions, of its manifold duties. Earnest, active industry is a living hymn of praise, a never-failing source of happiness; it is obedience, for it is God's great law for moral existence. — *The Physical Training of Girls at School, by Madam de Wah.*

Youth's Department.

COUNSELS FOR THE YOUNG. — Never be cast down by trifles. If a spider break his thread twenty times, twenty times will he mend it again. Make up your minds to do a thing, and you will do it. Fear not, if a trouble comes upon you; keep up your spirits, though the day be a dark one.

Mind what you run after! Never be content with a bubble that will burst, or firewood that will end in smoke and darkness. Get that which you can keep, and which is worth keeping.

Fight hard against a hasty temper. Anger will come, but resist it strongly. A spark may set a house on fire. A fit of passion may give you cause to mourn all the days of your life. Never revenge an injury.

If you have an enemy, act kindly to him, and make him your friend. You may not win him over at once, but try again. Let one kindness be followed by another, till you have compassed your end. By little and little, great things are completed; and so repeated kindness will soften the heart of stone.

Whatever you do, do it willingly. A boy that is whipped to school never learns his lessons well. A man that is compelled to work, cares not how badly it is performed. He that pulls off his coat cheerfully, strips up his sleeves in earnest, and sings while he works, is the man for me.

Evil thoughts are worse enemies than lions and tigers; for we can keep out of the way of wild beasts, but bad thoughts win their way every where. The cup that is full will hold no more; keep your heads and hearts full of good thoughts, that bad thoughts may find no room to enter. — *Selected.*

A good farmer is generally a true friend, an affectionate husband, an excellent parent, and an honest man; and it is an established axiom that a *well-tilled field* denotes not only care and industry, but the supervision of an enlightened mind.

Health Department.

Importance of Flannel. — The following extract, from Robertson, on Diet and Regimen, should not be overlooked by emigrants to California: —

"Sir George Ballingal, in his lectures on military surgery, adduces the testimony of Sir James Maeriger to the statement that, in the Peninsula, the best clothed regiments were generally the most healthy; adding that, when in India, he witnessed a remarkable proof of the usefulness of flannel in checking the most aggravated form of dysentery, in the second battalion of the Royals. Capt. Murray told Dr. Combe that he was strongly impressed, from former experience, with a sense of efficacy of the protection afforded by the constant use of flannel next the skin; that when, on his arrival in England in December, 1823, after two years' service amid icebergs on the coast of Labrador, and the ship was ordered to sail immediately for the West Indies, he ordered the purser to draw two flannel shirts and pairs of drawers for each man, and instituted a regular daily inspection, to see that they were worn. The precautions were attended with the happiest results. He proceeded to his station with a crew of one hundred and fifty men; visited almost every island in the West Indies, and many of the ports of the Gulf of Mexico; and notwithstanding the sudden transition from extreme climates, returned to England without the loss of a single man, or having any sick on board on his arrival. It would be going too far to ascribe this excellent state of health solely to the use of flannel, but there can be little doubt that the latter was an important element in Capt. Murray's success."

Mechanics' Department, Arts, &c.

Sun-dried Brick Houses. — A correspondent of the Artisan thus describes the construction of a house of this description recently erected in Smithtown, Long Island: —

The house that I have erected, I can assure you, is most substantial and warm. The walls are nine inches thick. The material of which they are built is rather novel to many, as they are built of unburnt brick, nine by twelve inches, and five inches thick. They were formed in moulds; the earth of which they were made, was dug from my cellar and foundations. The earth thus dug up, after being properly tempered, was put into strong moulds, and then pressed with a powerful lever press, and then turned off into the sun to dry. They are called *pies*, or sun-dried brick.

My main building is twenty-three by twenty-six feet, and twelve feet high. The kitchen is sixteen by twenty-three feet, and nine feet high. The height here set down is taken from the top of the first tier of beams. I dug my foundations two feet deep, and rammed the bottom, then filled in, and rammed, as I filled in, *cobble* stones the size of a walnut, or less, until the trench was full. Then I built hard-burned brick, one foot high, on which I laid my first tier of beams, and there commenced my pies wall. It took about five thousand pies of sun-dried bricks to build the said house. Had I commenced to build earlier in the season, I should have made all my partition walls of the same material; but as it was, my dividing walls I have made in the usual manner. I finished the outside first with a scratch coat of lime and sand, over which I put a light coat of cement, which makes the walls impervious to water or damp.

I plastered upon the wall, inside and out, without lathing. The plaster sets remarkably quick and hard. The whole expense of mason work, from foundation to garret, for laying up the walls, building up a cellar six feet in diameter, and three stacks of chimneys, lathing and plastering inside and out, was seventy dollars. There are ten rooms. I could now make brick enough for such a house for, I think, *thirty-five* or *forty dollars*. The question will, no doubt, be, as it has been already often asked, Will it stand the frost? Last fall I could only say we will *see;* but now I say, if it stood through last winter like a rock in the sea, against which the waves have been lashing for ages without effect, so I say of my walls; if the hard, pelting rains of the past winter, and which were often succeeded by hard frosts, did not affect my house, I think I can risk it in perfect safety for all time to come.

It will easily be perceived, by what I have written, that there is a great economy in building walls with this material. J. FISHER.

Smithtown, *April*, 1850.

Glass Water Pipes. — We are glad to know that glass tubes are now coming into a very general use for conveying water. Mr. Wm. T. De Golyer, of Schenectady, N. Y., has a patent for making tubes of such a form as to couple different lengths together, and form glass conductors for water, of any length. About 1000 rods of glass pipes of different diameters have already been laid down, and Mr. John Matthews, of First Avenue, this city, has tested the strength of a pipe one and one quarter inch in diameter, made at the Albany Glass Works, (Mr. Mayer, 139 Front Street, New York, is agent,) and found it capable of standing a pressure of two hundred pounds to the square inch, or a column of water four hundred and fifty feet high. Mr. Wilson, of Hastings, a few miles out of the city, has connected these glass tubes with an hydraulic ram, to stand a pressure of eighty feet high. After the joints were cemented only four days, the water was let on, and the joints were found perfectly tight. It is well known that glass is anti-corrosive, and resists all action of the elements of air and every kind of water: it is therefore indestructible, and when kept from the action of frost, it may be considered as enduring as the everlasting hills By them water is conveyed in all its purity from the fountain, as the interior is too smooth to allow any weeds or vegetable formations to adhere to it. We do not know the price for laying down different sizes of pipe, (although they are very cheap,) but Mr. De Golyer or Mr. Mayer will no doubt promptly furnish all necessary information on the subject, if letters are addressed to them, post paid. — *Scientific American.*

GRASS LANDS. — THE ADVANTAGES OF RE-SEEDING.

The difference between crops of grass on old meadows and pastures, and those which have been lately seeded, is so obvious as to attract the attention not only of every farmer, but of every person who has an opportunity of making the comparison. This difference may not be quite so apparent this year in New York, where there have been abundant rains, and where report says that grass looks finely; but in the west, where we have been travelling for several weeks past, there has been abundant opportunity to make the comparison between the two systems. The severe and protracted drought, which has for several weeks prevailed every where in the west, from Buffalo to the Mississippi River, (which has now fortunately been relieved by abundant rains,) has been a severe trial to the old meadows and pastures, many

of which will in consequence produce very limited crops. This is ever the case in dry seasons, except perhaps on peculiar soils or meadows subject to the overflow of streams.

How different the case with newly-seeded fields, and especially where plenty of clover has been sown! The vigor of the growing crops, the deep green color which it presents, even in the most trying seasons, and especially the abundant yield which it affords, are all convincing proofs of the benefits to be derived from the frequent breaking up and re-seeding of grass lands. We are aware that there is much diversity of opinion among farmers, as to how far this practice should be carried, and on what soils it is to be practised; but we think that those who have looked carefully to the product of old and newly seeded fields for a term of years, will agree with us that it is far too frequently neglected.

Some soils, such as river bottoms and lands subject to overflow, and possibly others, under peculiar circumstances may profitably remain permanently in grass. With those who advocate such a practice we are not disposed to debate the question. They are frequently, though perhaps not always, right. Other lands, well adapted to grass, if well seeded, may profitably be suffered to remain many years without disturbing the sod, especially if care is taken to give them an occasional top-dressing with manure — ashes, plaster, or some other fertilizer. The practice is more admissible if the soil, as is often the case, is hard to cultivate, stony, and difficult to secure an even surface by the removal of stones, &c. In such cases perhaps a slight diminution of crop, or an increased outlay for manure, can be submitted to, rather than go to the trouble and expense of breaking and re-seeding. We doubt, however, whether the practice has not obtained of continuing even such lands too long in grass.

Another class of lands well adapted to grass, but at the same time easy of tillage, are frequently continued in meadow or pasture long after they have ceased to produce a bountiful crop, and when the owner's interest would be much better consulted by a judicious rotation. As a general rule, lands which, at first seeding, will produce two tons of hay per acre, degenerate in a few years to half that quantity — when, by breaking up and taking off one hoed crop, and one of small grains, both of which will afford a profit, the land may be seeded anew and produce as well as at first. The occupant of such lands is too apt to have a short supply of both straw and grain, and especially of roots, for his stock, when the course we have recommended would afford him just the supply he needs, and enable him to keep far more stock, even were his grass crop no better, which we are not at all prepared to admit.

But the lands which suffer most for want of frequent breaking up and re-seeding, are the dry, gravelly, or sandy soils, which, although they produce good crops of grass for two or three years when first seeded, soon "run out," and cease to give that bountiful return which a judicious system may secure. Such lands are generally well suited to the growing of grain of some kind, and frequently peculiarly calculated for a rotation of the various crops in connection with clover and timothy. It is this class of soils which demands the adoption of the system of rotation which we have suggested, and which is now so successfully practised by many farmers in all sections of the country. A rotation embracing four or six crops, of which two or three shall be grain and three or four grass, will secure at all times good grass crops, and at the same time enable the soil to recover from the exhaustion of the grain crops before it is again appropriated to such purposes. We will not now submit any plan of rotation, but every farmer can judge for himself what system is best suited to his soil and circumstances. Our object will have been gained, if we succeed in fixing the subject in the minds of those farmers whose grass crops are this year suffering so severely, and induce them to look for the remedy, in future, to a more systematic and well-digested rotation of crops, and especially to the proper seeding down to grass of their lands intended for that crop. The quantity and kind of seed is a subject of importance, and one which may well afford a text for a separate article. — *Rural New-Yorker.*

ON THE DIGNITY OF LABOR.

(*From a Speech of the Bishop of Oxford, at the Westminster Meeting in Aid of the Exhibition of the Works of Industry of all Nations, to be held in* 1851.)

I believe that the tendency of this exhibition is to benefit the working classes. I am not one of those who have any secret misgivings as to there existing any intestine warfare between Christianity and science or manufactures. I know that there are men upon whose excellence it would be needless for me to enlarge who do entertain such apprehensions. In the quiet of their learned study, conversing with times that are gone by, they are startled by the din of the busy age, as it rises through their windows. They listen with apprehension and dislike to the voice of the age in which their lot has been cast, and they call it a mechanical age, and find with it other such like faults. Now, I do not sympathize with their opinions. I deny, and hold it as unworthy of Christianity to suppose, that there can be any opposition whatever between the fullest development of those faculties with which Almighty God has furnished man, and that Christian faith which is to train those faculties to their highest ends. When from these abstract considerations I turn to the actual world around me, and survey these mechanical inventions, I see in many instances beneficence marking these very mechanical improvements, and they have a direct tendency to ameliorate the condition of the lower classes of the people, and to bring within their reach advantages which were before restricted to the richer grades of society. And then, moreover, whether we regard the results of mechanical science or the products of art, I think we shall be convinced that there is a connection between perfection in these and the faith of Christianity. As an historical fact, it is plain that there never was a country or a time which could long maintain preëminence in art or science divorced from Christianity. I believe that the history of all countries will show this.

Look for a moment at the Chinese. We find that nation, so eminently gifted with those special faculties which would naturally make them superior in all the mimetic arts, in a state of perpetual stagnation, having lost even the power of using the inventions of former ages. And this is so because they want the spring which Christianity alone can give to set all their faculties in exercise, and to develop them to their highest standard of perfection. I think it, therefore, my part, holding the place which I do in the Christian church, to come forward, not with any secret misgivings; not with any cold, injurious doubts or hesitations; but heartily, and I may say, rejoicingly, not in spite of my Christianity, to aid according to my powers in the development of science and the mechanical arts. This it is my firm belief that it is my duty to do, and I feel that I am on my right ground when I stand here and address these observations to you. But I feel, moreover, that it is possible a nation may be too much occupied with the works of art, and with the triumphs of science; and that in attending too exclusively to these, it may lose that eternal flow of life, without which all external devel-

opments are worse than useless. I see, or think I see, that the proper attribute of Christianity, and of a Christian teacher, is, that they should mingle in works like these; and that, in doing so, they should try to call attention to the wants and the necessities of the producers of these works, and to remind the nation that, after all, man is greater than his works, and the workman superior to his fabric. So this exhibition calls attention to the dignity of labor; it sets forth in its true light the dignity of the working classes; and it tends to make the other people feel the dignity which attaches to the producers of these things.

THE ENGLISH RACE-HORSE.

The English race-horse boasts of a pure descent from the Arabian, and under whatever denomination the original stock of our thorough-bred horses have been imported, namely, as Turks, Barbs, or royal mares, there can be no doubt they were selected by the patrons of the turf, and by their agents, during the reigns of James I., the two Charleses, James II., and the commonwealth; and whether they were brought from Barbary, Turkey, or the continent of Europe, they were considered as the true sons and daughters of the desert. The first Arabian ever seen in England was imported by Mr. Markham, in the reign of James I., and the first foreign mares of any note were brought over by the agents of Charles II., under the denomination of royal mares. The change of climate, the pasture, and extreme care and attention in breeding by the best stallions, (and never forgetting the maxim that "From the brave descend the brave,") have wonderfully increased their size, their strength, and their powers of endurance; and it is generally believed, by the most learned men of the turf, that a first-class English race-horse would give eighty-four pounds to the best Arabian which can be found, for any distance under ten miles. In 1828, a match was made at Calcutta between the English horse Recruit, carrying one hundred and forty-eight pounds, and the best Arab at the time in India, Pyramus, carrying one hundred and fifteen pounds, two miles. Recruit had been a very short time in India, and had tender feet, which disabled him from taking strong work, notwithstanding which, he won in a trot.

The clearest proof of the improvement which has taken place in the English race-horse, is the fact that no first nor second cross from the imported Arab, with the exception of the produce of one mare by the Wellesley Arabian, (Fair Ellen,) is good enough to win a fifty-pound plate in the present day; whereas, in 1740, our best horses were the second and third crosses from the original stock; and we have no reason to assume that the Arabian horse of 1850 has degenerated from his ancestor of 1730. The most distinguished progenitors of the English race-horse are the Byerly Turk, the Darley Arabian, Curwen's bay Barb, and the Godolphin Arabian; and no horse of any eminence has appeared in England, in the last hundred years, which does not inherit their blood. Of the two former, we know very little; they were the sires of Basto, and of Flying Childers; but the blood of the Godolphin Arabian is in every great stable in England. He was a thick-necked, heavy-shouldered, over-topped horse, without apparently a single good point adapted to racing qualifications. Goldfinder and Eclipse, both foaled in 1764, were considered the most extraordinary horses in the last century — Sir C. Bunbury always asserted that Goldfinder was the best horse. The celebrity of Eclipse, as a stallion, has contributed to his fame far more than his public running, which only lasted two years. Horses of this era were rarely put into training before they were three years old; some never appeared until they were five years old; and all the great matches and sweepstakes were made for long distances, four, six, and eight miles. Many writers have, therefore, imagined that the horses, in olden times, were more adapted to stay a distance, than our present breeds; but it does not follow, because it was the fashion to run long distances in 1750, that the horses of that day had greater powers of endurance. Heavy weights and long courses were in vogue, because it was the custom for owners and amateurs to ride in the last half mile with the leading horses; a feat not very difficult of attainment, considering that the race-horses had run four miles before they joined the party. Our experience teaches us that the first cross from the Arab frequently show speed; but there are very few instances of the first or second cross which can run beyond the distance of one mile in good company. I, therefore, suspect that the form of the best race-horse of 1750 is inferior to that of a common plater of the present day.

It is computed that there are upwards of two hundred thorough-bred stallions, and one thousand one hundred brood mares, which produce about eight hundred and thirty foals annually; of these are generally three in the first class of race-horses, seven in second class; and they descend gradually in the scale to the amount of four hundred and eighty, one half of which never catch the judge's eye; the remainder are either not trained or are found unworthy at an early period.

Referring again to shape and condition, a good judge may be deceived as to the individual condition of a particular horse. There are horses which run best apparently lusty, and others are only up to the mark when they carry no flesh, and with very slight muscular developments. There are very few horses which require the same work, the same food, and the same physic. Thick-winded horses, with strong constitutions, may be sweated every five days during their preparation, and will take three times as much work as some delicate mares and geldings, of which there are many that never want a sweat. One horse cannot gallop when the ground is deep; another, with thin feet, cannot move if the ground is hard; and a heavy fall of rain will upset scientific calculations. Mares seldom run in their best form before the month of August; and geldings are considered to be best in the spring. — *Rous.*

SEX OF EGGS.

During the last summer, says a correspondent of the Plough, Loom, and Anvil, I wanted to raise a stock of poultry from a favorite hen and cock. They were of the black-breasted red game breed. The cock was purely bred, but the hen was a little crossed. The eggs she laid were of a deep buff color, and as she was the only hen I had which laid yellow eggs, they were easily collected. When I had twenty-six eggs, I put thirteen of the largest under a brood hen to be hatched; one egg got broken, and the other twelve had chickens in them; one, however, died in the shell, and so the number was reduced to eleven. Of these, one died before I could ascertain its sex; of the ten remaining, eight were cocks and two were pullets. The thirteen smaller eggs I also put under a brood hen, and she hatched me ten chickens. Of these, eight were pullets and two were cocks. There is no difference in the shape of the eggs laid by the same hen; in size they vary but little. I observe this peculiarity, that although the hen had yellow legs and the cock black, yet, throughout four broods, which I have had from the same hen and cock this summer, every yellow-legged chicken has proved a cock, and every black-legged one a pullet.

MEDICINAL QUALITIES OF THE GRAPE.

The New York Commercial, in an article on the grape, says this fruit is one of the best and most wholesome medicines. This affords an additional inducement for the culture of this popular fruit. The Commercial says, —

"In the vineyard districts of France, Spain, and other vine-growing countries, the medicinal properties of the grape are well known and highly prized. The free use of this fruit, as we are advised, has a most salutary effect upon the animal system, diluting the blood, removing obstructions in the liver, kidneys, spleen, and other important organs, giving a healthy tone and vigor to the circulation, and generally augmenting the strength of the entire animal economy. In diseases of the liver, and especially in that monster compound affliction, dyspepsia, the salutary and potent influence of a 'grape diet' is well known in France. The inhabitants of the vineyard districts are never afflicted with these diseases; which fact, however, alone would not be conclusive evidence of the medicinal qualities of the fruit of which they freely partake, since peasant life is rarely marred with this class of ailments; but hundreds who are thus afflicted yearly, resort to the vineyard districts for what is known as the 'grape cure,' and the result proves to be a cure, except in very long, protracted, and inveterate cases, which are beyond the reach of medicinal remedies. The invigorating influence of the ripe grape, freely eaten, upon the feeble and debilitated, is very apparent, supplying vigor and the rose hue of health in the stead of weakness and pallor, and this by its diluting property, which enables the blood to circulate in the remoter vessels of the skin, which before received only the serous or watery particles.

"In these remarks, however, we must be understood as speaking of the fruit when perfectly ripe. Unripe grapes, like all unripe fruits, are detrimental to health, and derange the digestive organs, and those depending upon, and sympathizing with them."

IMPROVEMENT OF DOMESTIC ANIMALS.

Few are aware how susceptible of improvement is the living machinery which elaborates *milk* for nearly every family in the Union. There is a reliable account in this report, of a dairy of forty-one cows kept in the state of New York, which yields sixty-two dollars in butter, cheese, and milk, as the product of each cow a year. From the returns of the last state census, it is safe to say that 1,100,000 cows are now milked in that state, which are supposed to yield about twenty dollars per head. To improve these up to an average annual product of thirty-one dollars each, (that is, to one half what the best large dairies in the country now yield,) would add $12,100,000 to the income of the citizens of a single state. This gain by the improvement of one kind of rural machinery would be equivalent to creating a capital of $200,000,000, and placing the money where it would yield over six per cent. interest in perpetuity. If the thirty millions of sheep in the United States gave as good returns in wool for the food consumed as the best 100,000 now do, it would add at least 60,000,000 pounds to the annual clip of this important staple.

In one of his letters to Sir John Sinclair, General Washington says, in substance, "that at the time he entered the public service in the war of the revolution, his flock (about 1000) clipped five pounds of wool per fleece. Seven years after, when he returned to his estate, his flock had so degenerated that it gave an average of only two and a half pounds per head, which was the common yield of Virginia sheep then, as it is now."

Although the numerous importations of superior sheep, cattle, horses, and swine, have greatly benefited the country, it must be admitted that much has been lost by suffering improved animals to deteriorate. Every wool-grower should ponder well this fact. If two and a half pounds of wool will pay the whole cost of keeping a sheep a year, five pounds will pay one hundred per cent. profit on that cost. Washington was eminently a "book-farmer," and was anxious to gain knowledge from the educated agriculturists of Europe and his own country. His overseer believed in keeping sheep as his father did, and was opposed to all innovations in husbandry.

There are now not far from 6,000,000 horses and mules in the United States; and it is not too much to say that, in a few generations, these animals may be improved full thirty dollars a head, on an average. If so, the gain by this increase of muscular power, and its greater durability, will be $180,000,000. If we study critically the machinery for converting grass, roots, and grain, into beef and pork, the difference is found to be still more striking. If the facts relating to this subject were spread before the people, great improvement would soon follow, and all classes share equally in the profits of more productive labor. — *Patent Office Report for* 1849.

ATTACHMENT TO A PLOUGH FOR TURNING UNDER GREEN CROPS, &c.

I will describe to you a fixture which I use for turning under clover, peas, weeds, &c., which I think preferable to a roller or an ox-chain attached to a swingletree. Saw off a block from some hard, durable, and heavy wood, say about ten inches long, and three and a half or four inches in diameter; then take a piece of trace-chain, about three feet long, confine one end to the block by driving a small staple in the end, having first passed the staple through an end link of the chain. Point the other end of the block, and attach a larger chain in the same manner to that. Tie the short chain (attached to the square end of the block) to the rod which passes through the mould-board and beam of the plough, by wrapping it around (the beam) at that place; drop the block in the bottom of a furrow which has been already opened, (of course on the mould-board side,) draw up the long chain, and attach that to the clevis pin or clevis; be sure that you have both chains just tight enough to permit the block to lie in the furrow below; allow no slack. The short chain gathers the clover, weeds, &c., and bends them down; the weight of the block prevents the chain from rising, and the plough laps the dirt over the weeds, whilst they are in a recumbent position. I am this day turning under weeds as high as the heads of the ploughmen, which are almost wholly concealed. H.

Nansemond County, Va.

— *American Farmer.*

Medicine for Horses. — Many seem to imagine that the constitution, physiology, and diseases of the horse are different from those of man and other animals. This is a mistake. The common diseases of the horse are similar to those of men; and the same medicines, in those diseases, are as useful to one as to the other. Some writer states that the doses should be from eight to twelve times larger when the horse is the patient. The anatomical structure of the stomach is such as to forbid his vomiting, so that an emetic should never be given.

EARLY-BEARING FRUIT-TREES.

Friend Holmes: How soon ought a tree, of suitable size for setting, to produce fruit, under ordinary circumstances? This is a question often asked, but vague and difficult to answer; still, it may be somewhat modified by the following conditions: —

1. *Varieties.* — It is well known that certain varieties of the apple, pear, plum, and cherry are dwarfish by nature, bear abundantly while quite young, and consequently they are rather short lived, but well calculated to satisfy *Yankee impatience.*

2. *Artificial Means.* — Trees which are naturally of coarse growth and lofty habits are often brought early into a bearing state, by bending the branches so as to compress the sap vessels, and prevent rapid growth, girdling, &c., or any method to check the descending sap, and cause the formation of fruit buds.

3. *By assisting Nature.* — Trees are endowed by nature with the necessary organs of fructification, and man can do much to aid in developing those organs, by furnishing them with sufficient nourishment, containing the specific food, or the elements of the tree and its fruit — by judicious pruning and training, so as to form low and open tops, and strong, vigorous branches. Where there is a disposition for a long and slender growth, the heading-down or shortening-in system is admirably calculated to induce fruitfulness.

If trees are in a vigorous condition, well trained and well set, three years from the graft or bud, they ought to produce fruit in from three to five years after setting. It is requiring too much to expect a young tree to produce a full crop of fruit, and at the same time to make rapid growth, soon after setting. We *must* dispense with one, and, if we look to the real value of the tree, it will be the former.

To those who have fruit on trees which were set last spring, I would say, Be sure and pick it off, or at least the most of it, if you look for future profit. A few days since, I observed an apple-tree, set last spring, with seventy apples growing on it. I immediately picked one half; the remainder would be quite too many to remain, under ordinary circumstances; but the tree was well set and mulched, and it is now making a fine growth.

We once had a small pear-tree, about four years from the graft, which set a very full crop of fruit, and viewing it with feelings somewhat allied to those of the parents of a precocious youth, who pride themselves with the idea of astonishing their neighbors with an *enfant prodige*, we suffered it to rally its whole physical strength in ripening the crop; but it was too much for *vegetable nature* to endure. It lingered a year or two, and then died. SIGMA.

Vassalboro'.

— *Maine Farmer.*

ON THE GOOD EFFECTS OF MULCHING.

It seems to me, that when any one has found a practice in horticulture not generally known to be of great value, he owes it to his neighbors and fellow-laborers in the cause to make it public.

I tried the value of *mulching* — i. e., covering the soil over the roots of trees with straw, litter, seaweed, or whatever else may be most convenient for retaining the moisture, keeping the earth cool, and preserving a uniform temperature — pretty extensively last year. I not only mulched newly-transplanted trees, but garden vegetables, egg plants, okra, &c. Encouraged by the good results, I covered the ground under melons with straw; and this year I am trying it with various flowering shrubs and plants.

The great advantage of mulching is unquestionably for transplanted trees. I think it may be safely said, that a tree having only one third of its original roots left, (and the top, of course, shortened back in proportion,) — such a tree as would die, nine times out of ten, with common treatment of watering, &c., — may be invariably saved by mulching. Watering the trees that have been transplanted every day or two, for a month or six weeks afterward, as I have seen many do, is a matter of no small labor and cost. It helps to kill the tree, I am satisfied; if not by the constant and violent alternations of wet and dry, which the tree suffers in this climate, then with the hardening and baking of the ground which it causes. On the other hand, the tree once planted, it can be mulched (if the materials are at hand) in five minutes; and from that time forth it demands no more attention, no carrying of water, no stirring of the ground. The ground is also kept in that state of steady moisture and coolness most favorable to the growth of new roots; and, if there is any vital power in the tree, it is sure to show itself in this way.

As to the importance of preventing the soil from parching up in the summer, especially when you are raising somewhat delicate plants, every one can see it for himself without demonstration. I have found it easy to cultivate some garden favorites in this way that gave me a good deal of trouble before I tried it. Indeed, so great is its efficacy that some German agricultural writers, as you are doubtless aware, have not hesitated to take the ground that covering the earth with a coat of straw acts more beneficially upon a crop than giving it a coat of manure of any description. Although I am not prepared to take this extreme ground, I am confident that mulching, especially to the fruit and ornamental tree-grower, is a practice of great value, and much too little understood by most persons. Yours,

A CONSTANT READER.

Dutchess County, N. Y., *May*, 1850.

Remarks. — Our correspondent is not a stronger advocate of the advantages of mulching than we are. Indeed, we have, for the sake of experiment, covered a piece of ground with straw in the German manner, in a small vineyard of about an acre in our own premises, in order to notice if there is any other value in the application than that arising from maintaining the soil in the best condition for growth. — Ed. Hort.

— *Downing's Horticulturist.*

DIVISIBILITY OF MATTER.

A remarkable instance of the divisibility of matter is seen in the dyeing of silk with cochineal, where a pound of silk, containing eight score threads to the ounce, each thread seventy-two yards long, and the whole reaching one hundred and four miles, when dyed scarlet, does not receive above a drachm additional weight; so that a drachm of the coloring matter of the cochineal is actually extended through more than one hundred miles in length; and yet this minute quantity is sufficient to give an intense color to the silk with which it is combined. — *Family Visitor.*

A Splendid Plant. — At a recent sale in England of exotics, a rhododendron arboretum (elegantinum) was exhibited, which had upwards of one hundred and fifty blossoms. The plant measured seventeen feet in circumference, was six feet in diameter, and six feet in height.

NOTICES OF PUBLICATIONS.

Horticulturist. — The July number contains a variety of valuable matter, and a beautiful engraving of a "Rural School-House." This subject should receive more attention. In building school-houses, convenience is often sacrificed to a too rigid economy, and generally, or, we might say, almost universally, no attention is paid to embellishment. This work is published by Luther Tucker, Esq., Albany, N. Y. Joseph Breck & Co., Agents, Boston.

Ohio State Fair. — A friend has handed to us a pamphlet containing a list of the premiums, and the regulations, with the names of the awarding committees of the First Annual Fair of the O. S. Board of Agriculture, to be held at Cincinnati, Sept. 11, 12, and 13. It is expected that this will be a great show, and that it will be attended by an immense assemblage of people.

Catalogue of Short-Horn Cattle, contains an account of thirty-three head of Short-Horns, owned and mostly bred by J. F. Sheafe, which will be sold at auction on the 29th day of August, at one o'clock, at High Cliff, one mile above New Hamburg, Dutchess Co., N. Y.

LOW-HEADED FRUIT-TREES.

By having low-headed fruit-trees, the sun, which is, perhaps, in our hot and dry summers, the cause of more disease and destruction in fruit-trees than all other diseases together, is kept from almost scalding the sap, as it does in long, naked trunks and limbs. The limbs and leaves of a tree should always effectually shade the trunk and keep it cool. The leaves, only, should have plenty of sun and light; they bear and profit by it. If trees were suffered to branch out low, say within one or two feet of the ground, we should hear very much less of "fire blight," "frozen sap blight," black spots, and the like. The ground is always looser, moister, and cooler, under a low-branching tree than under a high one. Grass and weeds do not grow a hundredth part so rank and readily, and mulching becomes unnecessary. The wind has not half the power to rack, and twist, and break the tree, and shake off the fruit — a matter of no inconsiderable consequence. The trees will be much longer lived, and more prolific, beautiful, and profitable. The trees are more easily rid of destructive insects, the fruit is much less damaged by falling, and the facilities for gathering it are much greater; there is less danger in climbing, and less of breaking limbs. The trees require less pruning, and scraping, and washing; and the roots are protected from the plough, which is too often made to tear and mutilate them.

IMPROVEMENT IN SUGAR REFINING.

The London Morning Herald states that an important improvement has taken place in the manufacture of sugar. It says, "By means of the now well-known patent for drying by centrifugal force, and the aid of a few simple adjuncts, sugar, which took from three to five weeks to refine, is now done in as many minutes. Incredible as this may seem, the whole process, with the result here stated, has been witnessed by our informant at the sugar-houses of Messrs. Finzel & Son, at Bristol. Moreover, sugars altogether unsalable in our markets were converted in a few minutes into an article worth about $8,48." — *Am. Artisan.*

For the New England Farmer.

REPLY TO A FRIEND, WHO ASKED, "ARE YOU AN ADMIRER OF NATURE?"

BY MRS. E. C. LOOMIS.

Yes, I love Nature! On its varying face
I gaze, and ne'er grow weary. There I trace
The hand of God, which fashioned all, and 'neath
The azure dome of heaven alone I bow
To worship Him. 'Tis June! The balmy breath
Of many flowers is round me. Roses fling
Rich odors on the soft south wind, and bend
Their graceful heads, as if to woo its sweet
Caress. The countless blossoms that look up
From grassy coverts with their starry eyes,
Are gentle messengers of love. They tell
Of one more beautiful than they. O, list
Their gentle teachings; pass not carelessly
The lowliest of them all.

Come forth with me,
And revel in the loveliness which decks
The brow of Nature. We will roam at will
O'er meads with flowery carpets. We will trace
The streamlet's course, and listen to its melody.
The birds with their sweet minstrelsy shall cheer
Our walk, and from the shadowy grass we'll pluck
The luscious berries nestling there. I'll lead
You to my favorite haunt — a blooming bower,
Where moss and violets mingle, and the sheen
Of sunlight falls, in flickering beauty, through
The boughs of never-fading green. 'Tis here
I sit and while away the summer hours,
With book or needle, or in converse sweet
With those I love. A banquet rich and rare
Doth Nature spread for me — a pure delight
To fashion's votaries unknown, amid
The pomp of city life.

Lebanon, *June* 24, 1850.

THE OLIO.

A man was brought up by a farmer, and accused of stealing some ducks. The farmer said he should know them any where, and went on to describe their peculiarity. "Why," said the counsel for the prisoner, "they can't be such very rare breed — I have some very like them in my yard." "That's very likely, sir," said the farmer; "these are not the only ducks of the sort I have had stolen lately."

The presbytery of Bethel, Pa., has resolved that marriage on the Sabbath is in violation of the fourth commandment.

Courage consists not in hazarding without a cause, but being resolutely minded in a just cause.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, AUGUST 3, 1850. NO. 16.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

THE APPLE-TREE BORER.

THIS borer, which also infests the quince, mountain ash, and various other trees, is frequently so destructive to apple-trees, that some orchardists have almost been disposed to abandon their cultivation. We hear of a great many remedies for the injury done by this insect, and of various modes of preventing their depredations, and we hope that more experiments will be made on this subject.

The grass and weeds should be kept from the tree, that the operations of the worm may be known. Ashes, lime, and other offensive substances, laid around the tree, have, in some cases, prevented the operations of the borer, but it is not infallible. Various offensive or corrosive washes may be used to advantage, but they cannot always be relied on. All these things have a good effect, and cause greater scarcity of worms.

When no plants are growing around the tree, and the earth is smooth, the operations of the borers may be seen by the dust thrown from their holes; and as they enter just under the bark the first year, they will do but little damage that season, and they may be easily destroyed, without any material injury to the trees.

But when they have operated the second year, it is not only a great deal of labor to destroy them, but the trees are seriously injured or are destroyed by them. Therefore it is important to attend to this subject in season, and make thorough examinations, and use effective means to destroy these depredators.

When the cultivator has been so negligent as to allow the borers to penetrate the tree to a considerable distance, they may be destroyed by running a piece of wire, whalebone, or other elastic substance, into their holes. Truman Clark, Esq., of Walpole, remarks that he destroys them by plugging their holes with tobacco. These worms evidently enlarge the holes where they enter, as they continue to grow larger, in order that they may have sufficient room to throw out the chips or dust which they make in their borings. The tobacco may stop their operations in this respect, or the odor of it may destroy them. It has been observed that a lighted match, put into the hole of a borer, and plugging up the hole immediately, will destroy it.

On the 310th page of our first volume, a correspondent states that he destroyed the worms that were in his trees, by putting around each tree one or two shovelfuls of wood ashes, and a covering of four inches of swamp muck over the ashes. This remained from April to August, and on removing it, the worms were destroyed, as they could not operate with this body of earth around their holes.

In our warfare against this formidable insect, we should endeavor to prevent the deposition of the eggs upon the tree, by some offensive substance, or destroy them by offensive or corrosive matters, or arrest the progress of the borers soon after they enter the tree, else they will do the work of destruction, and the killing of the borers will not repair the evil, though it may prevent their increase, or hinder the insect from escaping and propagating a litter of young depredators.

THINNING FRUIT.

Those cultivators who have not had much experience in raising fruit, neglect to thin it; consequently, their fruit is inferior, both in size and quality, and the quantity no larger. Owing to its inferiority, it sells at a much less price than it would under judicious management.

One peach-grower informed us that he had taken off two thirds of his peaches, and as they increased in size, and appeared too thick on the trees, he said that he was sorry that he had not taken off one half of the other third. One man complained to his neighbor, that a certain variety of the peach which his friend had advised him to cultivate was a poor bearer. "Stop your complaint," was the reply, "until you sell your fruit." He raised on one tree three dozen of peaches, sold them at two dollars per dozen, and was satisfied.

In many cases it is necessary to thin fruit, reducing it, sometimes, to one half the specimens, and sometimes a still greater reduction is necessary. Besides the injury to the fruit from too large a crop, the tree is also injured by exhaustion, which will

stint its growth, render it unhealthy, and cause light crops in future, particularly in the next season.

Experience in this business is necessary, for but very few persons can be taught, by precepts, the great importance of thinning fruit; so they will go on allowing too much to remain on the trees, till they gradually learn, from practice, the good effects of thinning.

WEEDS.

As soon as the haying season is over, or in dull weather, every opportunity should be improved for the destruction of weeds before they go to seed. A single stroke of the hoe will destroy a weed that would produce seed for hundreds, if neglected, which would require a long time for their destruction. How often do we see, early in the fall, a crop of weeds, fully equalling, in amount of produce, the cultivated crop! In this case, and in all cases where there is only a moderate crop of weeds, the cultivated crop is reduced in value, besides the serious injury from propagating a great pest.

Some weeds are succulent, and when dug up they may be turned to some small account by throwing them into the hog-pen. When this is not convenient, and there are many weeds, it is best to pile them into heaps, that they may decompose and form manure. When allowed to remain scattered on the ground, they become wasted in decomposing. The gases are scattered to the winds, and a small amount of almost useless fibrous matter remains. To save all the fertilizing matter of weeds, throw earth over the heaps, or bury the weeds in the soil.

SUMMER PRUNING OF GRAPE-VINES.

Grape-vines are generally poorly managed. The trimming late in fall or early in spring is insufficient; consequently by midsummer the vines become a dense mass, and then the wood and foliage are reduced in the most injudicious manner, without any regard to the peculiar nature of the plant; and in this way the crop is frequently nearly destroyed.

The main vine, or laterals, running from the fruit, should be allowed to extend until August, and generally it would better grow until the middle of that month, and then it should be only pinched off at the end, — not cut back, as many practise. Some imprudently cut back to the fruit, others almost to it, which will check the growth of the fruit, and retard or prevent its ripening. If this is done early, say in July, nature makes an effort to repair the injury by throwing out lateral branches; and this often increases the evil which it was intended to remove, as the laterals make the dense mass of vines still greater.

Let the shoots extend from the fruit in every way, and direct them separately, so as not to form a mass of vines; and when the vines are too thick, cut out branches that have no fruit on them, and lateral shoots, extending the vines far in every direction, and keeping them open to the sun; but do not remove leaves, nor place the vines in such a position as to let the sun shine on the fruit, as this injures it. Expose the leaves to the sun, and let them protect the fruit from his powerful rays.

We are sorry to say that some professional horticulturists manage grape-vines no better than the veriest novice, and the management of both is much worse than no management, or entire neglect. In numerous cases we have seen the crop ruined by cutting back close to the fruit, by those whose whole life has been passed in the garden. One gentleman has just remarked that he paid a gardener six dollars for spoiling his vines.

BUDDING.

August is the month in which the greater part of budding is done in this part of the country. Plums, cherries, and pears, that are several years old, or of moderate growth, are usually in condition for budding about the first of the month; but in some seasons these species of trees, when young and vigorous, and the season favors a late growth, will answer to bud the last of August, and even in the first week in September. Much depends on the weather, the soil, and various other circumstances that affect the growth. The middle of September is a good time to bud peaches of one season's growth. The operator must depend on his judgment as to the proper time, as it varies with seasons and other conditions.

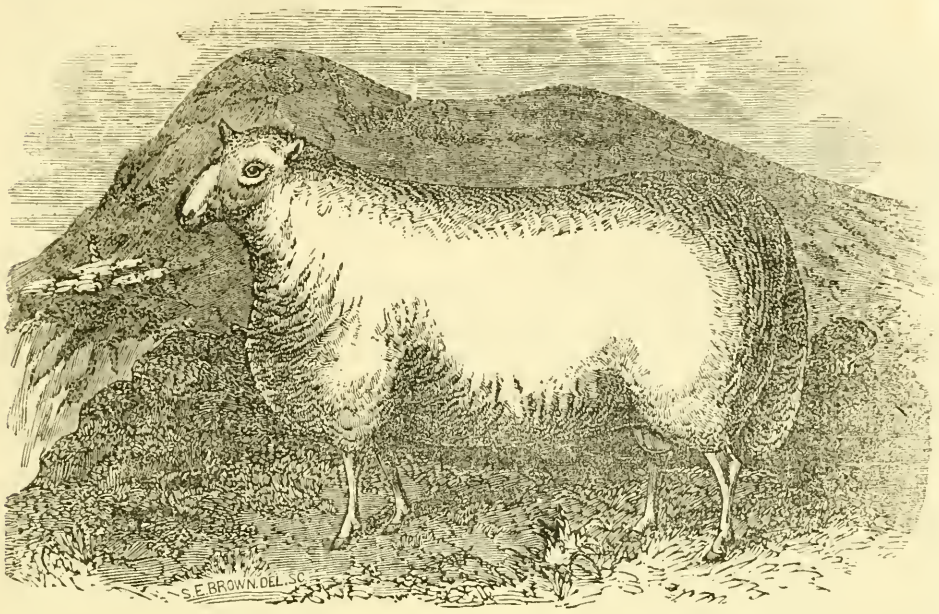
GRAIN CROP.

From numerous accounts from different sections of the country, it is evident that the crop of wheat, in most regions, will be remarkably good. In foreign countries the crops are also very good. Hence we may suppose that there will be a good supply of wheat and flour, and at moderate prices. The crops of rye and other small grain are good, or very promising. In the west the crop of wheat is unusually large, notwithstanding the very severe drought in May.

TO GUARD THE LUNGS WHILE THRESHING.

The following may be depended upon as a perfectly safe and convenient mode of guarding the lungs while threshing, as I have tested it for several years, and never knew it to fail: Take a piece of fine sponge, about two inches thick in the centre, and about four inches broad; cut out a little in the centre, so that it will fit the nose and mouth, leaving it about three fourths of an inch thick over the end of the nose and mouth; moisten it well, and squeeze it out, so as to prevent its dripping; fasten a string to the outer edge of the sponge, on each side of the face, and tie it back of the head, and one can work in a perfect smother for hours — I might say days — without any of those disagreeable sensations that are always experienced without such precaution. This will not obstruct the breath one tenth part so much as a piece of gauze will when drawn over the face. I would rather give one dollar per day for a good sponge, than to tend a threshing-machine without it. AN EXPERIENCED THRESHER.

— *American Agriculturist.*



CHEVIOT SHEEP.

The Cheviot sheep are among the most distinguished breeds in Great Britain. They are remarkable for their hardiness, and are admirably adapted to hills and mountains in cold regions; not only enduring cold and storms, but hard fare. They come to maturity rather early, and their flesh is of superior quality. Their wool is rather coarse, and used mostly for combing purposes.

This is the principal breed kept on the Cheviot Hills, an extensive elevated range, where snows and storms often prevail during the winter, and where they are supported on the grass and hay of these hills. So long have they been kept on these mountains that their origin or introduction to them cannot be distinctly traced.

The size of the Cheviot sheep is moderate, wethers averaging from twelve to eighteen pounds per quarter: the color of the face and legs is white; the countenance open; the eye lively and prominent; the ear large; the body long; and the limbs are long, which fits them for travelling, and enables them to pass over bogs and snows. The fleece is close, which protects them not only from cold, but from snow and rain.

This breed of sheep has been extended over the Highlands in Scotland, and is becoming very popular in elevated regions. They rank among the best in quality of mutton, and they fatten very readily; and though their fleeces are not fine, they are rather large and profitable.

We have no doubt that this breed of sheep is well adapted to the elevated and hilly regions and mountains in the middle and northern parts of our country, and we hope that experiments will be made to test their utility in such regions. This subject has received but little attention. Hon. Daniel Webster has some of this breed on his farm in Marshfield, and he is much pleased with their appearance. But from what we have heard of his farm, we should not think that this breed is so well adapted to it, as some of the larger breeds, that are accustomed to luxuriant herbage on flat or slightly rolling lands. They will doubtless be propagated on this farm, and distributed and fairly tested in more elevated regions.

The Cheviot breed has been crossed with the Leicester, which gives them finer forms, but the wool is longer and coarser. This cross prevails considerably in Scotland, where it is much admired, and is taking the place of the native black-faced breed of that country.

He is a public benefactor, who, by the prudent and skilful outlay of his money in bettering its condition, shall make a single field yield permanently a double crop; and he who does this over a square mile, virtually adds a square mile to the national territory — nay, he does more; he doubles, to this extent, the territorial resources of the country, without giving the state any larger actual area to defend. All hail, then, to the improvers of the soil! Health and long life be their fortune — may their hearts be light and their purses heavy — may their dreams be few and pleasant, and their sleep the sweet repose of the weary — may they see the fruits of their own labor, and may their sons reap still heavier harvests. — *Selected.*

First procure first-rate animals for your farm, and then procure good, humane, and intelligent men to take care of them.

For the New England Farmer.

INJURIOUS INSECTS.

Mr. S. W. Cole. Dear Sir: The insects, accompanying your letter of the 5th instant, were *Aphides*, or plant-lice, in several stages of growth; those with black bodies and long wings being the males and females, those like bugs and without wings being half grown; and the flakes, like mould, being the cast-skins of the young.

Various remedies have been suggested for destroying aphides on apple-trees; but I do not know any that are effectual, and, at the same time, applicable on a large scale. In a small way, as on a few young trees, the insects may be easily destroyed by syringing repeatedly with a solution of oil-soap, or dipping the infested twigs in a wide basin or pan containing this liquid. Ashes or lime may also be used with advantage, being thrown upon the twigs and leaves when wet with dew or rain. Perhaps syringing with lime-water will be found a good remedy; but experiments are wanting to test its efficacy.

As usual, we have had our full share of destructive insects during the present season. My own little place gives me some opportunity of seeing their power of doing injury, and of trying to check their ravages.

The common web-making caterpillars of the apple-tree (*Clisiocampa Americana*) have been very few in number. I have been in the habit of examining my trees when out of leaf, and taking off the ring-like clusters of eggs and destroying them, so that very few escape me; and when these are hatched in the spring, and the caterpillars begin making their webs, which are easily seen on small trees, they are searched for, and are destroyed by a single grasp.

On the other hand, the canker-worms (*Anisopteryx vernata*) have returned in great force, and have done more damage in this vicinity than at any time since the year 1840. Repeatedly, during the last three years, I have called attention to the fact of the gradual increase of these noxious vermin, but I am not aware that my efforts have been seconded in any quarter. The females rose in great numbers last autumn, and they continued to rise, at short intervals, during the unusually mild and open winter, which was extremely favorable to their operations, and most unfavorable to the success of the usual means for arresting their progress. It followed that tarring in the fall and spring was of very little use, and the trees were well seeded with eggs, during the winter, for an abundant harvest of canker-worms. Again I have had an opportunity of verifying the truth of statements heretofore made by others as well as by myself, — statements contradicted by some writers in the Western States, — that the females lay their eggs on the small limbs and twigs of the trees, and not ordinarily on the trunk. On my place, there are apple-trees of various sizes, some very large, and others quite small. On both, the females were found laying their eggs near the extremities of the branches, and not at all upon the trunks. Our unfortunate experience, during the last winter, must not lessen our faith in tarring as a preventive; for such an open winter may not soon occur again. Let not tarring be neglected next autumn, after the first hard frost.

While the canker-worms were eating up the leaves, the curculios (*Conotrachelus Nenuphar*) were stinging the fruit. Apples, cherries, and plums, at various stages of growth, have been attacked by them. My Baldwin apples began to drop when not much bigger than musket-balls. I should think that full one half of all that have fallen have been stung by the plum-weevil; the others were bored by the common apple-worm, (*Carpocapsa Pomonella.*) These insects are easily distinguished from each other; the latter having feet, which are wanting in the plum-weevil. Cherries, when weevil-stung, do not ordinarily drop off. Hence, among ripe cherries, wormy ones are often found; and not a few of them are eaten by the incautious, who, however, may have the satisfaction of knowing that thereby they help to check the increase of these insects. The robins and cherry-birds doubtless come in for their share of the spoils and of the spoilers. If the plum-weevils want to escape this kind of retributive justice, they must stick to the plums, and let the cherries alone. As for the wormy apples, we can diminish the evil somewhat, by gathering, every night and morning, all that fall, and giving them to our swine. It is a mistake to suppose that the plum-weevil stings the plums only when the fruit is small. My trees were jarred every night and morning from the time that the fruit was set till it had grown as large as cherries, and not one curculio was taken in the sheets spread below them, and not a single plum, up to that time, appeared to have been stung. Circumstances prevented my continuing this precaution afterwards; and now I find that nearly all the fruit has been attacked. Last year, I saved my plums by jarring the trees till the fruit was grown to its full size.

On the 15th of June, I found a single rose-bug, (*Macrodactyla subspinosa,*) but saw no more till about the first of July. These insects have been very troublesome, in this vicinity, during several previous years, doing great damage to plum, cherry, and apple-trees; but their numbers are much reduced during the present season, and the fruit-trees above named have suffered scarcely at all from their attacks. I have not, however, neglected gathering all that were within reach in my garden.

Of other destructive insects some notice may be taken at a future time; the present communication being quite as long as may suit your convenience.

Respectfully yours, T. W. HARRIS.

Cambridge, *July* 13, 1850.

Remarks. — The insects which we sent to Dr. Harris were from large apple-trees, the leaves of which were turning yellow and black, and falling from the trees. For a few years past, these insects have been prevalent and very destructive in some sections, and they seem to be increasing. We have destroyed aphides upon young shoots of nursery trees by the use of whale oil soap, but it would be a great deal of labor to apply it to large trees. — Ed.

For the New England Farmer.

EARLY BEARING OF FRUIT-TREES.

Mr. Cole: I have seen an inquiry in your paper of June 22, whether large fruit-trees, when grafted, will bear fruit sooner when the scions are taken from bearing trees than when taken from young trees. I have followed the grafting business for the last fifteen years, every spring, excepting the past one, setting from 3000 to 4000 scions each season, and am always trying experiments. I have found that scions taken from an old bearing tree will bear fruit in less than half of the time that they will taken from a very young and thrifty tree, and much sooner than they will from a medium-aged tree. I ingrafted some young apple-trees with the Porter apple, eight years ago, and a part of the scions I took from an old tree, and a part of them from very young and thrifty trees. Those that I took from the old tree have borne three years; the others have apples on them this year for the first time. Many other similar circumstances could be mentioned. I have upwards of

one hundred varieties of pears, and nearly or quite as many apples, and I have tried many ways to bring them to bearing as soon as possible, but have not, as yet, found any way that I could get fruit as soon as to graft them into a tree that had come to maturity. Therefore I have no hesitation in saying that, with my experience, scions taken from an old tree and set in a young tree will bear much sooner than others; and scions taken from a young tree and put in an old tree will bear much sooner than on their own stock.

L. BURT.

WALPOLE, N. H., *July* 15, 1850.

REMARKS. — We should be pleased to learn the results of other experiments on this subject, as other persons have come to a different conclusion from that of our correspondent. Here is an important point for consideration. A scion is taken from an old bearing tree, and set in a small stock near the ground, and in the summer of the same season the shoot from that scion is used for budding, with other shoots from the tree that the other scion was taken from. Now, will that scion, from its being only a few months on that young stock, lose its disposition to bear to as great a degree as though it had remained several years before it was used for budding?

For the New England Farmer.

FOOD OF PLANTS.

The food of animals always consists either of other animals, or vegetables, or a mixture of both, together with water, or some fluid containing a considerable portion of water, for drink; that is, as a solvent to the more solid matters. Plants, again, strictly speaking, subsist on drink alone, being, indeed, incapable of taking up any solid matter, at least till it be previously dissolved or diffused in water.

There is an obvious and well-known proof that plants live on water, chiefly, if not altogether, derived from hyacinths and other bulbs placed in glasses, and supplied with water, in which they blow as well as in a garden. It is found, however, that they do not thrive unless the water is regularly changed, indicating that it is not the water alone, but something in the water, which becomes exhausted and deteriorated by the feculent slime discharged by the plant. It has also been found, by experiment, that distilled water will not support a healthy growth in plants; and most, if not all species, when planted in pure calcined sand, and watered with distilled water, quickly die, as they do when quite deprived of water.

From chemical analysis and experiment, it appears that the chief matters taken up by the plants, besides water, consist of carbonic acid gas and azote, together with a few salts, such as potash; and out of these, and the hydrogen and oxygen of the water, all vegetable products seem to be wholly or chiefly elaborated. Mr. Lassaigne proved that these all pass into the plants from without, by the ingenious experiment of analyzing the chemical constituents of seeds before and after germination.

When, by chemical experiment, substances are found in plants different from those supposed to have been introduced from the soil, it is not to be inferred that the plants have created these, but that they have gradually taken them up in very minute portions, till a considerable quantity has been produced.

It is proper to confess, however, that we are still much in the dark upon this interesting subject, it being extremely difficult, if not impossible, to trace the fluid taken up by a plant after it passes beyond the surface.

BERNARD REYNOSO.

AMERICAN POMOLOGICAL CONGRESS.

In conformity with the resolutions passed at the last session of this national institution, its next meeting will be held in the city of Cincinnati, Ohio, on the 11th, 12th, and 13th days of September next, A. D. 1850.

The Ohio State Board of Agriculture, and the Cincinnati Horticultural Society, will also hold their Annual Exhibition at the same time and place, and the latter have generously offered to provide for the accommodation of the Congress.

All *agricultural*, *horticultural*, *pomological*, and *kindred societies* in the United States and the Canadas are hereby respectfully invited to send such number of delegates as they may deem expedient.

In order to facilitate the objects of this association, to promote pomology and the sciences upon which it depends, to collect and diffuse a knowledge of researches and discoveries in this important department, delegates are requested to bring with them specimens of the fruits of their respective districts, with lists of the same, and also papers descriptive of their art of cultivation, of diseases and insects injurious to vegetation, of remedies for the same, and whatever will add to the interest and utility of the convention.

Packages of fruit not accompanied by its proprietor, may be addressed to the care of Messrs. John F. Dair & Co., Lower Market Street, Cincinnati, O. These should be very distinctly marked, "FOR THE AMERICAN POMOLOGICAL CONGRESS."

All societies to be represented in this Congress will please forward certificates of the election of their several delegations to J. B. Russell, Esq., corresponding secretary of the Cincinnati Horticultural Society. Delegates will also report themselves at the Burnet House, on the morning of the 11th, where a committee will be in attendance to take charge of their fruits, and from whence the Congress will proceed to the hall assigned for its meetings.

MARSHALL P. WILDER, *President.*

S. B. PARSONS,
P. BARRY,
GEO. W. DEACON,
} *Secretaries.*

July 4, 1850.

Editors who feel interested in the objects of the above association are respectfully solicited to notice this circular.

REMARKS. — Although this association will be held in a comparatively new part of this new world, yet we shall expect not only numerous and excellent productions in the west, equal to any thing that can be produced in any part of the world, but a large gathering of the most intelligent and most eminent growers of fruit. Already this young region takes the lead in some pomological productions. More strawberries and grapes are raised around Cincinnati than in any other section of the country; and throughout the great west are pomologists second to none in the Union, and the number is large in that region that are doing themselves great honor and the country much good by their zeal and ability in this worthy cause. The doings of the Ohio Fruit Convention, which have been published for several years, are among the most instructive and reliable works of the kind that have been published in our country. Besides the contributions and attendance from the west, other parts of the country will also be well represented. — ED. N. E. FARMER.

WILD FLOWERS.

To those of our lady readers interested in floriculture, we would recommend, for the adornment of their gardens, one great and inexhaustible storehouse of beauty; namely, the woods and fields, with their wealth of uncultivated blossoms. It is in the power of almost every one to draw from this source, and, such is the perversity of human nature, perhaps on this very account, the opportunity is neglected. While various flowers, neither graceful nor fragrant, are admitted into the limited precincts of a garden, because, perhaps, they are rare, of difficult growth, or foreign extraction, many a wild, sweet native of our own hills and valleys would be altogether denied a place there. This is in bad taste, and the usual plea, "O, they are so common!" is by no means a reasonable or satisfactory objection. Whatever is perfectly beautiful might claim a place, though this would include so immense a collection that, of course, we would recommend a judicious selection from so vast a stock. How often in gardens have we seen the coarse and common althea towering in pride, and usurping a place which might have been filled to great advantage by a cluster of wood laurel, with its evergreen glossy leaves, and its rich, heavy clusters of rosy blossoms, or even by a specimen of the magnolia, with its white, glittering flowers, and its delicious perfume, scenting the whole garden! We have heard it advanced, particularly by foreigners, that our wild flowers have no smell; but let any one ride along the skirts of a wood, on a calm spring morning or evening, and judge for himself. Nothing can exceed their delicate odor, and we have often discovered their hiding-places by this telltale charm.

We have not the slightest wish, in this article, to discourage the cultivation of our numberless and beautiful garden plants. We would not be so understood. Their strong claims shall meet our attention in due season; but, at present, we think of advocating the cause of the too much neglected offspring of the fields. In gardens in the city, their presence is always desirable and grateful, and they improve amazingly by cultivation.

One objection often urged against them is, that they are single. This, to us, is a great charm; and if our readers will but compare the hue of a single blossom with that of a double one, they will be converts to our opinion. Take, for instance, a single dahlia or wild rose, and compare the color with that of a double one. Has the latter the same brilliancy of color? Does it glitter like the former, as if sprinkled with gold-dust? This difference, too, is very perceptible in all white double flowers. They never have the purity of single ones. Still, all the efforts of some of our gardeners seem to be directed to the one point of creating monsters in the floral world. No matter how delicate and beautiful the original blossom, it must be reproduced with three heads instead of one, to satisfy their elegant taste. Flowers are often totally ruined by this plan. We have seen hyacinths so double that they could not possibly expand, and were worthless; and last spring we received a bunch of violets, — violets! ladies, — with heavy little monster heads, which they seemed to hang down, as well they might, in very shame. We expect soon to see a double heart's-ease, or lily of the valley. If so, bad taste will have reached its climax. — *North American Farmer.*

A NOBLE HORSE.

Grant Thorburn says, "I once saw a horse, in the neighborhood of New York, dragging a load of coal (twelve hundred weight) in a cart. The lane was very narrow; the driver, some distance behind, conversing with a neighbor: the horse, on a walk, came up to a child, sitting on his hind quarters in the middle of the road, gathering up dust with his little hands, and making 'mountains of molehills.' The horse stopped — he smelt of the child; there was no room to turn off. With his thick lips he gathered the frock between his teeth, lifted the child, laid him gently on the outside of the whole track, and 'went on his way rejoicing' — and well he might rejoice! he had done a good deed."

SUMMER MANAGEMENT OF PYRAMIDAL TREES.

No matter how well trees may have been pruned before the growing season commenced, a little attention during summer is absolutely necessary. It is impossible for the most skilful pruner in existence to cut exactly, in all cases, at the proper point, or at least at the point that would induce the precise development of buds and branches that he wants; certain buds will push with greater or less vigor than he had reason to expect, from their appearance and position, and thus the balance proposed to be maintained is broken. In such cases, we must, at the proper moment, when growth is going on, resort to what is called pinching — nipping off with the finger and thumb (a sharp knife is better) the point of such shoots as are exceeding their due relative proportions. The leading shoot, that is intended to constitute the main trunk of the tree, should always take the lead; none of the lateral or side-shoots should be permitted to dispute its supremacy. If these shoots had been timely nipped, the branches below them and the leader above would all have had their just proportions. We therefore point this out as an item of very great importance in growing pyramidal pears. When the tree is left to itself during the whole season, and in the fall we find it grown so out of proportion a great deal of severe pruning is necessary to restore the balance, these strong branches next the leader have to be cut to one eye, perhaps, and the whole pyramid is injured and considerably retarded. What we have said has reference mainly to the leading shoot and those in its vicinity; but it applies with exactly the same force to all the main side-branches, which may be considered as so many leading shoots, and will require the same care and treatment.

There is another evil that must be remedied by pinching; for instance, when we cut a leading shoot or a side-shoot, expecting all, or nearly all, the buds below the point where we cut, to break and make side-shoots or spurs, and, contrary to our expectations, only two or three at the extremity grow, leaving the others dormant. To make these lower buds break, we must pinch those above them at a very early day. This checks the flow of sap, and concentrates it in the lower parts, causing the buds there to break. This is the way to have all the branches covered with fruit-spurs their whole length. Pyramidal pear-trees on *quince* stocks are naturally so fruitful, generally speaking, that pinching to form fruit-buds and spurs is rarely necessary. The principal point to keep in view is the *form*. On pear stocks, however, both objects must be kept in view. All we have suggested on this point will be necessary in both cases. Pinching to promote fruitfulness, consists in pinching or breaking off the ends of the small side-shoots, stopping their elongation, and turning the sap into the formation of fruit-buds. This is practised continually as growth advances, and the condition of the trees renders it proper, principally through July and August.

This pinching, to promote fruitfulness, requires more skill and practice in pruning, and much more physical information respecting trees, than any other pruning. If done too soon, or too severely, the object is defeated by having the buds break into new shoots, instead of forming fruit-buds, thus requiring pinching and pinching again, before the object is attained. Vigorous and feeble growers require different degrees of pinching, and require it to be done at different seasons. Different soils and climates all affect this matter so much, that no general rules can be safely adopted. Some rank growers on free stocks cannot be brought into bearing by this means, until the pinching and pruning are so severe as to weaken, to some extent, the whole force of the tree. Root-pruning has the same effect, and, in such cases, is quite necessary; but this must be done in the fall, when growth has terminated. — *American Agriculturist.*

WHAT FARMERS OUGHT TO KNOW.

Let us see what farmers ought to know and do, to raise themselves to the character of professional men; and what almost any of them might accomplish in the long winter evenings, at a trifling cost for books, and a little more expense of hard thought and attention.

A farmer ought to understand the leading principles of chemistry. The soil he plods among at the plough-tail is not a mere inactive mass, sticking to his shoes when wet, and choking him with dust when dry. It is a vast laboratory, full of many and strange materials, always in action, warring, combining, changing, perpetually; to-day receiving accessions from the heavens; to-morrow pouring them into the wide sea, to be again supplied to other lands. The earth is all but a living creature; and he whose business has been slanderously said to be but "of the earth, earthy," should surely understand the soil's nature, its elements, its likings, and its diseases.

The farmer should understand physiology. Under his care he has the noblest forms of creation — the ox, the horse, the sheep. Can he spend a life among them, and not know how the heart beats — how the nerves thrill — where lie the muscles — what are the principles of action, and the seats of disease — how the fat grows — and how the bones are formed? Can he be a breeder, who has never studied the peculiarities of races? Can he be any thing but an empiric, who undertakes to feed and fatten cattle, without knowing of what the food is composed, and what parts of the body require this or that element?

The farmer should have a knowledge of medicine, and of the elements of surgery; for though, in this respect, when applied to human ailments, it may prove that "a little knowledge is a dangerous thing," yet many a fine animal is allowed to become dog's meat, because its owner could not distinguish between a fever and an inflammation, set a bone, nor bandage a wound.

The farmer should be a botanist. The primeval curse of mother earth was, that she should bring forth thorns and thistles; and many other noxious weeds, besides, have since been added to her progeny. How great the amount of toil expended, and how serious the loss of crops, from such plants as Canada thistle, burdocks, Turkey weed, and a host of others, let those tell who have been the sufferers. Many books have been written on such things; many plans have been given for eradicating them; but unless the farmer can distinguish them — unless he knows their character, histories, and modes of growth, how unaided does he go to his task! Besides, botany, in all its shapes, is the natural science of the countryman. How does the seed germinate? How does the tender leaf unfold itself? How is the blossom impregnated and the fruit formed? What will injure, what improve each plant? All these are questions which every farmer should have studied and ascertained. And can any one be content to spend a life in ignorance of the names and characters of the trees and flowers that are so gorgeously spread around him, painting his fields and woods with their thousand hues, and rendering this outward world a mass of beauty?

The farmer should be — or, shall we say, should wish to be — a naturalist. No one has so many opportunities of observing and noting the habits and peculiarities of animals, birds, and insects. In some cases, this knowledge may be of inestimable service. It must always be a pursuit of pleasure, and cannot fail to refine and improve the mind and sensibilities, both towards the inferior creation, and towards man.

But time would fail to tell of what the farmer ought to know and understand. There is no knowledge which would not be serviceable to him. There is none which will not elevate him in the scale of intellectual beings; and, what, perhaps, is more important to many, there is scarcely a physical science which he will not find putting money into his pocket constantly. How many times in a life would a barometer save a whole harvest! How many blacksmiths' and carpenters' bills may be escaped by the humble knowledge of the use of tools! Now, if our farmers would but become self-instructors, and if, instead of doing just as their great-grandfathers did before them, they would think and learn for themselves, no profession would become more honorable, carry more weight in society, nor be more ardently sought after by the active and intelligent of all classes. Instead of our young men rushing from the country to the city, the city youths would yearn to be farmers; and instead of the chief emulation being who should save most, the strife would be who should accumulate the most by the profoundest experiments, most successfully carried into practice. By these means, farming would cease to be the mere drudgery of "dirty-handed industry;" and every operation would become scientific, based on great principles, breeding new thoughts and new results, and ending in valuable acquisitions. Instead of the poet describing the farmer as one who

> "Wandered on, unknowing what he sought,
> And whistled as he went, for want of thought,"

we should have farmers themselves distinguished authors of valuable works; scientific, at all events, if not poetic. Some such great minds we already have employed in farming, but, unfortunately, that is not yet the character of the class. G. F.

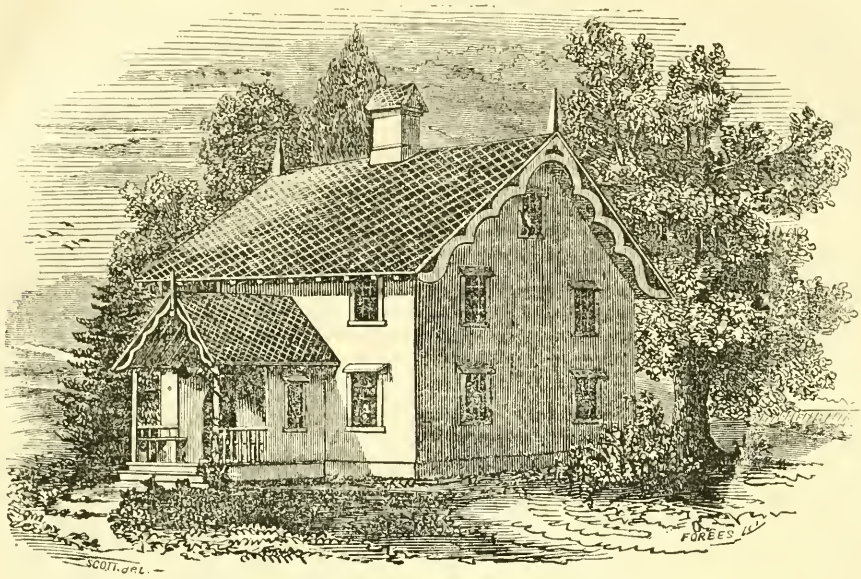
MICHIGAN, *Jan. 5*, 1850.

— *Am. Agricult.*

SHADE-TREES.

SILVER MAPLE, (*Acer dasycarpium.*) — This should occupy a conspicuous place in the highways and public grounds. It is a native of our state, and is found in moist, sandy soils, particularly along the margins of streams. To its graceful form and rich tints much of the beauty of the landscape-views along the Ohio, Muskingum, and other large rivers, is owing. It is more hardy than the sugar maple, and adapts itself to all varieties of soil. The inhabitants of cities and villages at the west should employ it instead of the sickly and filthy locust-tree. — *Family Visitor.*

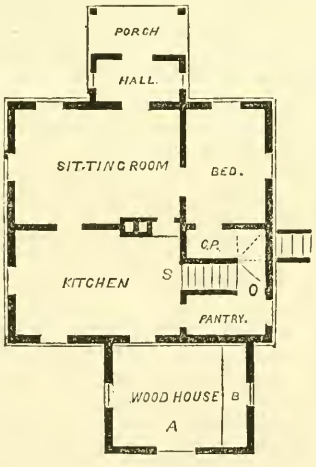
Decayed grain, of any kind, is highly injurious to stock. It has a paralyzing effect upon the animal fed with it, oftentimes causing death.



DESIGN FOR A COTTAGE.

We copy the following interesting article from the Albany Cultivator, and are indebted to Mr. Tucker for the accompanying engraving and plans: —

Eds. Cultivator: Enclosed is a plan and perspective view of a small farm-house. It will be seen by a glance at the plan, that the house is nearly square — the cheapest of all forms. The size is twenty-nine by twenty-six feet, with a hall and porch, together ten feet square, and a wood-house in the rear, twelve by sixteen feet. The hall is placed in the middle of the front, and may be lighted by a window on each side, of the width of one glass, or by a window in the door. From the hall, we enter the sitting room, which is twelve and a half feet wide by eighteen and a half long, lighted by two windows, and has a crockery closet at *c*. At the left, as we enter, is a bedroom, nine by twelve and a half feet, with a large clothes-press under the stairs: passing through, we enter the kitchen, twelve by eighteen and a half feet, which is lighted by two windows, and has doors opening to the pantry, stairway, and wood-house. The pantry (five feet by nine) is lighted by one window, and has a door at *o*, opening on the cellar stairs. In the wood-house, A, is an opening for throwing in wood, six or seven feet from the floor, four feet square, closed by a door; B is a work-bench, with a window over it.

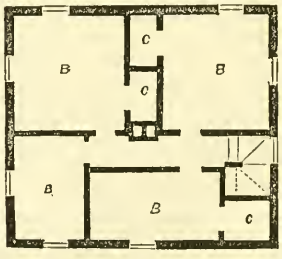


FIRST FLOOR.

On the second floor are four fine bedrooms, three of which have commodious closets. The garret can be reached through a scuttle near the chimney, by means of a light ladder, which, when not in use, might be placed against the wall at L. The first floor is intended to be nine feet high, the second eight. The cellar might be made under the whole house, or only under the back half. O is the outside cellar stairway.

It will be objected by many, that this house has no parlor. This plan is not intended for those who have the means to build a room *especially for company*, but for that large class of farmers who, while they desire something convenient and tasteful, cannot afford to pay for a room which they do not use themselves.

A glance at the plan will show that it is intended to be built of wood. For the outside covering, perpendicular boarding is preferable to clapboarding, because it is firmer and cheaper. I hope the exterior that I have sketched is sufficiently expressive of ruralness. Although the desire for novelty, and the wand of fashion, have done much towards creating the prevalent rage for rural Gothic dwellings, yet the intrinsic beauties of the style will always command for it the admiration of the rural architect, and it has now become so common in most parts of our country, as no longer to be considered a fantastic novelty by the staid portion of our people. All who examine the various forms of domestic architecture can now easily have opportunities of seeing its beauties and detecting its faults.



SECOND FLOOR.

The features which designate principally the style of this building, are the verge-boards and the bold projection of the roof. (The roof in the engraving is represented hardly steep enough for the style.) To support this projection, the rafters (which should be of rather large size, say six by four inches) should

run past the plate their whole size, about eighteen inches or two feet.

The square end of the rafter is, I think, a decidedly ornamental feature of the otherwise plain eaves. The verge-boards I have represented in the heaviest style that is admissible, because any but *substantial-looking* ornaments are out of place on a farm-house, and as a kind of example to operate against the other extreme — flimsiness. The only finish necessary for the roof projection, is, that the roof-boards over the projecting part should be of inch and a half stuff, (to prevent the shingle nails from coming through,) planed on the under side, and matched. The eave-trough might be of tin and nailed to the roof, or formed by nailing a narrow board to the edge of the lower roof-board. The ceiling of the porch should be made in the same way as the roof projection; the posts of six inch stuff, made octagonal by trimming off the corners, the top and bottom being left square. The front door I have represented in the drawing as pointed. As, however, there is no other feature of the kind in the house, I have come to the conclusion that it looks ambitious and out of place, and I beg leave to have the reader consider it square. To the chimney I have sought to give an ornamental effect, by capping it with two slabs of stone.

I will conclude with a few words in regard to the interior finish. In all parts of our country *pine* is the material most used for the interior wood-work of dwellings, and it is a common practice to cover it with white paint. How such a practice could ever have obtained among an intelligent people, I cannot understand. Its warm, lively color, when freshly planed, is peculiarly adapted to give rooms a cheerful and smiling expression. When we know that this pleasing tint can easily be preserved, and rendered even more soft and bright, by varnish, at no greater expense than would be incurred in giving it a good coat of paint, can we help being surprised that its beauties have been so long carefully concealed by the cold glare of white paint? Besides, the color of the pine, as brought out and preserved by varnish, harmonizes with furniture much better than any paint, and would of itself add much, apparently, to the furniture of a room. Darkened and mellowed by time, it would, at length, with the inmates of the house, assume that sober, though still cheerful, expression, which gives to age one of its greatest charms.

While on this subject, I will say a word about black walnut, which, where the intention has been to varnish, has been used more than any other wood for the interior finishing. It has been much used in cabinet work, and is one of the most beautiful of our native woods. Its dark, rich shades impart to the lofty apartments of mansions a stately and appropriate dignity; but for the rooms of ordinary residences, its sombre hue renders it quite inappropriate. And were I to have the choice of two evils, I would prefer white paint with its glare, to black walnut in its gloom.

F. J. SCOTT.

Toledo, Ohio.

SALT FOR FRUIT-TREES — FATAL EXPERIMENT.

Friend Bateham: For the information of your readers, I will relate a disastrous incident that has happened to me. Having learned, from agricultural papers and otherwise, that common salt is a good manure, especially for fruit-trees, and also a preventive of injury by insects, and being determined to have a good orchard of the best fruit that I could get, I had procured two hundred fruit-trees, mainly apples, but some pear and peach; and in planting my trees, I threw into the hole, and touching all round the roots of each tree, about half or three quarters of a pound of salt; the result was, that the salt killed every tree around which it was put.

The sap carried the salt up to the very top buds of the tree, so as to be tasted in them. Some persons have thought that it might not have been the salt that killed the trees; but there can be no mistake that it was the salt that killed them, as I had planted six trees before the salt was brought into the field, and one other tree was missed and no salt was put about it, and these seven trees not salted are alive and growing finely.

I do not wish to discourage people from using salt as a manure, but to caution them against using it as freely and in the manner that I did. I think that if salt be mixed with rich mould soil, or manure, and not allowed to touch the roots of the trees, and especially not in large quantities, in its crude state, it may be used with safety and advantage.

On the 22d and 23d insts. the fruit in this vicinity was greatly damaged by frost, but not all killed. Wheat looks well. Our meadows are very backward. Corn is coming up badly, on account of the dry weather and frosts. Early-planted corn and potatoes are much injured by the frost; so are beans, cucumbers, and garden plants generally.

Yours very respectfully,

JOHN FOSTER.

Cumberland, Guernsey Co., O., *May* 28.

Remarks. — We truly sympathize with friend Foster in view of his misfortune, and thank him for the caution which his experiment affords to others. If he had observed what was said on this subject in our paper last year, (p. 218,) we think he would have not made the mistake he did; and, in fact, we have never, to our knowledge, seen the practice recommended of applying salt to newly-planted trees; especially should it not be applied in the soil directly in contact with the roots, as in its crude state it is poisonous to vegetation; while, in a diluted state, (dissolved by rains and incorporated with the soil,) it is found beneficial, *applied in moderate quantities to trees of bearing size.* — Ed. — *Ohio Cultivator.*

FOURTH ANNUAL REPORT OF THE BOARD OF AGRICULTURE OF THE STATE OF OHIO.

We have received this report, which makes a good volume, of nearly 300 pages. It is truly gratifying to see how rapidly agricultural improvement is progressing in Ohio. Nothing shows it better than the increased size of these reports, coming, as a great bulk of its contents do, from the several counties, and giving a good history of the leading crops in each, by actual residents. For accurate information as to the real condition of agriculture through the state, we consider this volume entirely ahead of our own more bulky Transactions. The state of Ohio will owe an immense debt to a few men, who have stuck to the Board of Agriculture until they have succeeded in arousing a feeling among the farmers that will make them second to those of no other state. We predict for their great fair at Cincinnati, on the 11th, 12th, and 13th of September next, an exhibition that New York might well be proud of.

And why should not Ohio be foremost among the first? There is no state in the Union that possesses, to so great an extent, all the elements of boundless prosperity that she does; and we hope her citizens will not allow her resources to remain long undeveloped. The first great step towards it is to build up her agriculture. The real wealth of this world lies within a foot of the surface of the earth. If any man doubts, let him dig. — *Wool-Grower.*

Domestic Department.

For the New England Farmer.

FLOWERS.

Who does not love flowers? They are such pure and beautiful things, such sweet gifts from our heavenly Father, scattered with lavish hand to gladden the hearts of his creatures! Not for the wealthy alone do they bloom, but the lowliest cottager may claim them as his own, to beautify his humble home. I never passed a cottage overhung by vines, where roses and honeysuckles mingled, and jessamine peeped in at the windows, without thinking that there must be, in that lowly abode, hearts full of love — love for the beautiful, and love for God. How pleasant to see young children bearing their hands full of the fragrant treasures — twining them in garlands for those they love, or scattering them over some lonely grave!

Methinks that children surrounded with flowers — taught daily to gaze upon them and examine and admire their wonderful structure — cannot grow up unmindful of their Maker. In their hearts will be planted an affection for the lovely and beautiful in Nature, and they will "look through Nature up to Nature's God."

"Blessed be God for flowers —
For the bright, gentle, holy thoughts that breathe
From out their odorous beauty, like a wreath
Of sunshine on life's hours."

E. C. L.

Milk Cellars. — Farmers about to build a dwelling should know that, by carrying up a large flue (twelve inches in diameter and *circular* is the best) in the chimney-stack from the *cellar*, and having a window or two opening to the north, or cold side of the house, out of the cellar, they can have as good a "milk room" under their house as could be had over a spring, that may be perhaps two hundred yards or one fourth of a mile off; which is so *pleasant* to go to in *bad* weather, especially by the *female* portion of the family.

The floor should be flagged with stones, as they can be kept sweeter and are colder than either bricks or cement, which absorb "spilt milk," and thus taint the atmosphere. The walls and ceiling should be plastered, to facilitate whitewashing and cleansing. Nothing but milk and cream should be kept in the room, as a pure atmosphere for cream to rise in is absolutely essential to the making of sweet butter.

What is needed to have a *cool, sweet cellar*, is a current of air, which will be secured by the aforesaid flue and the open windows — as a strong current of air is at least ten degrees colder than the same air at *rest*.

Churning. — Farmers ought to know that churning can be done with any good churn in five to fifteen minutes, as well in winter as summer, by having the temperature of the cream right — say sixty to sixty-two degrees. The temperature of an ordinary sitting or living room, in winter, to be comfortable, is sixty-five to sixty-eight degrees, and a closet opening into such a room would be the best place to keep the pot in the winter. In the summer the cream can be readily reduced to the right temperature, by breaking up clean ice and putting it into the churn.

A thermometer, which is necessary to regulate these matters, costs but one dollar; and such an investment every farmer ought to make, who has churning to do, and thus save labor and time, which is money, and make this much-dreaded part of the duties of farmers' wives and daughters much pleasanter and easier — and for this I know they would thank your modest correspondent, if they knew him. — *Ohio Cultivator.*

Youth's Department.

Curious Facts. — The greyhound runs by eyesight only; and this we observe as a fact. The carrier-pigeon flies his two hundred and fifty miles homeward, by eyesight, viz., from point to point of objects which he has *marked;* but this is only our conjecture. The fierce dragon-fly, with twelve thousand lenses in his eyes, darts from angle to angle with the rapidity of a flashing sword, and as rapidly darts back; not turning in the air, but with a clash reversing the action of his wings — the only known creature that possesses this faculty. His sight, then, both forwards and backwards, must be proportionably rapid with his wings, and instantaneously calculating the distance of objects, or he would dash himself to pieces. But in what conformation of his eye does this consist? No one can answer. A cloud of ten thousand gnats dance up and down in the sun, the minutest interval between them, yet no one knocks another headlong upon the grass, or breaks a leg or a wing, long and delicate as these are. Suddenly, amidst your admiration of this matchless dance, a peculiarly high-shouldered, vicious gnat, with long, pale, pendent nose, darts out of the rising and falling cloud, and settling on your cheek, inserts a poisonous sting. What possessed the little wretch to do this? No one knows.

A four-horse coach comes suddenly upon a flock of geese on a narrow road, and drives straight through the middle of them. A goose was never yet fairly run over; nor a duck. They are under the very wheels and hoofs, and yet, somehow, they contrive to flap and waddle safely off. Habitually stupid, heavy, and indolent, they are, nevertheless, equal to any emergency. Why does the lonely woodpecker, when he descends his tree, and goes to drink, stop several times on his way, listen, and look round before he takes his draught? No one knows. How is it that the species of ant, which is taken in battle by other ants to be made slaves, should be the black, or negro-ant? No one knows.

A large species of the star-fish possesses the power of breaking itself into fragments, under the influence of terror, rage, or despair. "As it does not generally break up," says Prof. Forbes, "before it is raised above the surface of the sea, cautiously and anxiously I sunk my bucket, and proceeded in the most gentle manner to introduce *Ludia* to the purer element. Whether the cold air was too much for him, or the sight of the bucket too terrific, I know not; but in a moment he proceeded to dissolve his corporation, and at every mesh of the dredge his fragments were seen escaping. In despair I grasped at the largest, and brought up the extremity of an arm with its terminating eye, the spinous eyelid of which opened and closed with something like a wink of derision." With this exquisite specimen of natural history wonders — for naturalists can only vouch that "such is the fact," and admit that they know no more — we shall close our digression. — *The Poor Artist.*

As a man is, under God, the master of his own fortune, so he is the master of his own mind. The Creator has so constituted the human intellect, that it can only grow by its own action, and by its own action it will certainly and necessarily grow. Every man must educate himself.

Health Department.

To stop a Fit of Coughing. — A correspondent of the London Medical Gazette states that, to close the nostrils with the thumb and finger during expiration, leaving them free during inspiration, will relieve a fit of coughing in a short time. In addition to the above, we state, from personal knowledge, that to press the finger on the upper lip, just below the nose, will make the severest premonitory symptoms of a *sneeze* pass off harmless. We have found the remedy useful many a time in creeping on game in the woods.

Love of Water. — Some persons shrink from bathing, but when they once get used to it, it is indispensable. A medical writer says, —

"Let a child wash himself all over every morning for sixteen years, and he will as soon go without his breakfast as his bath."

Mechanics' Department, Arts, &c.

Dyeing Woods. — For dyeing wood a *fine black* color, have a chairmaker's copper fixed, into which put six pounds of chip logwood, and as many veneers as it will conveniently hold, without pressing too tight; fill it with water, and let it boil slowly for about three hours; then add half a pound of powdered verdigris, half a pound of copperas, and four ounces of bruised nutgalls, filling the copper up as the water evaporates; let it boil gently two hours each day till you find the wood to be dyed through, which, according to the kind, will be in more or less time.

Fine Blue. — Take a clean glass bottle, into which put one pound of oil of vitriol; then take four ounces of the best indigo, pounded in a mortar; put them into a vial, (take care to set the bottle in a basin or earthen glazed pan, as it will ferment;) after it is quite dissolved, provide an earthen or wooden vessel, so constructed that it will conveniently hold the veneers you wish to dye; fill it rather more than one third with water, into which pour as much of the vitriol and indigo, stirring it about, as will make a fine blue, which you may know by trying it with a piece of white wood; put in your veneers, and let them remain till the color has struck through.

The color will be much better if the solution of indigo in vitriol is kept a few weeks before using it; also the best trough you can use, is one made of stone ware.

Fine Yellow. — Take of the root of barberry four pounds, reduce it, by sawing, to dust, which put into a copper or brass trough, add four ounces of turmeric, to which put four gallons of water, then put in as many white veneers as the liquor will cover; boil them together three hours, often turning them; when cool, add two ounces of muriate of tin, and you will find the dye strike through much sooner.

Fustic and quercitron will also dye good colors, the former with alum, the latter with muriate of tin.

Bright Green. — Proceed, as in the above recipe, to produce a yellow with fustic, and add the vitriolated indigo, as much as will produce the desired color.

Bright Red. — Take two pounds of genuine Brazil dust, add four gallons of water, and after putting in your veneers, boil them well for at least three hours; then add two ounces of alum and a little salts of tin, and keep it lukewarm until it has struck entirely through.

Purple. — Take two pounds of chip logwood and half a pound of Brazil dust, add four gallons of water, and after putting in your veneers, boil them well for at least three hours, then add six ounces of pearl-ash and two ounces of alum, and let them boil two or three hours every day till you find the color struck through.

The Brazil dust in this recipe is perhaps superfluous, as it only contributes to make the purple of a red cast; use muriate of tin very little.

Orange. — Let the veneers be dyed, by either of the methods given, of a fine deep yellow, and while they are still wet and saturated with the dye, transfer them to the bright red dye, till you find the color has penetrated equally throughout.

NEGLECTED MANURES.

LIQUID MANURES, TANKS, &c.

Analytical Laboratory, Yale College, New Haven, Conn., *June*, 1850.

Eds. Cultivator: Having now mentioned, in succession, a variety of manures in a number of classes, — having called attention to the fact of their being almost universally neglected, and to the leading characteristics which in the several cases constituted their chief value, — I propose to leave this subject, lest your readers should find it becoming tedious. It is far from being exhausted; indeed, it is but begun: still, enough has been said to call into exercise, on the part of attentive readers, a spirit of watchfulness, that nothing worth saving shall escape them in future.

In the present letter, I shall notice the great waste of liquid manure which occurs in many parts of the country, and the imperfect methods of attempting to preserve it, which are often adopted.

Chemical analysis shows the liquid manure, or urine, of animals, to contain many valuable fertilizing substances. It is always particularly rich in nitrogen, also in the alkalies, potash, and soda, and in carbonic and sulphuric acids. The excrements of birds contain both the liquid and the solid part together; hence their great richness: this fact alone should convince the farmer that, in losing the liquid, he greatly reduces the value of his solid manures.

The nitrogen in fresh urine exists there chiefly in the form of a substance called urea: this consists in a large part of nitrogen, and, if dry, may be exposed to the air for a long time, before it undergoes any perceptible change. In the presence of water, however, and the other substances with which it is associated in urine, a species of fermentation soon commences; it is then speedily changed into carbonate of ammonia, which readily escapes into the atmosphere. In warm weather, the smell of this ammonia escaping may be perceived after the lapse of a very few hours. If the fermentation be allowed to proceed, the whole of the nitrogen will be transformed into carbonate of ammonia, and the larger part of this will evaporate into the air. If this constituent can all be retained, and the liquid applied to the crops, it is found to be a powerful manure. Prof. Johnston states that at Flanders the urine of each cow is valued at about $10 per annum.

Scarcely less valuable are the drainings from the dung-heaps, or from barn-yards. These contain large quantities of ammoniacal substances, and also of useful mineral ingredients, dissolved out from the solid parts of the manures. They undergo the same fermentation as urine, but more slowly, and the ammonia also escapes in this case. Where the manure, as is to be seen in many yards, is exposed to constant washing by rains, nearly every thing soluble in water is gradually dissolved out, and it is thus rendered quite inferior in quality.

The question now arises, How are these valuable liquids to be preserved? and how is the loss of their ammonia to be prevented? The method of accomplishing this, may vary with circumstances and situation.

Where it is practicable to build the barn upon a side-hill, there is probably no better plan than to form a cellar beneath it, where all of the solid manure can be thrown from above, and the liquid conducted down upon it. A layer of peat or muck upon the floor would prevent any thing from soaking through and escaping. In certain situations, manure kept in this way becomes too dry, and does not decompose properly; in all such cases the liquid manure would be doubly valuable. Some farmers turn in hogs to root over and compost the material in such cellars. Manure made in this way is neither exposed to evaporation nor to washing; and one load is worth two, or even more, of the bleached and washed straw and stalks, which we see being carted out from some yards. If it ferments too much, it is necessary to turn it over to check fermentation; mixing earth and sprinkling plaster over the top is also a good practice.

In cases where the formation of the ground does not admit of a convenient cellar under the barn, a *tank* is the most advantageous receptacle for the liquid drainage. This may be made by digging a square hole at the lowest part of the premises, and rendering it water-tight by a lining of planks, brick, or stone. This is far better than an open hollow, such as may be seen in many yards. These are not only disagreeable to the eye, and a source of many inconveniences, but they expose the liquid to the full evaporating and decomposing influences of the sun, so that it decreases and deteriorates in a very rapid manner.

Many farmers think that a tank must necessarily be made of great size, or it will overflow. If all the water from the eaves of the farm-buildings be allowed to flow into it, such a necessity exists; but if this water is carried away by separate drains, as it should be, then the quantity flowing into the tank cannot be excessive. During the summer, except where much stock is kept, or after showers, little liquid would be collected, especially if the yard were spread with muck. Where there is much stock, a drain should be made to lead their urine directly into the tank.

The next question that arises is relative to the disposition of this liquid from various sources, after we have got it into the tank. From what has been said, it will be seen that it is extremely liable to ferment and putrefy, and to lose a large portion of its most valuable ingredients; this will not happen quite so soon in a covered tank as in the open air, under the influence of the sun, but still it cannot, during warm weather, be delayed long. There are several methods of treatment which have been found successful.

Some farmers mix two or three times its bulk of water, thus retarding the fermentation until they have leisure to distribute the liquid over their fields, with a common water-cart. In most cases this would be a troublesome mode of management. A more convenient way is to pump it up, and pour it upon the surface of manure and compost heaps, sprinkling them over with gypsum at the same time.

Where neither of these plans will answer, it is quite practicable to preserve the ammonia by sprinkling in occasionally a little sulphuric acid, say one or two pints; this converts the carbonate of ammonia into the sulphate of ammonia, a compound far less volatile than the carbonate. The same effect may be produced by adding gypsum or sulphate of lime; sulphate of ammonia is formed in this case also. The propensity that gypsum has to form this compound, when it is brought into contact with ammonia, explains its beneficial action in arresting the escape of that gas from fermenting manure heaps. Even when ammonia is rising so as to be visible in white fumes, and perceptible to the smell, a sprinkling of gypsum will arrest all further escape for a considerable length of time.

In situations where it is convenient to employ them, peat, peat ashes, wood or coal ashes, rich mould, &c., are good materials to throw into these tanks; they will absorb nearly all of the valuable parts of the manure. The tank soon fills up in this case, and must be cleaned out at comparatively short intervals.

These methods of using the liquids from the barn-yard and the stables are all perfectly simple and practicable, while at the same time they involve little expense. The manure saved is of the most powerful character, and will, upon trial, be found to add very greatly to the resources of any farm.

The subject of water from the sewers of towns has lately attracted much attention in England, and Prince Albert has quite recently made public a plan for extracting, on a large scale, the valuable substances which it contains. He proposes a large upward filter; that is, to bring the water into a receptacle under such a head as to force it upward through a filter of sand and gravel. The clear water passes off above, and the solid matter remains below the filter, to be taken out and used for manure. I think that certain practical difficulties would attend the working of this plan, and the prince seems to have overlooked the fact, that the clear water, which runs away, contains every thing that is soluble in water, and of course much that it is important to preserve. In any case, the system would be too expensive for this country, but is worthy of mention as showing how much value is placed upon this species of refuse abroad. Wherever land lies so that it can be irrigated from the sewers of large towns, such irrigation will be found a most effectual and economical method of enriching it.

For my next communication I shall endeavor to select some more savory subject than has occupied our attention in the preceding letters of this series.

JOHN P. NORTON.

—*Albany Cultivator.*

MANURES—WHAT FARMERS OUGHT TO KNOW.

The annual waste of valuable manures by farmers makes, in the aggregate, an immense sum. Suppose it to be but five dollars' worth (a low estimate) for each one in the county, and in the whole it will amount to thousands.

Waste is the consequence of carelessness. Loads of vegetable matter are suffered to be scattered about in by-places, and never collected for use. Draining from the yards (perhaps to a running brook) is another process of gradual waste. The soluble manures thus carried off are of more immediate value to the growing crops than the remaining solid portions, the latter having to decompose and be dissolved in water before plants receive any benefit from them.

Some have so little regard for the animal excrements, that the cattle and sheep are permitted to roam at pleasure, during the winter and spring; and, in too many instances, wander about the highways. The hay and cornstalks are often fed in these places, and such portions as the cattle refuse to eat are lost, because never gathered up; and the droppings also remain, as though the laws of the country required the wagon-track to be a rich soil. Many places may be seen where there is quite as much manure in the road adjoining barns as in the yards.

It is a common custom, in villages, to enrich the gardens in the spring with the best manures, costing a high price; and then, during the summer, men are hired to throw that same manure (now concentrated into plants called weeds) into the street, as if they were noxious articles. Carry them to the manure heap, and give them as much attention as the cleanings of the stable.

Dead animals are carted to hollows and by-places, as remote as possible, and left to be eaten by crows and other animals, or to decay and render the surrounding atmosphere unpleasant and unwholesome. This is not good economy. Take the carcass to some convenient place, where you can give it a good covering of earth. As decay progresses, the flesh passes into gases, which are taken up by the soil, and thereby the earth forming the covering is rendered more fertilizing than the matter taken from the barn-yard. Thus the farmer can manufacture eight or ten loads of rich compost, with little expense or trouble, and cheaper than any other process. The bones are not to be disregarded. Have them put into a convenient place, and when a rainy day comes, break them up in small pieces, and scatter them on your lands. They are much used for wheat, corn, and turnip crops. Bone-dust, in some portions of our country, is considered an indispensable article, and in England is in very general use. Human bones have been gathered on the battle-field of Waterloo, and carried to England by ship-loads, there to be used for manuring land. They are considered of sufficient value to be transported from this country to England for that purpose.

Save your soap-suds. Instead of throwing them near the kitchen door, to form an offensive mud-hole, pour them on the manure heap, or sprinkle them on the meadow. Make but one trial of it, and you will not again cast them away as useless. Leached ashes are supposed to be of little value — an entirely erroneous opinion. Coal ashes are also condemned, and cast into the streets. They are an active promoter of vegetation, and, hence, worth saving.

If you would raise good crops, they must be fed. All vegetable matter which will decay, affords nourishment, producing cash in the shape of grain, &c.; therefore look after it as carefully as you do the sixpences in the purse. — *Deckertown Home Journal.*

MANAGEMENT OF NEWLY-TRANSPLANTED TREES.

The season thus far has been quite auspicious for success in transplanting trees; yet they should not now be neglected, but they should be well mulched, to keep the earth loose and moist, in case a drought should ensue. Apple-trees of good quality, well set, may be considered worth not less than one dollar each — enough to take care of.

It is evident that nature proportions the roots and tops of trees so as to balance: the roots searching out and furnishing nourishment sufficient for the top or branches; but when trees are transplanted, more or less of the roots are left in the ground, and not unfrequently many of the small fibres become so dried as to unfit them for performing their office as feeders, (which ought not so to be;) nature's course must become checked in the vigorous growth of the tree. It must therefore be evident that advantage will be derived from lessening the tops, so as not to impose a tax upon the roots, which their feeble condition will not allow them to pay. It is probable that, in most cases, the tree would live if the top should not be reduced, but often the struggle between life and death, for a time, is doubtful; and if the former obtains the victory, it is but a pitiful one — the tree not having made any growth, in which case it seldom recovers enough to flourish well the succeeding season. In most cases, trees, when transplanted, require some thinning of their tops to give them a good, open, and spreading head, which is essential to the good quality of the fruit.

But when they do not require thinning, heading back, or the shortening system, as it may be called, may be practised to advantage. It is generally an easy matter to form and obtain a good head, where there are healthy and flourishing roots to feed and drive it forward; and *vice versa.* D. T.

Vassalboro', *6th mo.*, 1850.

— *Maine Farmer.*

HOW CITIES EXHAUST THE FERTILITY OF LAND.

There has been enough of the elements of bread and meat, wool and cotton, drawn from the surface of the earth, sent to London, and buried in the ground or washed into the Thames, to feed and clothe the entire population of the world for a century, under a wise system of agriculture and horticulture. Down to this day, great cities have ever been the worst desolators of the earth. It is for this that they have been so frequently buried many feet beneath the rubbish of their idols of brick, stone, and mortar, to be exhumed in after ages by some antiquarian Layard. Their inhabitants violated the laws of nature, which govern the health of man and secure the enduring productiveness of the soil. How few comprehend the fact, that it is only the elements of bread and meat, evolved during the decomposition of some vegetable or animal substance, that poison the air taken into human lungs, and the water that enters the human system in daily food and drink! These generate pestilence, and bring millions prematurely to their graves.

Why should the precious atoms of potash, which organized the starch in all the flour, meal, and potatoes consumed in the cities of the United States in the year 1850, be lost forever to the world? Can a man create a new atom of potash or of phosphorus when the supply fails in the soil, as fail it must, under our present system of farm economy? Many a broad desert in Eastern Asia once gladdened the husbandman with golden harvests. While America is the only country on the globe where every human being has enough to eat, and millions are coming here for bread, how long shall we continue to impoverish ninety-nine acres in a hundred of all that we cultivate? Both pestilence and famine are the offspring of ignorance. Rural science is not a mere plaything for the amusement of grown-up children. It is a new revelation of the wisdom and goodness of Providence, a humanizing power which is destined to elevate man an immeasurable distance above his present condition. To achieve this result, the light of science must not be confined to colleges; it must enter and illuminate the dwelling of every farmer and mechanic. The knowledge of the few, no matter how profound, nor how brilliant, can never compensate for the loss sustained by neglecting to develop the intellects of the many.

No government should be wanting in sympathy with the people, whether the object be the prevention of disease, the improvement of land, or the education of the masses. One per cent. of the money now annually lost by reason of popular ignorance, would suffice to remove that ignorance. — *Patent Office Report.*

Retire early, and rise early.

INFLAMMATION OF THE LUNGS IN HORSES.

The transportation of live stock by railroad has been latterly much adopted on the principal lines in this country. It is, in many cases, cheaper to convey animals in this way, besides avoiding the great loss of weight which takes place, especially in fat animals, when they are obliged to travel to market. The present season, many horses destined for sale in New York and Boston have been brought to Albany by railroad from Western New York. On reaching Albany, it has been common for them to tarry several days, in order to appear in the market in the best possible condition. Many of these horses, while stopping here, have been attacked with inflammation of the lungs, which, in several cases, has terminated fatally. The disease has sometimes been so violent and rapid in its progress, that death has ensued within twenty-four hours. We are informed that the frequent occurrence of this disease in horses brought by railroad has been a discouragement to that mode of conveyance. Without pretending to a particular knowledge of the circumstances, we will venture to suggest that the primary cause of the disease is the confinement of the animals in a heated and vitiated atmosphere in the cars. Their sudden transfer to the open air, or to an atmosphere of much lower temperature, produces the effect so well described by Youatt: "The discharge from the skin is at once arrested, and the revulsion, or pernicious effect of the sudden stoppage of a natural evacuation, falls on the lungs, too much weakened and disposed to inflammation by heated air and poisonous fumes." The first difficulty is probably accelerated, in many instances, by overfeeding and want of exercise.

As a prevention of the disease, the better accommodation of the horses in their railroad transit should be the first object. The next should be to feed moderately, using constant care in regard to the protection of the animal from the effects of the changes of temperature, giving daily exercise, with good grooming. Should the evacuations from the bowels indicate constipation, the administration of simple catharties will be safe. A dose of Epsom or Glauber's salts — half a pound to a pound, according to the symptoms — may be given. But, in a disease of so important a character, it will be safest, when it makes its appearance, to intrust the animal to a skilful veterinarian. — *Albany Cultivator.*

IMPROVED STOCK — SHEEP.

Mr. Freas: On this important subject most intelligent farmers at this day manifest a laudable and deep interest. The position assumed by the agricultural press is rapidly arousing attention to it, and our farmers begin to *reason* and *act*, and to denude themselves of their old and long-cherished prejudices, in proportion as the light reflected from the page of science upon their path becomes more luminous and well-defined. As the natural consequence of this, we find that the annual fairs now held in most of the states for the promotion of agricultural improvement, are rapidly increasing in interest; a more decided and generous public spirit is obvious; the animals exhibited are more numerous and of better quality; and far greater pains is taken by farmers generally to render these important institutions worthy of the "great interest," and an honor to the states and counties of whose enterprise and prosperity they speak.

In reference to most valuable animals, the Sheep, the truth of the foregoing observations is strikingly apparent. The old coarse, long-wooled varieties, though possessing value for particular purposes, have already become nearly obsolete. Twenty years ago, no farmer anticipated seeing a Dishley, South Down, or Teeswater animal at these fairs, any more than the farmer of the present day dreams of seeing there the Cashmere goat or the Alpaca. I wish to be distinctly understood in this matter, for I am speaking not of particular localities, where the spirit of generous improvement and emulation dates from a period long antecedent, in point of time, to the commencement of the chronological segment above alluded to, but to the country in general.

At that time we had no agricultural press, and no George III. to encourage honorable efforts. But the fact is now happily far otherwise. Though, in most of the states and territories, legislators remain almost wholly inactive upon the subject, public spirit and enterprise, together with an ever-restless and enlightened press, are accomplishing much in our behalf, and will no doubt supply, in time, the want of legislative patronage and protection, at least to a considerable extent.

And now, Mr. Editor, as many of your agricultural readers are, no doubt, desirous of availing themselves of all the advantages which science and experience so liberally afford to the enlightened in effecting the improvement of their flocks, I beg leave to submit the following observations by that distinguished friend of agriculture, Arthur Young, in reference to selecting sheep. In the first place, Mr. Y. remarks "that the general principles which guided Mr. Bakewell in breeding a beast or a sheep for the butcher, explain his own stock, which is in the highest perfection when examined with an eye to these perfections."

1. "In all his exertions, his aim was to obtain that breed which, with a given amount of food, will give the most profitable meat; that in which the proportion of useful meat to the quantity of offal, is the greatest."

2. Points of the beast. On this plan, the points are those where the valuable joints lie; the rump, the hip, the back, the ribs, and, after these, the flank; but the belly, shoulder, neck, legs, and head should be light, for if a beast has a disposition to fatten, and to be heavy in these, it will be found a deduction from the more valuable points. A beast's neck should be square, flat, and straight, or, if there is any rising, it should be from a disposition to fatten and swell about the rump and hip bones, and the belly should be quite straight, for if it swells it shows a weight in a bad point. He prefers to have the carcass well made, and showing a disposition to fatten in the valuable points. So far on seeing.

3. Feeling. Mr. Bakewell, in order to decide whether a beast has the right disposition to fatten, examines by feeling. His friend, Mr. Culley, who has had an infinite number of beasts go through his hands, agrees entirely with Mr. Bakewell in this circumstance, and when with him in Norfolk and Suffolk, was surprised to find lean bullocks and sheep were absolutely bought there by the *eye* only. So absolutely is the hand necessary in choosing either, that they both agreed that if they must trust to the eye in the light, or to the hand in the dark, they would not hesitate a moment in preferring the latter. The form of the bone, in sheep, is quite hidden; it is the hand alone that can enable us to decide whether the back is flat and broad, and free from ridge on the back bone, or can examine, correctly, if the other points are as they should be. The disposition to fatten is discoverable only by feeling.

Speaking of the sheep generally, the points to examine are the same as in the ox -- flatness, breadth of back, a spreading barrel carcass, with flat belly, and by no means curved or hanging. The essential is the carcass, and a disposition to fatten in the

carcass, and perhaps to have the least tallow on the sides.

The keeping of sheep on most of the upland and hilly farms of this country is, generally speaking, a lucrative business. If selected with reference to their meat-making or wool-producing properties, and with a well-digested system of breeding and management, these animals are rarely debilitated by disease; it is principally owing to neglect and carelessness that they sicken. By most farmers the winter management of the sheep is deemed a matter of trivial importance, whereas the reverse of the proposition is true. If sheep are confined in large numbers, in confined and poorly-ventilated enclosures, with an inadequate supply of pure water, and with poorer food, the legitimate consequence is premature debility, disease, and death. At the period of producing their young, the most assiduous attention should be accorded to the dams. They should be provided with warm quarters, well littered and ventilated, and supplied with food of a generous and strengthening description. The young, when dropped, should be carefully looked after, and food calculated to invigorate the system, and to produce a healthy and vigorous action of the lactescent organs, be liberally supplied to the dams.

In the summer, and during those months when they are permitted to run at large, they require to be carefully watched, especially when depastured in large flocks. The free use of salt is highly beneficial, or a mixture of salt and ashes; and if the forage is shortened by drought, or of an ungenial or innutritious order, the deficiency should be supplied by daily feeds of grain, roots, or by soiling.

As a general rule, however, it is injudicious to crowd them together in large numbers, even where the pastures or ranges are spacious: it is better to divide the lintory into lesser divisions, and to appropriate to a certain number an allotted space. By so doing many unpleasant contingencies will be obviated. Shelter, even in summer, is essential, oftentimes, to the sheep. During this period, showers are often experienced, and exposure to drenching rains, during which the atmospheric temperature suddenly falls to a comparatively low point, often produces disease, and even death.

One error, and a very essential one, in the practice of farmers, I will here notice. After incurring a heavy expense in purchasing valuable animals, many proceed as if they supposed they had actually accomplished all that is necessary. Instead of providing good and secure pastures in which the animals may find abundant and nutritious herbage during their range and isolation from other flocks, they turn them into the highway to be crossed by breeds of inferior traits, and emasculated or half starved from a lack of timely and proper food. The consequence of this insane procedure is, that they are disappointed: the animals, so eagerly sought for and purchased at perhaps an exorbitant price, fail to realize their expectations, and all subsequent efforts, as improvement in that department, are prematurely and forever renounced. This is necessarily an injury to the community; it tends to induce scepticism and unbelief as to the legitimate merit and feasibility of the enterprise, and thereby to discourage all laudable efforts on the part of many who would otherwise have embraced an early opportunity to assist, by their own personal example and influence, the advancement of so good a cause.

A WASHINGTON COUNTY FARMER.

Seven Hill Farm, *July* 3, 1850.

— *Germantown Telegraph.*

In Cheshire, Mass., an apple-tree has borne from 90 to 110 bushels of apples in a season.

PROF. ESPY'S THEORY OF STORMS.

As some interest has been awakened here of late on meteorology, we propose to present our readers a brief view of the "*theory* of storms," called the "Espy theory" — so designated to distinguish it from another and kindred theory, named the "Redfield theory." The latter theory, presented by W. C. Redfield, Esq., of New York, is supported by Lieut. Col. Reid, of the Royal Engineers, and Dr. Dove.

Mr. Espy, in his theory, professes to explain all the phenomena of rain, hail, snow, waterspouts, winds, and barometric fluctuations. The following is a brief synopsis of his theory: —

1. Atmospheric air is subject to expansion, — either by heat or by a diminution of pressure.

2. Aqueous vapor is specifically lighter than atmospheric air, — its weight, under given circumstances, being only about five eighths that of air.

3. When a portion of air becomes lighter than the surrounding air, from expansion by heat, from being more highly charged with vapor, or from any other cause, it ascends.

4. Air, in ascending from a lower to a higher region, is subject to diminished pressure, and consequently to expansion.

5. The atmosphere is capable of containing, and does always contain, a certain quantity of water in a state of transparent vapor.

6. This capacity of the atmosphere for containing water increases much more rapidly than the temperature.

7. The quantity of water actually in solution varies greatly at different times and places, independently of the temperature; the air, at a given temperature, sometimes being filled nearly or quite to the extent of its capacity, while at others, it falls far short of it.

8. If, from any cause, the temperature of a portion of air, containing a given quantity of vapor, be reduced to a certain point, that is, at all below the dew-point, it must deposit a portion of the water.

9. Expansion, arising from diminished pressure, is attended by diminished temperature. The actual diminution of temperature, on this account, in ascending from the surface of the earth, is about a degree and a fourth for every hundred yards; and consequently air, highly charged with vapor, that is, with a high dew-point, would not have to ascend very high before condensation must commence.

10. The condensation of vapor is attended with the disengagement of a very large quantity — more than a thousand degrees — of latent caloric. In other words, sufficient caloric is set at liberty, by the condensation of a given quantity of vapor, to raise the temperature of a hundred times that quantity of matter (of the same specific caloric) ten degrees.

Heat is the life-giving element in this theory, as of every other storm theory. W.

— *Rural New-Yorker.*

Physical Influence of Habit. — Proficiency in all handicrafts is the legitimate result of the physical influence of habits. The blacksmith makes a nail, for instance, well and quickly only after many and often repeated trials. The hand and eye must be educated, habituated to the work, and then they cannot fail. It is so with all mechanical professions. The artisan, by a long apprenticeship, becomes acquainted with the use of the proper tools, and at last the master of his trade, and the habits then acquired, whatever may be his after situation, will influence his whole life.

NOTICES OF PUBLICATIONS.

The Farmer's Every-Day Book; or Sketches of Social Life in the Country; with the Popular Elements of Practical and Theoretical Agriculture, and Twelve Hundred Laconics and Apothegms, relating to Ethics, Religion, and General Literature; also Five Hundred Receipts on Hygeian, Domestic, and Rural Economy. By Rev. John L. Blake, D. D., Author of Family Encyclopædia of General Literature, and a general Biographical Dictionary. Auburn, N. Y.: Derby Miller & Co. 654 pp., octavo. — Among the most interesting and useful works connected with agriculture, this must hold a conspicuous and high rank. Besides a large amount of practical matter, it abounds in valuable articles and sentiments that tend to improve the taste and elevate the farming community. The work is executed in a neat and handsome style, and embellished with beautiful and very appropriate engravings. Dr. Blake has been long and extensively known as a popular author of numerous works, and we are pleased that, with the wisdom of long experience and the ripeness of vigorous age, he has given his attention to agriculture, and has commended and adorned it with his polished pen. This work should not only be in the library of every farmer, but it should hold a prominent place in the library of every family in the country; for it presents ably and truly the importance of agriculture, and the advantages and pleasures of rural pursuits. Our readers will recollect that we have presented them with a few interesting articles from this work, which were politely furnished by the author previous to its publication.

The Illustrated Domestic Bible, No. 2. — We recently noticed this valuable work, by the Rev. J. Cobbin. Fetridge & Co., 20 State and 132 Washington Streets.

Acts and Resolves of Massachusetts, for 1850, with the Rolls and Messages. — This volume contains 584 pages, showing that the long session of the legislature must have been a laborious one.

Circular of the Central Committee of the United States on the Exhibition of all Nations, to be held in London, 1851. Washington: printed by Robert A. Waters. — This is a pamphlet containing rules and regulations in regard to the great industrial show, with arrangements for forwarding articles from this country, all of which must pass under the inspection of the Central Committee, or a sub-committee appointed in each state.

Letters on the Extension of Slavery. — We are indebted to Hon. Horace Mann for his Letters on the Extension of Slavery into California and New Mexico, and on the duty of Congress to provide the trial by jury for alleged fugitive slaves.

Farmer's Guide. — We have the fifth number of this able and instructive work, from Fetridge & Co.

List of Premiums, and Rules and Regulations for the third Cattle Show and Horticultural Exhibition of the Maryland State Agricultural Society, to be held in Baltimore, Oct. 23, 24, and 25.

ACKNOWLEDGMENTS.

Of Mr. George Hyde, (of the late firm of S. & G. Hyde,) nurseryman, Newton, a box of Hyde's Late Black Cherry. This fruit strongly resembles, in appearance, the Black Eagle, and, like this fine variety, it is of a very rich and excellent quality. The Late Black is about a week later than the Black Eagle, and is a very promising kind. It is hardy and vigorous.

Of Mr. John Washburn, Plymouth, Knevette's Giant Raspberry. This is a large red berry, resembling the Fastolff in its general appearance. It ripens between the Fastolff and Franconia, and is fully equal to either of them in quality, having more flavor than the former and less acidity than the latter. It ripens between these two, and the plants are said to be more hardy than either of them, so that they will endure our winters unprotected. It is new and promising. Also Ironmonger Gooseberries, remarkable for vigor and productiveness. The fruit is not large, but the quality is better than that of extremely large kinds; yet it has not that very fine pulp, delicate flavor, and smooth, thin skin of Houghton's Seedling.

OUR GRANITE HILLS.

"Thanks be to God for the mountains."

BY MRS. SARAH J. HALE.

What glorious thoughts, what glorious themes
To mountain tops belong!
The law from Sinai's summit came;
From Sion, sacred song; —
And Genius, on Parnassian heights,
His banner first unfurled;
And from the seven-hilled city waved
The sword that swayed the world!
Then let us raise the hymn of praise;
To us the hills were given;
And mountains' tops are altars set
To lift the soul to heaven.

Though Europe's plains are crushed with chains,
As every tyrant wills,
Yet Freedom's light is flashing bright
Along Helvetia's hills!
And should our Eagle stoop his wing
O'er prairie, plain, or sea,
Mount Washington an eyrie holds
Of deathless liberty!
Then let us raise the song of praise —
To us the heights were given;
Our Granite Hills are altars all,
To lift our hopes to heaven.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own. — JOHNSON.

VOL. II. SATURDAY, AUGUST 17, 1850. NO. 17.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

THE CURCULIO.

THIS formidable insect has done immense damage this season, by stinging plums and other fruits. In some sections nearly all the plums have been destroyed by it. We have often recommended the use of salt as a remedy. It is not an infallible remedy or prevention, but it is usually a protection, and when it does not prevent the evil it lessens it.

A cultivator remarked to us, some years ago, that a plum-tree of good growth had borne no fruit, though it blossomed full every spring. We advised him to apply salt early in the spring, which he did for several years, and he had good crops of fruit. Recently he neglected to salt the tree, and the fruit failed.

Dr. S. A. Shurtleff has used salt around his plum-trees for many years with good success, both in preventing the operations of the curculio, and the black wart; and his valuable communications on this subject, which we published some years ago, have been very instructive to others.

A short time ago we were on the farm of Mr. Moses Jones, of Brookline, under whose skilful management almost every spot of earth and every fruit-tree yields well; and observing that his plum-trees were bending beneath their heavy and growing load of fruit, we inquired how he prevented the depredations of the curculio. He said that he jarred the trees morning and evening, and let the curculios go as they fell from the trees, and they flew away and returned not, as he supposed. His plan was remarkably successful, but as it is difficult to recognize these little insects, it would not be easy to determine whether his neighbors suffered from his driving, instead of killing the insects, from his trees. So a doubtful moral question is involved in this mode.

Mr. John Day, of Boxford, informs us that for some years his plum-trees, mostly the Green Gage, did not produce fruit, though they blossomed fully. This season he applied a small portion of salt to them in March, and in May, he applied more; and as he had several trees of the same kind, he thought that he would "kill or cure" in one case. So he spread around one tree, as far as the branches extended, a peck of salt, nearly covering the ground. The tree is three or four inches in diameter; it is so full of fruit that he finds it necessary to thin it. Other trees were salted less, and they have less fruit on them. Some of the fruit on this tree, which is a Green Gage, has been stung, but the operations of the curculio were abortive, as there have been no worms in the fruit.

The fruit might become impregnated with salt, so as to prevent the hatching of the egg, or the development of the young; or the curculio, on stinging the plum with its proboscis, might find the plum too briny for a nidus for its young. Without any regard to our suggestions, the facts communicated by Mr. Day favor the opinion of many that the prevention by salt is by its imparting a slight saline taste to the fruit, readily perceived by the insect, rather than by destroying the insect in the ground.

THE SEASON AND THE CROPS.

THE WEATHER. — May was a cold, wet month, and the spring was one of the most backward ever known. Fine weather commenced about the first of June, and since that time it has been very favorable for vegetation. It has generally been warm, and we have had a good proportion of rainy and fair weather. There has been no drought, and only once have there been symptoms of it; and even then the busy farmer wished for more sunshine that he might make hay.

THE CROPS have generally been good, or are promising. An abundant harvest will crown the labors of the skilful and industrious husbandman.

Hay. — This crop is one of the largest ever raised in New England. But farmers should be cautious, and not count too much upon it, and prepare to winter too much stock. Large hay crops do not spend well, and early in the season the grass was cut immediately after several weeks mostly of dull weather, and the hay, as well as the strawberries that ripened at that time, lacks substance and flavor. Old hay is mostly consumed throughout the country; and owing to several fine seasons for grass, there is a great deal

of stock in the land, and should it be low, an attempt will be made to winter an unusual amount; and should we have a long, cold winter, some will find that early in spring their cattle are not worth the value of the hay that they have consumed.

Rye is good, but a part of the crop has suffered from the unfavorable weather at harvest.

Wheat. — It is too early to determine how far this crop will be affected by the great evils, rust and the grain worm.

Indian Corn is rather backward, but it is growing luxuriantly, and gaining rapidly upon the season.

Potatoes have had a fine season, and they are making a good growth. From the last of June to the present time, August 8, we have had frequent rains, and generally warm, muggy weather, just the kind that predisposes potatoes to rot, and in many cases they are becoming affected, in some localities, to a considerable extent. Bright weather, like the present day, may check it. Though we do not consider warm, wet weather the primary cause of potato rot, yet we regard it as one of the principal predisposing or secondary causes, and one which is indispensable to its production.

Fruit. — Small fruits, such as strawberries, gooseberries, currants, raspberries, whortleberries, and blackberries, have been abundant, and this market has been well supplied with them for two months. They are delicious and wholesome, and fill an important place between the late apples and the early apples, pears, peaches, plums, and grapes. Owing to the cold, wet weather in May, the crop of cherries was very light. There is a fair prospect for a middling crop of plums. Pears vary from empty trees to those that are breaking down under their loads, where the negligent cultivator has omitted to thin the fruit. See Mr. Ives's communication, showing that while the cold, wet weather totally destroyed all prospect of a crop from some varieties, others wholly escaped. The prospect for pears is generally pretty fair. The Bartlett, the leading pear in this section, is rather thin, which led some to suppose that it would be large and fine, but there is a blast upon it in many places, giving it a rusty appearance. There is a prospect of the largest peach crop ever raised in New England. Some cultivators have expended much time in thinning their fruit. The apple is the most important fruit, as we obtain large crops with little expense, and it is in use nearly the whole year, both for the kitchen and for the dessert. Apple-trees blossomed full, and there was a prospect of one of the greatest of crops; but in warm situations in this region, and generally farther south, the blowth was before the cold, wet weather had passed, which caused great injury. But on high lands, and farther north, the trees did not blossom until we had pleasant weather, and excepting partial injury from the pelting of heavy storms, the season is favorable, and as is usual in *even* years, we shall have a good, though not very great crop of apples.

Farmers, as well as all others, have abundant reasons for gratitude to Him who giveth rain and sunshine, seedtime and harvest; and while we eat the fruits, may we remember whence every good and perfect gift cometh.

SOWING GRASS SEED — IMPROVEMENT OF GRASS LANDS.

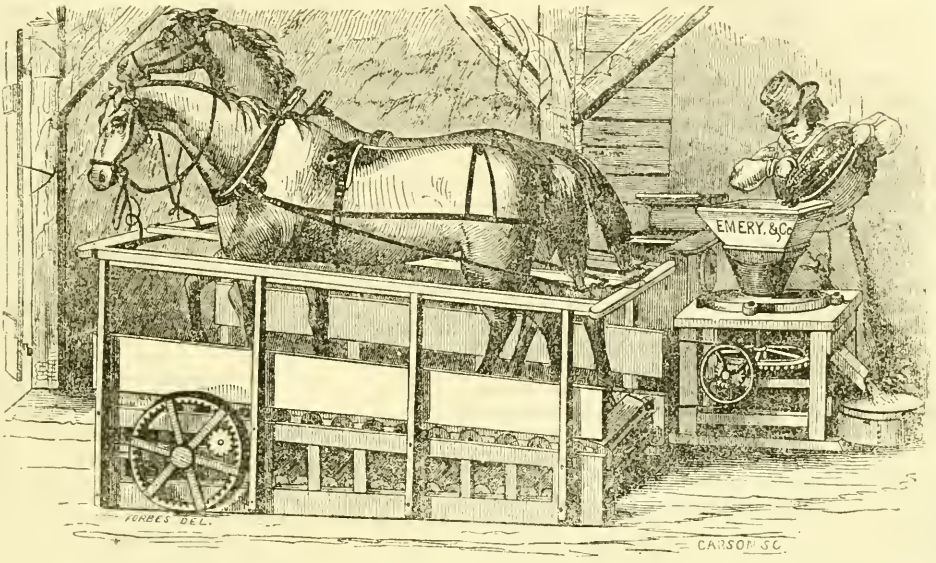
August is a very favorable season for sowing grass seed, especially when it is wet. It will answer to sow very early in September, but the sooner it is sown after the 1st of that month, the better. Omit the clover seed until March, as it is liable to winter-kill when sown late in summer or in fall.

Grass lands that need renovation, and are too wet for tillage, may be improved by ploughing, thoroughly inverting the sod, and laying it over smooth and even; then manure the land well, and harrow thoroughly, first lengthwise, then obliquely, so as not to turn up the sod. When finely and deeply pulverized, and the surface made level, sow grass seed, and then use a very light harrow or brush harrow.

If grass lands are smooth and level, and free from coarse, wild grass, weeds, bushes, &c., they may be improved by a good top-dressing, without ploughing. In some cases lands have been kept in high condition in this way for twenty years, at small expense, and the crops have been large. Under this management, good grass land will furnish means not only for its own renovation, but a still larger amount of manure for the improvement of other lands.

WATERING LANDS.

A loamy soil, that is much watered, soon becomes hard, the surface is glazed, rendered in a great measure impenetrable to the air, and consequently it is no longer capable of affording, in dry weather, the necessary nourishment to the plant. The sources of its fertility are obstructed. This may be better understood by some of our readers, when we state on the authority of Sir Humphry Davy, that a soil in the greatest degree absorbent, exposed to the atmosphere till it becomes dry to the touch, still contains moisture equal to one eighth part of its whole weight. This is discovered by subjecting it to a heat indicated by 300° of Fahrenheit's thermometer. Now, all water not chemically combined, but only "adhering to parts of the soil, is in constant use in vegetation," and the one eighth part referred to is of this kind. If we estimate common fertile soils, however, as containing only one twelfth part, then in four hundred pounds of soil, even when it is dry to the touch, we shall have thirty-three pounds of water in store for the use of vegetation; and it is particularly worthy of notice, that such soils, when deprived of a portion of this by plants, procure a fresh supply by constantly absorbing water from the atmosphere, where it exists in the state of vapor. In effect, a good soil is a perpetual fountain, even in dry weather. From these statements it must be evident that unless the ground is frequently cultivated, and kept mellow, so that between its particles the air can pass in, the latter cannot impart the moisture which it holds in solution; but when the soil is frequently broken, minutely divided, and prevented from conglomerating, it will acquire and retain moisture. — *Selected.*



NEW HORSE POWER AND GRIST-MILL.

This cut represents a new railroad horse power, on the plan of the endless chain, with a mill attached for grinding grain. It is got up by Messrs. Emery & Co., of the Albany Agricultural Warehouse. The horse power combines the best advantages of the endless chain principle for economy, durability, convenience, and for the ease, safety, and comfort of the laboring animals. The gearing is such that the friction is slight, and the machine substantial.

A good horse power affords numerous opportunities for substituting animal for manual labor; which is of great importance, as the former is far cheaper than the latter. The labor of a horse generally costs less per day than that of a man, and yet the horse, in labor adapted to his condition, will do six times as much as a man. A machine constructed like this which we have figured, is not liable to disorder, and its wear is so slight that the expense for repairs is but trifling.

The mill attached is allowed to be of the best construction, and it operates with efficiency and despatch when driven by this power. The price is moderate, and the whole construction durable, excepting the grinding plates, and a new set costs only $2.

ON FATTENING CATTLE AND SWINE.

The committee appointed to report on the best method of fattening cattle and swine would offer the following as their views on the subject. (The present year there has been no application for premium.)

Select the best formed cattle, from five to eight years old, of quiet disposition, and good appetite, inclining to fatten. After the spring work is over, commence giving them the best pasturage during the summer, also the best fall feed until they come to the barn; then feed them with good hay and Indian meal, at first from one to two quarts per day, gradually increasing till six or eight quarts are given, until they are slaughtered, or about fifteen bushels of meal to each animal. This process furnishes the largest weight, the best quality of beef, commanding the highest price in the market, and at the present prices, a profit to the owner.

Also, with respect to fattening swine, — select those weighing about one hundred pounds, which will cost about $5 each, purchasing corn at the common rates. Keep them in a large, roomy yard, with a good supply of loam from the road-side, and muck from the swamp, giving them a dry room to lodge in. Feed them with three quarts of corn per day for one year. This will give four hundred pounds of good pork, which has usually paid for all the corn and the first cost of the animal; and what is taken from the yard will pay well for all the labor which has been expended. For the committee.

JEREMIAH COLMAN.

Newburyport, *Nov.* 9, 1849.

— *Trans. Essex Ag. Soc.*

THE POTATO FLY.

The potato crops are suffering severely from the ravages of the "potato fly" — some patches, our own among the number, are almost stripped of their leaves. We do not know what effect this will have upon the young potatoes, as we are wholly unacquainted with the fly, not having, to our knowledge, ever seen any thing of the kind. Can some one enlighten us on the subject? Will some one skilled in agricultural matters point out the best mode of exterminating the insect? — *Decatur (Ind.) Gazette.*

Our readers will find an account of the potato fly in our paper of August 1, 1849. We know of no effectual remedy for the evil. The only way is to let it "bide its time;" it will probably disappear in a few years, as it has done in other places; and it is not often that the injury is very extensive or severe. We saw several patches of potatoes partially stripped of leaves by this insect in Northern Ohio the past month. — *Ohio Cultivator.*

For the New England Farmer.

PALMER'S IMPORTATION OF SHANGHAE FOWLS.

Mr. Cole: As much has been said in your excellent journal, and elsewhere, respecting the Shanghae fowls, imported a few years since by Capt. A. S. Palmer, for the Hon. Nathan F. Dixon, and also with regard to Mr. Dixon's present stock, that has not always been in accordance with the truth, I have deemed it important to place before your readers, and especially amateur fowl-breeders, a few facts, to correct the erroneous statements, false insinuations, and wrong impressions, that have come forth from your journal, to say nothing of any other.

After the publication of the articles alluded to, I addressed a note to the Hon. Mr. Dixon, calling his attention to those articles, and making inquiry with regard to the purity of his present stock, &c., &c. The following letter is his reply, and will set the matter in a clear light, and we trust supersede further conjecture: —

C. H. Pendleton, Esq. Dear Sir: Yours of the 26th ult. has been received, and it should have received an earlier reply, but other engagements have prevented. You call my attention to several articles which have appeared in the New England Farmer, upon Shanghae fowls, of which you have given me extracts. All I can say of them is, that those persons who have spoken of my fowls, have been very careless in the collection of their facts. Capt. Alex. S. Palmer brought me from China (I think in the spring of 1845) three cocks and three hens, which he procured and selected himself in Shanghae; and from these fowls selected and brought by Capt. Palmer I have bred.

I have kept them entirely pure, and where there was no possibility of their mixing with other fowls. The fowls which I gave you were the direct descendants from those which Capt. Palmer procured in Shanghae; they are the pure blood of that stock. The plumage of those I received was from very light to very dark red, no one of them white. Many of the chickens from that original stock, however, were white, and they were of all colors, from white to very dark red. I always bred from those of the same color with the original stock.

From the first year I received them, I have always kept twelve hens and a cock by themselves, from which I have bred, and (as you know) in a place where they could not mix with other fowls. The eggs and the chickens from that pure stock I have given to my friends all over the country.

Whether they are the best and purest of Shanghae fowls I know not, and care not; but they came from Shanghae, and were selected with great care, and those presented by me to you were their pure descendants. Yours respectfully,

Nathan F. Dixon.

Washington, *July* 12, 1850.

The information contained in Mr. D.'s letter is corroborated by the statement of Capt. Alex. S. Palmer, who informs me, that in 1845 he visited the port of Shanghae, and was particularly struck with the uncommon size of these fowls. He immediately determined to procure some for his friend Mr. Dixon, who, on leaving the United States, requested him to bring him something in the shape of live stock. He accordingly put on board two large coops of fowls, but succeeded in bringing home only eight fowls, the rest having died on their passage. The fowls, Capt. P. informs me, were not the "remnant of store fowls put on board his ship," as Mr. Morse incorrectly infers, or was informed, but were selected with great care, and imported *expressly* for the Hon. Mr. Dixon. None of those fowls, however, were of white plumage.

It was stated in one communication in your journal, that they ate fowls on board of Capt. Palmer's vessel, that weighed eleven pounds dressed. These, the captain informs me, were capons.

Thus much for Capt. Palmer's importation. In a future number I may say something with regard to the merits of Mr. Dixon's stock of Shanghae fowls. I will only add in conclusion, that the Hon. Mr. Dixon, to my knowledge, has kept his Shanghae fowls, from which he breeds, in a place where they could not come in contact with other fowls; and with his characteristic generosity, has gratuitously presented the eggs and fowls of his pure Shanghae stock to his friends all over the country.

CHARLES H. PENDLETON.

Pendleton Hill, Ct., *July* 23, 1850.

For the New England Farmer.

"FARMERS' CLUBS."

Mr. Cole: "The plan of creating public sentiment by means of popular assemblies seems to be the only one which promises success."

The above borrowed language is worthy of many illustrations. Virtuous principles and moral acts have accomplished much in the world's prosperity, and wherever virtue has strewed her seed, there the slow, steady progress of success has brought forth a rich harvest. Recall to mind any act in the annals of prosperity, retrace its history from its origin, and it will be seen that popularity and virtue has wrought in that its lovely masterpiece.

It is not our object at this time to portray a brief outline of historical events which virtue has accomplished. We wish to call the attention of your readers once more to a subject that may be found on the 45th page of the present volume of your valuable paper. We there gave our opinion, in a limited manner, on the vast importance of forming "conversational meetings," or "farmers' clubs."

The merchant, the mechanic, and almost every grade or class of profession have their associations; but the farmer, that most useful and important of all other temporal employments, upon the fruits of whose labors the world subsists — his associations, like others, are limited. What class of men is there whose energies should be more combined, more harmonized, and more universally diffused, than the hardy sons "who till the soil"? This work was given to mankind by nature; it was man's first employment upon earth, and has been pursued with eager intensity ever since the days of our father Adam. It is, then, a merited vocation, and should and must be sustained with universal magnanimity. Unlike many other vocations, the farmer's work has yet never attained unto perfection. His work is slowly and steadily progressing, gradually ascending, but has never reached the summit. Much has been done, and much is doing, to promote agriculture; but there is yet room for much more to be done before this work is brought to perfection. Can perfection in agriculture be attained? is an unsettled question. Whether it can be done or not, there is much advocated by agriculturists that would tend to accomplish this great end.

We have said, by way of comparison, that the farmer's associations are limited, or, in other words, "few and far between." This should not be. The topic for remark which here presents itself is very extensive, and were it not for the fear of trespassing upon the reader's patience, and the want of space, we would feebly attempt to elucidate some essential

points; but we forbear. Suffice it to say, that the farmer's residence is away from the din or noise of the merchant and mechanic; his residence is remote from country villages, where there is nothing to molest or disturb the quietude of nature. In these beautiful localities there is generally a district school-house. In what better way can farmers spend the long winter evenings than by meeting together in these little classic halls, to discourse topics which belong to their vocation? If this plan were generally adopted in all farming communities, much might be done in promoting the cause of agriculture; and we predict that by such means much more would be accomplished, and at far less expense, than what an agricultural school could accomplish; because in the one case, long, protracted experience will be given; while in the other, theories are to be taught, and results waited for, which, after all, will be theory more than practice; while in the former plan we not only have theory, but actual experience, from youth up to threescore years and ten. We believe the plan here introduced of forming "farmers' clubs," would be considered a sort of recreation, which would thus make such a society in every respect agreeable and pleasant.

Some years since, an agricultural society was formed in a neighboring town, and farmers in this section were earnestly entreated to join or meet with them, and some did become members; but they soon gave up their organization, and for what reasons? We know of none other than this, that the officers then and there chosen to preside over an assembly of stout, hardy, robust "sons of the soil," were men who were almost entirely ignorant of the science of agriculture; men whose employment has ever or principally been in the mechanic's shop, or in the merchant's storehouse. Is it any wonder that they should give up their organization, based upon such irregularities? It is an old saying, "Have a place for every thing, and every thing in its place:" but in this case it appears that things were greatly out of place.

Now, if societies of this kind were formed in all farming communities, and a full and accurate report made of their proceedings through the medium of some agricultural journal, much benefit might be derived; and we think that both old and young would take pleasure in meeting for public discussion. Perhaps it may be thought by some, that they are not capable of engaging in such an enterprise, because of their inabilities; but every person is capable of expressing an idea, and in societies like this, if formed among persons possessing ordinary faculties and means, (but farmers are generally an intelligent people,) it will not be expected that its members would express themselves in such logical or grammatical sense as would learned or literary men. It has been admitted by intelligent people that there is occasionally some impropriety existing between some speakers and their hearers concerning the power or abilities of one or the other. For want of space we must here break the thread of our subject and close this epistle. Perhaps the reader will treat it like an "idle tale that's told," or consider its contents "as void and empty as the wind that blows;" but we know that great benefit has been derived from agricultural societies, or "farmers' clubs;" and what we advocate is, that a more general diffusion of agricultural knowledge might be established.

Yours, &c., D. W. J.

Winchester, *August* 2, 1850.

There were manufactured in Rockland, Maine, formerly East Thomaston, the last year, nearly 700,000 casks of lime.

For the New England Farmer.

PEARS AND PLUMS.

Mr. Cole: In accordance with your request, I have drawn up hastily a few of those varieties of pears which were *not* swept off by the unprecedented blight which appeared upon the blossoms on the eve of their setting fruit. I will name them in proportion to the quantity of fruit set.

Bartlett, Golden Beurre of Bilboa, Buffum, Urbaniste, Lewis, Andrews, Thompson, Long Green, and Hacon's Incomparable. The following have scarcely set a specimen: Belle of Flanders or Flemish Beauty, Dearborn's Seedling, Belle Lucrative, Beurre d'Aremberg, Aston Town, Fulton, Harvard, Duchesse d'Angouleme, Van Mons, Leon le Clerc, Bloodgood, (this last I cannot find a specimen on any tree.) The Bezi de la Motte, *on quince root*, fruits well this season.

Our plum-trees, this season generally, are covered with the wart. It is still one of the, if not *the* most difficult subject to account for this ugly and pernicious excrescence. I have for three years past conjectured that it was owing to a want of congeniality of soil, particularly as Mr. Lackey, of Marblehead, whose trees have been free from it, grows them on very strong, retentive, and clayey soil. A gentleman from South Andover, who has been a successful grower of this fruit, and whose soil is of the above description, has this pest upon his trees for the first time. It has been said by some one, I think it was Dr. Harris, that the curculio will sting the branches. This insect, in its worm state, is found this season in these knots *while in a green state*, and it may be possible, as the plum set its fruit this season later than usual, that the fly, not finding its accustomed place to deposit its egg, *may have* perforated the bark, and there ejected it. I trust our many cultivators will investigate this subject, for if this scourge should continue for a few years, we must relinquish the cultivation of the numerous fine varieties of this delicious fruit. The *only* variety in my garden that is entirely exempt from the knots this season, is Sharp's Emperor, which is in a half-shady situation.

Yours truly, in haste,

I. M. IVES.

Salem, *July* 24, 1850.

For the New England Farmer.

VARIETIES OF CURRANTS.

Mr. Editor: I send you a few specimens of currants under cultivation, together with such facts in regard to their culture as have come under my observation.

The 1st specimen is the Morgan currant, and supposed by some persons to be the same with the Dutch currant. But I think it quite distinct, and it is characterized by its long pendent fruit stems, and trailing habit of the branches. It is a fine currant, of a strong and healthy growth.

No. 2 is the Champagne; and with me this variety is not a great bearer. Its fruit, as you will perceive, is very beautiful, and very acid, and probably is more valuable for wine than the dessert. Most persons pass it by in the garden, and leave it to be eaten by birds.

No. 3 is a production of the great English pomologist, Mr. Knight, and is distinguished for its large dark-colored berry, growing in clusters around the stems of the plant. It is a fine currant. Mr Knight's Early Red currant we have found to be not much earlier than the other varieties. We should

not think of cultivating it for this characteristic, and it possesses no other.

The Victoria currant is with me, as with most persons who have cultivated it, a very large, good currant, but not so early as some other varieties. The White and Red Dutch are good, and by some persons thought to be the best. Mr. Knight's Sweet Red may perhaps by some persons be considered a little less acid than the White Dutch, while others would not admit it. I should not cultivate it for its supposed comparative sweetness. The black currant, marked No. 1, is Ogden's Black Grape, a very fine medicinal currant, indeed. Those I send you are not as large as usual, in consequence of the bushes not being sufficiently pruned. No. 2 is the Black Naples, and by those who like the flavor of a black currant, would be preferred to the Black Grape, but is probably not so good for medicinal purposes. No. 3 is the new Missouri Hack currant, and when its fruit is ripe is pleasant to the taste. This currant is not to be confounded with the Yellow flowering ornamental Missouri currant common in gardens, which it much resembles.

We have several other varieties under cultivation, some as yet not sufficiently tested as to their value for general culture, and others, we think, will prove to be more ornamental than useful. I would remark, in closing this communication, that the Houghton gooseberry is deservedly becoming a great favorite, and I think we shall find it to succeed best when set on the north side of a wall or fence, thus affording it protection from the rays of the noonday sun.

Yours, &c., S. P. FOWLER.

Danvers New Mills, *Aug.* 1, 1850.

Remarks. — We are much obliged to Dea. Fowler for his valuable present of specimens. His accurate experiments and nice observations give importance to his opinions. The Morgan currant appears very much like Cushing's Seedling, which we cultivate. The latter bears more profusely than the Large Red Dutch, but the berries are not quite so large. We have not yet fairly tested it, as this is the first season that it has borne with us. — Ed.

For the New England Farmer.

RECLAMATION OF SWAMP LAND.

Mr. Editor: Having become a subscriber of your paper, I wish to inquire how to reclaim an old swamp, which in the days of my fathers was covered with pine, cedar, ash, and other timber common to the country. In ditching and digging for muck, I find decayed flags and other vegetables to the depth of from two to six feet. It is covered with brakes and wild grass, that are hardly worth mowing. I wish to know how deep it is necessary to drain, &c. Also, some remarks on the management of bees would be acceptable. Yours, &c.,

S. J. GILBERT.

Brownington, Vt., *July* 27.

Remarks. — In most cases there is a stream of water through the swamp; this should be deepened for a main drain. The depth of this drain should depend on various circumstances. We have noticed some cases in which it was necessary to cut the drain five or six feet deep at the lower part of the swamp, or where the water passed off, in order to have a sufficient drainage. In other cases a few feet in depth are sufficient. In some swamps there is but little descent at the surface, and a moderate fall must be obtained in the main passage for water.

After opening the principal drain, cut drains around at the margin of the swamp to receive the water from the high lands. If the swamp is small, these drains, with a few to carry the water directly from the marginal to the main drain, will be sufficient. If it is a large swamp, it will be necessary to make drains about three or four rods apart, and they should run through springy places, if such there are.

When the land is well drained, the bushes, old logs, stumps, &c., should be cleared up and burned, and the ashes scattered. When the land has become dry, plough it; if too wet to plough, dig up and burn the hassocks, brambles, weeds, &c. Whether ploughed or not, haul on a few inches of gravel, sand, or loam. Add a good dressing of manure, harrow well, and sow to herdsgrass and redtop the last of August or first of September. If you would have clover, omit sowing it till the next March. If the land is too wet to haul on gravel in the summer or fall, attend to this in winter, when the ground is frozen.

If the mud is only two or three feet deep, it is better to sink the drains into the hard earth, as this will give a much better drainage; but if the mud is very deep, the drains should be made a good depth, as the water will drain off slowly through a mud or peat soil, and the soft soil, that has almost floated on the water, will settle much after it is drained off.

SEEDLING CHERRIES.

If we could raise some of the best varieties of cherries from seed, without budding or grafting, as we do many kinds of peaches, we should accomplish an important object, both in getting more hardy trees and saving the labor and risk of budding and grafting; which processes are more liable to fail in the cherry than in other varieties of fruit, particularly that of budding. — *N. E. Farmer.*

If our friend Cole could visit our grounds at this time, he would see that the important object which he suggests can be accomplished to a considerable extent. A very large per cent. of seedlings raised from the pits of the Bigarreau of Downing have proved to be equal in quality to our most popular varieties. In most instances they seem to be hybrids between the Bigarreau and Black Tartarean, though generally inclining towards the former. Their periods of ripening are equally various, extending through the whole cherry season. None have ripened quite as early as the Purple Guigne; the Doctor comes in with the early white-heart.

Most of them have improved from year to year, as the trees have advanced in age and size. A few have run back to the diminutive mazard.

In order that they may have a full investigation, and that none be introduced prematurely to the public, we have invited several of our best pomologists to scrutinize them, and in due time descriptions and reports will doubtless be made. We shall in no instance put forward any of the varieties, but leave it for the work of disinterested persons.

We have some thirty or forty varieties in fruit at this time, which, so far as we can judge, will range as

high as the American Heart. Several are equal to any known kinds.

There is no obstacle to stocking not only the gardens, orchards, and waste grounds, but even the public highways in dry, sandy, or gravelly locations, with profusion of the finest of cherries. Against our own lands we have set a row as far as the highways extend. They may tempt boys, but we choose to have the youngsters enjoy a good treat of fruits. — *Family Visitor.*

PROCURING WATER BY THE USE OF THE SIPHON.

Friend Bateham: Many farmers experiencing much inconvenience in consequence of a deficiency of water for their stock, or its situation being remote from the barn-yard, I herewith, for the benefit of the readers of the Cultivator, send a description of a watering place I have recently constructed.

My farm not being supplied with constantly running water, and it being very difficult to obtain by digging, I have turned the water from off my barn into a well near by, which affords but a small supply of water, and by means of a siphon about three hundred feet long, the water is conducted into a trough the same distance from the barn. The well is near twenty feet deep, and the end of the pipe, where the water is discharged, two or three feet lower than the bottom of the well. For the purpose of putting the siphon into operation, a small pump is attached to the discharging end, by which means the air is exhausted, and the water will continue to flow for several months, when perhaps air will accumulate at the summit, and the pump again be required.

To insure success, much care should be taken, in laying the pipe, to prevent undulations or sudden curves, else air may accumulate in the pipe, and the water eventually cease running.

To prevent a waste of water when the supply is not copious, a valve is fitted to the discharging end of the pipe, to which is attached one prong of what might be termed a forked lever, (eighteen inches long,) while the other is fastened, by means of a hinge, to the end of the trough, immediately below the valve; to the other end of the lever is attached a float, resting on the water in the trough, (a white lead keg answering a good purpose.) When the water is exhausted in the trough, the float is lowered, by which means the valve is opened and the water commences running, and when the trough is by this means again filled, the float is raised, and the valve again closed; thus acting as a self-regulator.

To prevent freezing in winter, a partition is placed near one end of the trough, with a small aperture at the bottom to admit the water to freely pass, and the end containing the regulator embanked around by earth, and securely covered.

From various experiments, I have ascertained that by means of a siphon, water may be raised from twenty-five to twenty-eight feet; although theory demonstrates the atmosphere as being capable of elevating it near thirty-four, yet, in practice, it is found that the above distance is the greatest elevation attainable by ordinary means.

A pipe of one half inch calibre answers a good purpose. My siphon has now been in operation about four months, and I think it will continue to operate as long as the water is sufficient. Any information, of which I am in possession, will be freely communicated, by letter or otherwise.

DAVID FAWCETT.

Salem, Columbiana Co., 2*d mo.* 28*th*, 1850.

Remarks. — We have deferred the publication of the foregoing communication for several months, with the expectation of procuring a drawing and engraving of the very ingenious apparatus it describes; but finding some difficulty in obtaining these, we give the description alone, as it is very clearly stated, and, we believe, will be readily understood by all who are sufficiently familiar with the principles on which it operates, to be likely to desire any thing of the kind. And, indeed, there are not many persons who have a well so situated that water can be drawn from it by a siphon, as it requires the surface of the ground at the discharging end of the pipe to be lower than the water in the well. See the operation of the siphon explained in our last year's volume, page 103, where reference was made by inquiry in regard to the foregoing case, but the amount of fall was not correctly stated in the letter of inquiry. — *Ohio Cultivator.*

ON COLTS.

The committee on colts, having attended to their duty, report: —

Twenty-four colts were entered for premium, from one to four years old. Some were not in the pens, and others had no attendants to show them, or give any account of their training or pedigree.

As there were but four premiums to be distributed, one to the best colt of each class respectively, they recommend the following award, viz.: —

For the best four years old colt, to Rufus Pray, of Newbury, $10.

For the best three years old do., to Baily Loring, of Andover, $8.

For the best two years old do., to Nathaniel Boardman, of Danvers, $6.

For the best yearling colt, to Samuel Tucker, of Hamilton, $4.

We cannot leave the interesting subject of the horse, without a word or two upon the importance of this animal to the public; of encouraging the raising of the best kind, and the best mode of training.

Of all our domestic animals, the horse stands in the foremost rank. Although steam and railroads have lessened the necessity of his aid, they have not lessened his value in the market, or the pleasure which he still affords to those not so much bent on business and gold, as amusement and healthy exercise.

The labors of the horse seem to be changing from year to year, and have in some degree been mitigated. If we look back but a few years, we find him travelling the bark-mill from morning till night; and before the invention of steam engines and railroads, he was destined to perform the very arduous labors of the stage-coach, in the duties of which, from high feeding and hard driving, he was soon worn out. But the modern application of steam seems to be sent in mercy for his relief. If steam has not entirely superseded the use of the horse for the work, it has certainly very much curtailed the requirement of this kind of labor. He is now mostly used for pleasure riding, and short excursions, requiring the cultivation of different features and qualities than those heretofore demanded. Speed and activity are the qualities sought for now, in place of strength of body and limb, which are better fitted for the draft.

The horse is susceptible of the most perfect training, and can be made to know your wishes almost before they are expressed, and possessing great activity and strength, when properly encouraged, will use them to the utmost of his power. The attachment of the horse to his master is well known, and a reciprocity of feeling between the horse and his keeper

is frequently very great; but we are sorry to know he is sometimes most grossly and wantonly abused.

The horse, though, when kindly treated, he will manifest great attachment and perfect obedience, submitting to severe labors, will sometimes exhibit great and provoking obstinacy. This leads to cruelty, and sometimes unmerciful beating.

From experience and observation, we are fully satisfied that whipping only increases the difficulty, and makes him more obstinate. Although it is somewhat difficult to command one's temper, when the horse, knowing your wishes, persists in refusing to obey, still I am satisfied that kindness will sooner bring him to obedience than an opposite course of treatment.

When in full health and plight, he will be as fond of moving forward as you are to have him do so. A little patience is much better than the whip. We once asked a horse-dealer how we should manage a contrary horse. He replied, "Never let him know but that he behaves just as you want to have him."

Horses are often made vicious in breaking, as it is called, and in training, when young, by bad management. In breaking colts into the harness, they should never know that they can break away. When convenient, the younger you begin with them the better. Accustom them gradually to the halter and harness.

The halter, in the first place, should be so strong that they cannot break it when made fast to a substantial post. They will seldom try its strength more than once or twice; and the same with any part of a harness. If they find they can break a halter, it is seldom forgotten, and becomes a very vicious habit. After two years old, they may be placed by the side of a steady horse, and afterwards in a light carriage, followed up every day for some little length of time.

In shoeing the first time, be sure you get a good, strong smith, that will hold the foot as long as he wishes; not too long at first, lest he should be weary. Horses are not unfrequently very troublesome through life by a fault in first shoeing.

The signs of a good road horse, and for speed, are, a small head, a short back, and flat legs. Something may be known by the countenance, which cannot well be described. A bright full eye, wide nostrils, and a projecting wide forehead, may be considered some of the signs of courage and long wind. The color of horses depends somewhat upon fancy; but bay, dapple gray and black are the most preferred in our county.

The three greatest and most common faults to which horses are liable, are stumbling, kicking, and shying. We know of no remedy for the first. The second may be avoided by using him to the harness about his haunches and head, when out of the carriage, and when he can do no mischief. Shying may be quite benefited, if not cured, by stopping and moving slowly by the object, instead of urging the horse to breast it at once.

The Arabian breed of horses are attracting some attention in our county. They have not yet come to years quite sufficient for use. They promise speed, courage, docility, and an exemption from most of the principal faults of road horses.

The growing of this kind of stock in our county is, at the present time, receiving great attention, if we may judge from the number at the show. We believe it to be as profitable as any other stock, as very few horses, at four years old, are worth less than from seventy-five to one hundred dollars. The demand and the value have not lessened, but rather increased, since the introduction of railroads.

Now, let us bespeak for this noble animal kind treatment, good keeping, and light burdens. With such gentle usage, the horse will love and serve you faithfully for twenty-five, forty, and even fifty years. Do not maim or disfigure him by the cruel practice of pricking, nicking, or even cutting off a single hair, which the Author of nature has furnished him with for his special accommodation. And good taste will require, that in his natural garb and form, he actually shows the best, and is the most comfortable to himself. Curry and groom him every day, and give him a blanket and a warm stable in cold weather, and clean straw to lie on. Talk to and with him, for he will soon understand your language, and manifest signs of recognition, or the tenor, at least, of your words.

Horses like to be petted, and words of encouragement, we will again repeat, are better, under all circumstances, than the whip.

For the committee.

R. A. MERRIAM.

Salem, *Sept.* 27, 1849.

— *Trans. Essex Ag. Society for* 1849.

SUGAR GROWING IN LOUISIANA.

The Baton Rouge Advocate of July 11, after speaking favorably of the high lands in the States, as adapted to the cultivation of the sugar-cane, says, —

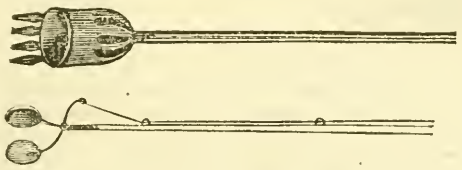
The last two years have brought a vast cultivation, more, perhaps, than for any previous ten years. In this section, the sugar mill is rapidly taking the place of the cotton gin; the unoccupied lands are coming into cultivation, and even the worn-out and abandoned cotton fields are found well adapted to the raising of this crop. There are now being erected, in this vicinity, no less than fifteen sugar mills, at probably an average cost of $10,000 each. This will bring into cultivation not less than five thousand acres of land, throwing into the market one hundred and forty thousand hogsheads of sugar, which will find its natural transit through Baton Rouge.

Agriculture in New Hampshire. — A state agricultural fair is to be held at Concord, N. H., on the second and third days of October next. A large number of premiums will be awarded in all departments of agriculture and mechanics. The premiums are large for the first effort, varying from one to twenty dollars, and the committees are large and well chosen. The fair is got up under the auspices of the N. H. State Agricultural Society, recently formed.

Fallen Fruit. — Be very careful to gather all punctured or decaying fruits, whether on your trees or on the ground, and give them to your hogs. If you do not, the worms which they contain, and which have been the cause of their premature decay, will make their escape into the ground, and you will find the evils which await their visitations increase upon you another season.

Agricultural. — The Delaware State Agricultural Society has passed resolutions, protesting against the Canadian reciprocity bill, and advocating an agricultural bureau at Washington.

A Big Calf. — Dea. David Alden, of Southboro', lately killed a calf, that weighed, when dressed, *one hundred and seventy-five pounds.* Has any one beat this, or even equalled it?



FRUIT GATHERERS.

The upper cut represents an implement made of tin or sheet iron. It is composed of a cup attached to a handle, with teeth on one side the cup, between which the stem of the fruit is received, when it is forced from the tree, and falls into the vessel prepared for its reception. In this way, fruit may be gathered from high and extended limbs without bruising, to which it is liable in falling from the tree.

The lower cut represents an implement composed of two cups of tin or other light material, of sufficient size to receive a large apple, attached to iron arms, which are fixed at the end of a light pole. A string passes along the pole, and is fastened to one of the arms, and when it is drawn by the operator, they close upon the fruit, which may be easily taken from any part of the highest tree without the least injury.

PRUNING SAW AND CHISEL.

This implement is very convenient for pruning trees of elevated or high branches. The blade of the saw is about a foot long, with one end attached to the blade of a chisel, and the other to a projection from the socket. The chisel is several inches wide, very thin, and of the best material. This combined implement is attached to a pole of suitable length, so that a person can stand on the ground and trim his trees with convenience.

USES OF SEA MUCK.

The Agriculturist for July, in an article on manures, speaks thus of the beds of sea muck formed or forming on the shores of this country: —

There is enough of these deposits, in New Jersey, to fertilize no inconsiderable portion of its hungry and impoverished uplands. The same is true of most of our sea-washed coasts. Millions of wealth lie buried in every marsh and stagnant pool, which needs but half the capital and energy devoted to the exhumation of California gold, to develop equal wealth, and with far more certainty.

There are various ways of compounding and applying sea or swamp muck to the soil. The simplest way, and one as generally profitable as any other, unless other fertilizing matters can be made by the addition, is by throwing it up in heaps for partial drainage and decomposition before applying; or if the land be a hungry, silicious (sandy or gravelly) soil, apply it as soon as taken out of its bed, when sufficiently dried for economical removal. The sand will seize upon this new food with great avidity, and will rapidly decompose and convert it into vegetable manure. The salt in all such as is exposed to the ocean tides will add materially to its value for manure.

If the application is to be made to clays or adhesive lands, then the muck should first undergo partial decomposition. To effect this, several modes may be adopted. It may be most advantageously thrown into the cattle-yards and pens, or privies, to absorb and become incorporated with the urine and droppings; or it may receive the wash of the house, the road-side, the offal from slaughter-houses, melters' shops, tanneries, woollen manufactories, and the like. In this way, it becomes decomposed and every way fitted for the greatest utility; but it also acts as an absorbent, or a strong box to hoard those soluble or volatile matters that would escape into adjacent rivulets, or evaporate in the air. The value of this material, when applied in this way, is incalculable, and it should always be used to the fullest extent of its useful agency.

But when at remote distances from the cattle-yards, or it is wanted in quantities much beyond what can be prepared in this way, we have found lime (unslaked, or quicklime) to be the most efficient decomposer of these muck beds. They are frequently filled with hard, fibrous, wiry roots and stalks, which might lie undecomposed for years in many compact soils. But when brought into contact with lime, all those and similar matters are readily converted into finely divided manure, which is capable at once of yielding its nutritious substance to the growing plant. This mixture may then be added to other manures, or applied on any soils or crops with the utmost benefit.

ROSE CUTTINGS.

One of the best methods of securing the success of these, is to stick the cutting about an inch deep into *clean* river sand, with properly prepared soil about an inch below, to receive the roots as soon as they strike. The clean sand prevents the roots from rotting. A correspondent of the Horticulturist succeeded with this when every other mode failed, and says he does not lose one in twenty.

We would add, that if the cuttings are thrown into water for a day or two, they are much more likely to grow. They should of course be placed under glass during winter and the continuance of frost. The last half of this month and the first week of next month is the time to set out. The cutting are necessarily of this year's growth. — *Telegraph.*

Domestic Department.

Young Females. — The increasing privileges which an illumination has conferred upon our sex, exceedingly heightened their responsibilities. Formerly, to be "faithful over a *few* things" was all that their limited sphere required; now they are both qualified and expected to be made "rulers over *many* things." The treasures of their own minds are revealed to them, and they are summoned forth as laborers in the wide field of benevolence. The temple of science is no longer inaccessible to the foot of woman. From its pavilion, whence, with Moslem jealousy, she was for ages excluded, a voice addressed her, "Enter in and live." Of treasures which had been from ancient times accumulated, yet strictly sealed from her eyes, she is invited to partake. It remains to be proved in what manner this invitation will be received — this admittance valued. Will she loiter at the threshold of this magnificent temple? Will she amuse herself in its courts by gathering its brief flowers that spring up where there is no deepness of earth? Will she just enter the gate, and proclaim, with the shrillness of vanity, her own invitation? her own proficiency in the mysteries of knowledge? Or will she press to the innermost shrine among those true-hearted and meek-souled worshippers, "whose candle goeth not out by night"?

Young females, these interrogations are emphatically for *you*. With you it is the time of culture, the day of hope. Suffer not the allurements, the temptation of indolence, to prevent your oblation on the altar of wisdom. Come while the dews of the morning are fresh about you. The meridian may absorb your vigor, or find you toiling in different and more sterile fields. May you not be constrained to adopt the lamentation, "My own vineyard have I not kept." A time will come, should your days be prolonged, when life may seem like a twice-told tale, — when, the present and the future disrobed of the novelty, the mind will turn for enjoyment to the past. Lay then a deep foundation, and collect a story of imperishable fruits for this season of retrospection, convinced that "knowledge is power." Seek it when it may be obtained, and so use it that all within the sphere of your influence may be prompted by your example to the attainment of moral excellence, to the pursuit of "glory, honor, immortality, and eternal life." — *Mrs. Sigourney.*

Elderberry Pies. — A correspondent, H., dating at Somerville, St. Lawrence county, New York, sends the editor of the American Agriculturist the following receipt for making pies from black elderberries. As this berry is pretty abundant in this region, we may serve a good purpose in publishing it.

It may not be generally known that the fruit of the common black-berried elder (*Sambucus canadensis*) affords a most delicious and wholesome material for pies. When rightly prepared, it would not be known from those made from the whortleberry, and many would prefer them to the raspberry and the blackberry. A tablespoonful of vinegar should be added to each pie, which will neutralize the peculiar taste, and impart a pleasant acid flavor. No other precaution need be taken, and no difference is observed in preparing them for use.

The red-berried elder is poisonous, but cannot be mistaken for the other, because it ripens its fruit long before the black elder comes to maturity. When this very abundant berry is better known, it will be more highly prized, and doubtless would improve in quality under judicious cultivation.

Youth's Department.

A Word for the Boys. — In attempting to point out some of the evils attending other branches of business, I did not intend to be understood as intimating that the farmer was *without his* difficulties. But the great truth which I would, if possible, impress on the minds of the youthful part of the agricultural community is, that the farmer has, on the whole, fewer evils and temptations to encounter, and has within his reach more of the means of substantial and lasting happiness, than any other inhabitant of this beautiful world — yes, this beautiful, glorious world of ours, for so it is, notwithstanding what all the croakers may say to the contrary. But labor is his destiny, and this we do not wish to deny or conceal. Indeed, it seems to have been the original intention of the great Creator, that man should spend his days on earth in constant labor and exercise. For what does the good book say? — that he was put into the garden to sit under the shady trees all day, and when he was hungry, merely to stretch out his hand and pick up the fruit? No; it says no such thing. It says, "The Lord God took the man, and put him into the garden of Eden, *to dress it and to keep it.*" Whether or not he performed that part of his duty well, we are not particularly informed; but as we have an account of his doing *one* "thing that he ought not to have done," I think it is very natural to conclude that he might have "left undone *some* of those things which he ought to have done," and that, in fact, it may be barely possible that if he had been busy "keeping and dressing" his garden, he might have been out of the way of temptation. Be that as it may, it is very certain that in our day there are many gardens and farms which bring forth "thorns and thistles" most abundantly, "for the sake," or at least in consequence, of the indolence of their occupants; and I believe these are the kind of men most likely to be found in the employment of the *Old Serpent.*

This brings us, however, to another *great truth*, which mankind have been and still are to this day slow to believe, namely, that *labor is not an evil*, but a great and incalculable blessing. Doubtless it may be, and in some cases is, carried to excess, and wears out the man prematurely. Notwithstanding, that constant labor, day after day, is a blessing, and not an evil, is a great truth, which should be impressed on the mind of every man, woman, and child. But that we may know and feel that labor is really and in truth a blessing, the mind and the body must both labor together; and this carries us away back to when I was talking about "food for the mind." Here lies the great secret, the "philosopher's stone" that turns all the iron into gold — food for the mind — or more properly, perhaps, work for the mind. The body cares nothing for work, nor heat, nor cold, nor rain, nor snow, provided the mind too is at work. But when working alone, the body tires, and the mind, for the want of better employment, soon begins to sympathize with the poor body, and both get into a bad fix. On the other hand, the mind cannot long work alone. The body, when left idle, soon becomes enfeebled and diseased; of this, the pale faces and slender forms of multitudes of students and professional men afford the most melancholy and conclusive evidence. Now, the only proper system of education and practice, through life, is, that both body and mind work together; for experience proves that they are mutually strengthened and invigorated by constant exercise. And mankind are beginning, though slowly, to profit by the experience. And I think that even a boy may satisfy himself, by a little reflection, that these things are so. Suppose you were

to be allowed the privilege of cultivating an acre of land in corn for your own especial benefit, with plenty of manure, and time enough to do it in the best possible manner — and if you could obtain a premium on it from the Agricultural Society, that too should be yours. You would then, of course, like to know how those men who have raised great crops of corn have managed; you would probably look over, carefully, the back numbers of the Central New York Farmer, and perhaps those of the Cultivator and the Genesee Farmer, if you could obtain them, and get all the information you could; then you would take the course which you thought, on the whole, best suited to your particular piece of land, and go to work. Suppose, now, that your corn should come up and grow finely, and flourish even beyond your highest expectations, and that finally it should be allowed that yours was decidedly the best corn in the neighborhood, and probably in the county. Think you it would be *hard work* to tend that field of corn? — to plough it, manure it, plant it, hoe it, and nurse it throughout? I think not. I believe you would say the happiest days you spent that summer were in that field of corn — and why? Simply because your whole mind was engaged in the thing — or, in other words, was at work. And a scientific practical farmer would have his mind constantly and as pleasurably engaged in the management of his farm, and in fact much more so, in consequence of the great variety of objects that would engage his attention. But we must begin to apply all this to the every-day practice of a farmer boy, viz., to assist him, in some measure, to increase his present and future happiness, by furnishing food for his mind, or setting his head to work. I fear, however, that my young friends will think me more prolific in words than wisdom, as I have again reached the end of my sheet without coming to the end of my subject; but if their patience is not entirely "used up," I will, if opportunity permit, try my pen once more, and endeavor to be as brief as possible.

UNCLE JONATHAN.

— *Central New-York Farmer.*

Health Department.

A Plea for Cold Water. — Not half the benefits of *cold water* have yet been told. From a work printed in 1721, Dr. Manwaring says water is the most wholesome of all drinks — being appointed for man in his best state, and being the natural drink of all animals; for it cools, moistens, and quenches thirst, and conveys the nourishment through the smallest vessels of the body. It requires little caution in the use of it, (except in very hot weather,) since none are tempted to drink it to excess. Water-drinkers are found to be the longest livers, and seldom complain of diseases. Dr. Keill says water is better fitted to promote digestion than other drinks; while spiritous liquors weaken the organs of the stomach, and thus impede digestion. Water, says Dr. Bayard, concocts our food better than any spiritous or fermented liquors. Dr. Pratt has shown, that people who use cold water as a drink, are wholly or far more free from palsies, apoplexies, giddiness, trembling, pains of head, piles, rheumatism, &c.; and it is known that these diseases are most incident to those who freely use strong drinks. He also says that pure water strengthens the stomach, gives an appetite, preserves the sight, and cleanses all the passages of the body. Dr. Duncan asserts that they who are content with water have more health and strength than others; and that strong liquors raise the heat of the stomach too much; make the blood unnaturally, and therefore injuriously, hot — and that the blood, so inflamed, causeth indigestion, and various pains, vapors, rheums, ulcers, and premature death. Sir John Floyer says water-drinkers are prudent and moderate in their conduct — they are free from diseases which affect the head, and from a fetid breath. He states cases in which the use of spring water has effected cures by washing off the acid humors from the blood, giving strength to the stomach and bowels, and creating a good appetite and digestion.

Sir Thomas Eliot declares in his book, "Castle of Health," that the poor people in his vicinity seldom drank any thing but water, and that they were strong, free of most diseases, and lived to a great age. He says, when he was in Levant, where the use of wine was forbidden, as the people were Mahometans, he did not drink it; and found he had a better appetite and digested his food better than before, when he often used it. Dr. Harvey says it is not so much heat which causeth indigestion, as a liquid provided by nature, and which dissolves the food, is depraved by spiritous liquors; and he commends water above all other drink, to promote digestion. Water-drinking is a preventive of the gout, and of hypochondriac complaints, but both are produced by the use of fermented liquors. It has also proved a cure or a preventive of several painful diseases. It should be the regular drink of man and woman; and it should be given young children to drink, as well as for a bath. It also makes the mother a better nurse than *toddy* or wine, or any spiritous cordials; and who does not know the value of water in bruises and sprains? Besides all which, water is cheap, and will not give indirect pain to the wife or children. — *Selected.*

Mechanics' Department, Arts, &c.

To color Pine to imitate Black Walnut. — Every kind of wood is easier colored than pine, because there is so much rosin in it, which prevents the dye from entering; but the Scientific American gives the following directions for doing it, which may be new to some of our readers: The pine should be perfectly free of knots, (as they will not color,) and a strong solution of hot logwood, boiled in a vessel for three hours, rubbed carefully all over it, and then allowed to dry. It would be better to have a large vessel of strong liquor, in which to steep the pine for a few days, such as an old molasses cask. After the logwood is dried, a solution of copperas should be applied in the same way as the logwood, which will make the color quite black. By using a strong solution of sumac in place of the logwood, the wood will become quite dark when it gets the copperas put on it, but it will not have the rich appearance of the logwood color. By using alum in place of copperas, a purple kind of color will be made upon the wood.

To make Whitewash that will not rub off. — Mix up a pailful of lime and water ready to put on the wall, then take a quarter of a pint of flour, mix it up with water, then pour on it boiling water, a sufficient quantity to thicken it; then pour it, while hot, into the whitewash. Stir it well together, and it is ready for use.

The fetters of rhyme are no more than a bracelet to the true poet.

ECONOMY.

Teach children economy, both by precept and example. Economy is one of the main pillars of success and reputation in future life, as avarice is its bane.

The grand element, after superior talent and good sense, in the character of Washington, Franklin, the Adamses, and nearly all our revolutionary worthies and their predecessors, and with equal justice we may add, their successors also, was economy — economy in its broadest sense, economy of time, of opportunity, intelligence, and advantages, equally with economy of money.

Without economy, Franklin would have had no time nor money to acquire the stores of information he had treasured up, and that stood him in such good stead in after life. Franklin agreed to board himself for half the amount allowed his fellow-apprentices. He bought bread, raisins, and other simple, nutritious, and easily-digested food, which he could eat without cooking. The consequence was, he had despatched his meal in the printing-office before they had reached their boarding-house. All the remainder of the time occupied by the more laborious meal was by him devoted to those acquirements which subsequently delighted the literary and scientific world. What was saved from his food, furnished the only means he could command for the purchase of books. Thus half the money spent by his fellows on board, amply supplied him with both mental and physical food.

Had Franklin been the low-minded, needy gormandizer, dependent on any greedy schemer or paltry politician for the means to gratify a loathsome appetite, he would have succumbed to the popular clamor when almost universally assailed. But after inviting all his objectors to his frugal repast, — a dinner of plain boiled Indian pudding without dressing, — of which he partook heartily, while their pampered stomachs turned from it with disgust, he showed them his independence of popular support, and that even then he had purposed that self-dependent, *self-dictated* course, which was destined afterwards to challenge the admiration of both hemispheres.

The untiring activity, enterprise, and economy of Washington enabled him to devote the seven long years of the revolutionary war to his country's service, without pecuniary recompense. By the practice of these virtues, he had acquired the ability largely to augment the gift of a patriotism so opportune, and so almost indispensable to a suffering nation.

Arnold had his morbid, undisciplined, clamorous appetite to pander for; and without strong moral principle to uphold him, rapidly ran through a career of extortion, peculation, and robbery, till he was fitted for the last great leap into the abyss of infamy, long before prepared for him by the arch tempter, who had early and effectually taught him to *despise economy*.

It is said that the British emissary sent to treat with Marion, finding him sheltered in the almost impenetrable fastnesses of a swamp, and with his entire suite of officers dining on a few roasted potatoes, reported the hopelessness of assailing an enemy so independent of the conveniences of life, and threw up his commission, which could be only employed in the futile efforts of tyranny against a self-denying patriotism and virtue.

But leaving examples historically conspicuous, let us look at the every-day avocations of life. Examine the success of business men, in this or any other large city. How few of those, *to the manor born*, achieve independence by their own exertions! Reckon up all the successful men, whether as importers, shippers, jobbers, or retailers; examine any class of mechanics or artisans; look into the professions of the pulpit and the bar, of surgery and medicine, of artists, authors, publishers, and schemers of every hue and description, and nineteen out of twenty, if not ninety-nine out of a hundred, will be found to have been bred in the country, and early trained to hardy enterprise, patient endurance, and the most rigid economy. These are the elements of future prosperity; the only bases of success. This is the law of our being — an ingrain principle of our nature, without the early and constant practice of which, future achievement is as hopeless as growth without food, or vitality without air; they are indeed so essential, that they should be taught and enforced even where there is no present necessity for their practice. Teach the little girls to economize their dresses, their school-books, their pin-money, and even the paper-rags, — and the boys their own little personal matters, and those pertaining to the farm, as economy in feeding the animals, economy in saving and supplying manures, economy in the application of hand, ox, and horse labor to their various and appropriate duties, — and we will guarantee to every child of good sense and sterling moral principle, thus educated, the greatest measure of success attainable in the sphere, occupation, and circumstances with which they may be surrounded. — *American Agriculturist.*

AMELIORATION OF LANDS BY DRAINAGE AND IRRIGATION.

Water is an indispensable agent in the production of vegetation. It is only in a state of solution that the *pabulum* of plants can be taken up; and although every circumstance associated with the economical process of nutrition be favorable, yet the deficiency of this fluid — nay, the privation of a constant and properly graduated supply — will nullify and render them utterly inefficient in reproduction and sustenance of vegetable organisms. The wheel of the miller demands a continued supply, or it ceases to revolve; if the fountain fails and the stream shrinks, the wheel remains idle. So if the soil be not irrigated by the dews and rains of heaven, or by artificial means, no useful vegetation clothes its surface, the phenomena of reproduction ceases, and the beautiful creations of organic life wither and die. But the redundancy of water is no less detrimental to a healthy and vigorous vegetable development, than the entire privation of it. Every one has observed that lands which are submerged during the greater part of the season, are usually, if not invariably, sterile; and this result ensues, whether the water be upon or near the surface. Soils, also, which are so situated as to be inundated during seasons of protracted or copious rains, are often more seriously and injuriously affected by the opposite extreme of excessive drought, than the more dry and porous soils. The legitimate solution of this is, that such soils are deficient in native energy, — there is no action except in a very thin stratum of the superficial parts, in consequence of the supernatant water in the spring and fall indurating all to the surface; and consequently, when dry weather succeeds, the crops, which have taken root, being deprived of the requisite quantum of water, sicken and die. Swamps on which water stands, and perhaps stagnates, from lack of action, during a great part of the season, produce only aquatic grasses. Such lands, though replete with humus, and all the more essential elements of latent vegetation, are, in their pristine and unameliorated state, little better than water and barrens. Whenever lands of this description are found, the adoption of a correct system of drainage is the only resource. Drainage may often be effected by simply deepening

the natural passage-ways of the water, or by the opening of a ditch sufficiently large to carry off a superabundant water, and reduce the soil to that consistency which is the best calculated to secure the sustenance and support of a vigorous and profitable vegetative force. In some low lands, no superficial indications of the presence of water, in excessive and permanent quantities, are exhibited; yet the opening of a drain will evolve the true cause of their barrenness. The subsoil, in such cases, requires amending, for it is here that the real evil is found to exist in the form of stagnant or cold water, both of which, in such circumstances, are unfavorable to vegetable life.

On this subject, an able writer remarks, "Lowering the water one foot, in some instances, may be sufficient; the mud in swamps that have been submerged for ages, may be brought into action as the best of soil, yielding hay and other vegetable productions, for a long time, almost without the aid of manures. If cold springs come in near the edges, these may be cut off and carried away by means of ditches, filled in with rocks that are often found near at hand; or, where rocks are not to be found, the logs and stumps dug from the land may be used in the place of stones, leaving apertures in the drains for the water to pass off. Large swamps are by these means reclaimed, and a vast quantity of the richest soil brought into use." The substitution of stumps for stones, in filling the drains, is not a judicious practice, as by the tendency of these to decay and rot, and, from their peculiar formation, to choke and arrest the transmission of the water, they operate harmfully, and should always be rejected except where stones cannot be obtained unless at great expense. It is generally the case that the high and elevated, and commonly rocky lands, surrounding swamps and bogs, render the procurement of suitable materials for the accomplishment of this department of draining comparatively easy; and where this is not the case, most farms of any extent furnish an ample supply.

On the subject of surface-draining, our author observes, "Of the hard lands, continually suffering from surface water, there are thousands of acres that may be changed entirely by drainage: when an under drain, cutting off cold springs, and receiving the water from the surface, is once made, the ground or subsoil may be stirred below; and the deeper we go, less than eighteen inches or two feet, the greater will be the capacity of the land to produce. Even stiff, clayey soils may be drained so as to become light and permeable. The action of stimulating manures, upon such grounds, often brings out of the ground giant productions. In the cultivation of lands, whether they be wet or dry, the stirring of the subsoil is productive of great advantage. The ground cannot be stirred too deep."

By *stirring*, the writer does not mean inversion, or the bringing to the surface large quantities of cold, unenergetic soil, while the vegetable stratum of the top is turned down and buried beyond the ordinary range or reach of the roots. This would be to inflict sterility and barrenness upon the most affluent soil. But by the use of the subsoil plough, which loosens and somewhat pulverizes the substratum or subsoil without elevating or bringing any portion of it to the surface, the capacity of all land for vegetable production will be greatly and permanently increased. Of this fact, the Scotch and English agriculturists have long been aware, and many in this country have used the subsoil plough with the best and most flattering results. A PRACTICAL FARMER.

Bald Eagle Farm, *July* 12, 1850.

— *Germantown Telegraph.*

Nothing is more frightful than active ignorance.

SAXON AND MERINO SHEEP.

Is there not great confusion among wool-growers regarding the above-named breeds of sheep? And does not that confusion lead to many bad results in breeding, as well as in the choice of flocks? We think it does.

What now constitutes a Merino? We answer, A certain kind of sheep originally from Spain, and known there as the Infantado or Negretti. They are generally known in this country as a compact-built sheep, with a dark fleece of fine wool, and showing a great deal of loose skin under the throat, and generally over the body. It is a further characteristic of this breed to have wool upon their legs down to the hoof. Their fleeces are filled with gum and yolk, which gives the peculiar dark color to the outside.

The Saxon is a finer wooled sheep than the Merino. There is little or no loose skin under the throat; the face and legs are clean; the wool much clearer of gum or yolk, very fine and soft; and the fleece much lighter than the Merino. This breed was known in Spain as the Escurial, a branch of the Merino family; the term "Merino" meaning, as applied to Spanish sheep, all their fine-wooled sheep, as "Chunah" means their coarse-wooled.

Are these separate and distinct breeds, and have they been so for a length of time? We incline to the opinion that they are distinct breeds, and that no reasonable time can change them. We do not, for instance, believe that from a pure-blooded flock of Escurials it would be possible to breed a flock of Infantados; nor do we believe any amount of good breeding could produce from a flock of pure Infantados the light-formed and gracefully-shaped Escurial.

We are aware that the attempt has been made, both in this country and in Germany, to procure a breed by crossing that should combine the excellence of both. We do not know of any person who has been successful in this country, while in Germany the attempt has been entirely abandoned. The breeds may be improved, there is no doubt; but it must be by keeping the blood of each class pure. Since the German sheep-breeders have adopted this plan, they have met with the most happy results. The late importations of Saxons show a very great improvement, both in carcass and fleece, and are as unlike the early importations of that breed as can well be imagined. We hope our flock-masters in this country will turn their attention to a more careful system of breeding. Keep the breeds as pure as possible, and in a few years we probably can boast of as good sheep as any country.

There are those who believe that the breeds can be mixed to advantage, and we should like to hear their views on the subject; but we confess that, so far as our own observation goes, a good race of sheep cannot be produced.

There perhaps cannot be a better place nor a more appropriate opportunity for us to define our position in regard to the various sheep interests of the country than here and now.

We wish it distinctly understood, then, that, as the conductor of this journal, we recognize no party, sect, or faction of wool-growers or sheep-breeders. We will not submit to be dictated to or controlled by any of them. All who desire it may have a fair hearing — each may put forth his claims before the public — and any controversy, while conducted in a decorous manner, and made interesting by facts and arguments, will be permitted. This journal is intended to be the organ for the wool-growing interest of the whole Union — impartial and independent. We have no partialities — no favorites. Our highest ambition is to see this great interest placed upon a firm basis, and in a sound and flourishing condition; and if the wool-growers will rally around us, we shall have no

fear for the result. These remarks have become in a degree necessary, from the fact that some of our kind and valued friends have taken exceptions to our remarks upon sheep in No. 3. Hereafter, if any one thinks he sees us departing in the slightest degree from our "platform," we shall feel obliged if he will call our attention to it. — *Wool-Grower.*

REVIEW OF WOOL MARKET FOR JULY, 1850.

Never in the history of the country has the wool trade taken such a course as it has this season. The whole clip has gone out of first hands, and is held by more purchasers than in any previous year. It has nearly all left the west, and this state, and has gone directly to the mills. There are no large stocks in New York or Boston, and, with but two exceptions, the dealers in Philadelphia have none on hand. Nor is this all. There is no wool to go to these points. No stocks can accumulate, because there is no wool in the country to be sent forward. It has been purchased and sent forward, and is pretty equally diffused among the manufacturers. There is not a million of pounds of wool west of this city for sale; nor is there in this state, west of Utica, half a million of pounds to come upon the market. Still the manufacturers have not, upon an average, a stock of wool to last them over four months, if they run to the full capacity of their machinery; and it will not be in their power to supply the deficiency from foreign wool. It cannot be had, for all the wool markets have experienced an advance, and the staple has been taken up, with great rapidity, for the French and English markets. The question comes up, then, What will the manufacturers do? We see but one course. They will be compelled to stop their mills, or work only a part of their machinery. In either event it will produce a good result. Their goods will become scarce, and they will be enabled to get a material advance, which will in some degree compensate for the high prices paid this spring for wool; for they all complain that their wool has cost them nearly or quite twenty per cent. more than they expected, when the market opened. — *Wool-Grower.*

BREAKING IN HEIFERS.

S. P. C., of Clockville, N. Y., gives us the following information relative to his mode of "breaking in heifers," through the Rural New-Yorker. There is a great deal of good sense in it.

"The *cause* of heifers or cows being refractory is, generally, *fear*. This, I presume, will be readily admitted, and I submit it, whether a "good switch" and "loud words" are an efficient remedy; or will they not have a tendency to *increase* that fear?

"Now, the great rule which has always governed me in breaking in my heifers, is *kindness*. Always from calves treat them with kindness, handle them, curry them, and be with them often, and they will grow up perfectly docile and harmless. They will never kick nor run from you, but will apparently care as much for you as for their offspring. They will not unfrequently *come to you* to be milked; and I once had a cow that would, at milking time, follow me to any part of the yard for this purpose, and she must always be the *first* cow milked. If this *notice* was refused her, she would apparently feel quite *indignant*. I once purchased a valuable cow very cheap, from the fact of her being bad to milk. She had been *whipped*, until it was acknowledged that whipping did no good. The first time I milked her she started several times — would run a short distance, and look around, apparently in the greatest fear. I would go up to this cow, pat her gently, speak kindly to her, and frequently, during the day, card her. She soon seemed to lose all fear, would start less frequently, and in the course of two or three weeks was as gentle as any cow in my herd, and a woman could milk her with perfect safety. I had not had the cow more than a year, before I was offered for her three times the price she cost me.

"I *never* had a heifer show the least sign of kicking at her first milking, although they will not always stand still. *I never use a whip*, or any thing else, for the purpose of breaking them in, that will have the least tendency to frighten the young animal. A good card is much more effective, is much easier used, and is much more *agreeable* to the animal, as any one who will *try it* will readily acknowledge.

"I should particularly like to have some of the advocates of the *cut and slash* doctrine come and see my herd — see the perfect docility of every animal — their universal *good temper* — and then say which is the most effective, kindness or brutal force. Every animal in my herd is perfectly gentle, and can be handled as well in the lot as in the yard. The only difficulty I have with them, is, when I occasionally curry them, the *master* animals seem very *jealous*, and will not permit their inferiors to enjoy the *luxury* without some molestation."

GREEN VEGETABLE MANURE.

This has been used for upwards of two thousand years, and in countries where the art of culture has been most attended to. Various crops have been sown with no other view than to be buried in, when fully grown, to render the soil fit for crops of more importance. Every species of vegetable, in a green state, acts more or less as fertilizers, some probably more than others, according to their power of draining organic matter from the air, and inorganic from the subsoil. It is, therefore, no detriment to the soil to be covered with weeds, providing they are not allowed to seed, and that they be dug into the ground instead of being hoed down and raked off, which latter process is a direct robbery of the soil. Green vegetable manure is most effective on light, sandy soils, and least so on peaty lands. It is surprising how much valuable manure is wasted in gardens, by carrying it to the compost heap, instead of at once burying it in the soil; and how much is lost or neglected in woods and waste places, from mere indolence, or from want of knowing that rampant nettles and rank-growing plants constitute a great amount of the food of plants. Tree leaves and the mowing of lawns are valuable manures, and far too seldom turned to useful account. For using green vegetable manure, it should be applied as soon as possible after it is cut. — *North British Agriculturist.*

TO PROTECT PLUMS.

I notice in the farmer's column of the 25th number of the present volume of the "Newspaper," an inquiry in regard to preserving plums from the curculio or other insects. Having had some little experience in the culture of plums, I will say a word on the subject. Some seventeen years ago, I bought a farm on which was a fine plum orchard. Some of the largest trees, the first year, had a great quantity of plums set on them. When they had got about half the natural size they began to fall off, and not one on the whole of my trees ever came to maturity. Such as remained on until they should have been ripe, were a hard substance, and the gum exuded

from them as if stung by some insect. These trees were all very thrifty. I had made up my mind to cut down those of them that did not bear fruitfully. The second year I hired a man to prune my orchard. He asked me if he should prune my plums. I replied, no; that I had concluded to cut them down, as they had no fruit on them, any thing like plums. He told me to prune them when they were in full bloom, and I would have good fruit. I concluded to try it for one year longer, and if they did not bear fruit then, I would cut them down. I did so, and found, to my astonishment, I had the best of fruit, and for two years did not fail to get a good yield of fruit. I then sold my place, and have not seen it since, but have no doubt the trees will bear fruit as long as they live, and the pruning will add years to the life of the trees.

The idea that the insect stings the tree or fruit is not altogether correct. In nine cases out of ten (in my opinion) it is owing to the top of the tree being too large for the roots to support. If you keep your trees properly pruned, you will get not only a good supply of fruit, but of the best quality. J. L. F.

Hill-Top, Wayne Co., Pa., 1850.

— *Dollar Newspaper.*

FACTS ABOUT SWINE.

We have received from Mr. Rood, of Adrian, some facts in regard to the breeding of swine, which are of importance to every farmer. Mr. R. remarked that he had long observed that pigs from old sows made much heavier hogs than those from young sows. And he related an instance which places the matter in a very striking light. He had two sows of the same breed, one of which was one year old and the other three, the former being out of the latter. Both sows had a litter of pigs on the same night, and as a part of both litters were destroyed, the two litters were put together and nursed by the older sow. The pigs of the younger sow were apparently the most promising, at first; but they all grew up together, were treated alike and fatted alike, and when they came to be killed, the pigs of the older sow weighed about eighty pounds more than those of the young one. — *Michigan Farmer.*

THE VALUE OF OIL IN INDIAN CORN.

According to Prof. Johnson, the popping properties of corn depend upon the expansion of the oil, on the application of heat. A barrel of pop corn would give six barrels of popped corn; while the rice corn, which contains a still larger proportion of oil, would give thirty-six barrels of popped corn from one unpopped; while there are some kinds which, from the absence of oil, would not pop at all. The structure of grains is a most important study. It is particularly important in its bearing upon the feeding of stock. The same explanation he applied also to wheat, which he said also contains a smaller proportion of oil than corn.

THE PRESERVATION OF PROVISIONS.

The science of preserving meat, lard, butter, cheese, and other animal as well as vegetable substances used as food for man, has received very little attention in this country. This neglect causes a loss of many millions every year. To say nothing of the bad taste of eating so much frowy and rancid butter at home, full one half of all that is sent to England and other foreign countries is sold at half the price of sweet butter by reason of the defective manner in which it is manufactured and put up for market. American farmers have great advantages for the economical production of beef and pork, mutton and wool; and it will render them a valuable service to obtain from Europe correct information of all discoveries and improvements, either in the growing and feeding of domestic animals or in the curing of provisions. — *Patent-Office Report.*

FORTY GOOD SHEEP.

Thomas Hale, Esq. Dear Sir: In October last I purchased of Alfred Hull, Esq., of Wallingford, Rutland county, eleven merino bucks and nineteen merino ewes, four Tainter bucks and six Tainter ewes. On the 26th June last, I sheared two hundred and fifty-four pounds fine and light wool, well washed and tagged — average weight from each, six pounds five and one half ounces. The average from the merino bucks was seven pounds three ounces; from the merino ewes, five and one half pounds — from the Tainter bucks, seven pounds six ounces; from the Tainter ewes, six pounds twelve ounces.

During the month of December I gave the bucks one pint of corn per day, and hay only, during the other time, to all of them. If our manufacturers are encouraged to pay us good prices, I think we farmers can make a living by raising wool from the improved merino and Tainter breeds.

Respectfully yours,

FREEMAN H. CHASE.

Chelsea, Vt., *July* 10, 1850.

— *Journal.*

RICH MEN OF NEW YORK.

The starting-point in the course of some of the rich men in New York, is thus referred to in the Herald: —

There is hardly a rich man in this community who did not commence his career poor — began as a journeyman in his line of business. The career of a few of our leading rich men may serve as instances. The late John Jacob Astor, who died not long ago, and was probably worth thirty millions, commenced his career on this continent as a journeyman pedler, beginning with candy, and getting on in fur peddling, when he commenced investing in real estate. His descendants are now stars at the opera. The late John G. Costar was a journeyman hatter, and died recently a millionnaire. The late John Mason was originally a tailor, from Connecticut; the late Mr. Jones, a cooper — yet both were honest and industrious through life, and left large fortunes, which their happy descendants are enjoying in every genteel way. Stephen Whitney, who now owns blocks of buildings in the city, began as a journeyman clerk in a small grocery store. The Harpers, whose business now amounts to millions, began as journeymen printers, and now build churches and endow parsons. The Havemeyers were journeymen sugar refiners. C. H. Marshall, the large ship owner, was a sailor before the mast. The wealthy merchants, Spofford & Tileston, were journeymen — one as a printer, the other in the shoe business. E. K. Collins, the great steamship and packet owner, and liberal merchant, was a journeyman clerk in a commission house. Stetson, of the Astor House, was a journeyman bar-keeper at his start. Shortland, the rich cooper and land owner, was for years merely a journeyman cooper. And so it is in every rank, profession, and extended business in which men engage in this city. Our richest and most prosperous citizens commenced with nothing, and have amassed their fortunes by persevering industry. We have very few rich men who were born rich.

NOTICES OF PUBLICATIONS.

Transactions N. Y. S. Agricultural Society for 1849; by the politeness of B. P. Johnson, Esq., Secretary. — This is a large octavo volume of nearly 1000 pages, well filled with valuable matter, such as the doings of the State Society, abstracts of the transactions of the county societies, essays, communications, reports of discussions, lectures, &c. This work is embellished with beautiful engravings. It reflects great honor upon the state, and is highly creditable to the able secretary, who has superintended the work.

Transactions of the Michigan State Agricultural Society, with Reports of County Agricultural Societies. — This is an interesting work of 234 pages, exhibiting a great degree of intelligence and enterprise, and a rapid progress in the improvement of the commonwealth in its infant state. Will not this commendable example stir up some of the old states to do something? Where is the Massachusetts S. A. Society? Asleep! or in a more hopeless condition.

Transactions of the York (Me.) Agricultural Society for the years 1847, '8, '9; by the politeness of S. L. Goodale, Treasurer. — This society has been in operation only three years, but its Transactions show that it is in a very flourishing condition, as it dispenses liberal and numerous premiums, and is rapidly accumulating a permanent fund. Our worthy friend, and occasional correspondent of the Farmer, Hon. Rufus M'Intire, has presided over this association since its formation.

Night-Side of Nature, or Ghosts and Ghost-Seers, by Catharine Crowe. — This is a collection of materials on remarkable dreams, visions, &c., &c., by an interesting romantic writer, well adapted to the taste of those who delight in the marvellous. Boston: Muzzey & Co., 29 Cornhill.

Oration, by Edward Everett, with a brief account of the celebration of the seventy-fifth anniversary of the battle of Bunker Hill, at Charlestown, June 17, 1850. — We have not yet read this work, but it claims perusal, from its being the production of one of the first orators of the age.

Hovey's Magazine of Horticulture is an excellent work. At the beginning of the present volume, the price was reduced to $2.

ACKNOWLEDGMENTS.

Of Messrs. Hovey, specimens of a new seedling cherry, which is one of the largest and handsomest cherries we ever saw. Our specimens were not fully ripe, yet its quality indicated that it was of a high character. Mr. C. Hovey informed us that it was of excellent quality, and that it ripened as late as the Sweet Montmorency, which is usually the last week in July and the first of August. We think it is a fruit of great promise. It will not be for sale for a few years, until it is more fully tested, and considerably propagated.

From Mr. Theodore Drew, Plymouth, seedling currants, on a branch of the bush. We never saw a greater bearer, and the plant seems remarkably vigorous. The size of the berry is tolerably large, the color darker red than usual, and the flavor seems richer and milder than the common red currant. Mr. D. has not yet propagated it, having only the original bush.

Of Mr. Shed Needham, Danvers, a box of *white* blackberries. These berries are sweeter than the common blackberry, resembling in flavor the mulberry. Mr. N. is so well pleased with this variety, that he is extending its culture.

THE OLD APPLE-TREE.

BY CHARLES H. LEWIS.

The old apple-tree, where in childhood I played,
Round the chair of my grandsire, that sat in its shade;
O, the loved ones that once sat beneath it are gone,
And the old apple-tree is deserted and lone.

But dear to my heart is the old apple-tree;
Its blossoms still nourish the murmuring bee;
The redbreast still rustles its branches among,
And the lark from its top pours his orison song.

The grass is still green on the turf underneath,
The sweet-brier distils there its odorous breath,
The rose and the eglantine still are as fair
And as sweet as in childhood's blest season they were.

O, long may that tree in its verdure be seen,
And long may the turf underneath it be green,
The birds there sing sweetly, and flowers blossom fair,
For the loved ones of childhood are slumbering there.

THE OLIO.

I like the story of the blacksmith, who was requested to bring a suit for slander. He said he could go into his shop and hammer out a better character in six months than all the courts in Christendom could give him.

Give me the money that has been spent in war, and I will purchase every foot of land upon the globe. I will clothe every man, woman, and child, in an attire of which kings and queens might be proud. I will build a school-house upon every hillside and in every valley on the habitable earth.

Education — the twilight that ushers in the glorious sun of liberty.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

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STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, AUGUST 31, 1850. NO. 18.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

HARVESTING CORN.

A GREAT deal is said about the different modes of harvesting corn. The old method is to cut the stalks, when the corn is nearly ripe, in order to let in the sun to ripen the corn. Some modern farmers have improved upon this method, as many believe, by cutting the plants up at the ground when the grain is nearly ripe, and putting it into stooks; and when it is well dried, the whole is carried into the barn and husked.

We are in favor of the latter mode, and the following are a few of the reasons for our preference. In the first place, we would premise that the whole plant, the top as well as root, is necessary to the perfection of the grain, and when the corn is so ripe that the plant may be mutilated so far as to cut off the top without injury, the root may be cut off without injury.

We will now show the advantages of the new mode. By cutting up at the ground, or cutting off the root, there is far less labor than in cutting the stalks. One blow of the knife will cut up a hill, but in cutting stalks there must be as many operations to a hill as it contains stalks. Pieces of corn, of about fifty bushels to the acre, and thickly planted, so that there were five or six thousand hills to the acre, have been cut up at the ground at fifty cents per acre, or by a half day's labor. This would require diligent labor, we acknowledge. About the same labor is required to tie up, carry together, and stook. Now, we would ask, who can in one day, with moderate labor, cut, bind up, and stook the top stalks on an acre, and in due time gather the corn, and cut up the but stalks, and forward the harvesting so that the whole can be gathered in as quickly as the corn can be hauled in when all is cut up together? We claim a great advantage for the modern mode in point of economy in labor. There is no loss of grain by cutting up at the ground, and there is a great saving in the but stalks, which become much injured by storms, sun, and wind, and other wear and tear.

Besides the usual advantages of cutting up corn, there is a great advantage in this mode of harvesting, in saving it from frost, when it ripens late. Corn that is only full in the milk, may be cut up when a frost seems to be at hand, and it will make good, sweet bread, though rather light; while, if struck with frost at so early a stage, it is not fit for man or beast. It is not worth harvesting, for even the pigs will refuse it.

If corn be cut up on the eve of a frost, it will not be injured while lying in heaps on the ground. We have saved corn from a frost by cutting it up by moonlight, when the state of the weather indicated a hard frost.

We now give the mode of securing corn, as practised by Mr. W. Salisbury, of Medfield, and trust that it will be useful to many of our readers. He cuts his corn when the grain is glazed. Provide a good firm stake, and bore two holes at a suitable height, as you can judge from experience. These holes should cross each other, and one should be just above the other. Into these holes put small iron rods; wooden rods will answer by having them larger. The rods will form a cross, thus, +.

Stick down this stake, then take the corn, about twenty-five hills, without binding into bundles, and place it equally around the stake, between the arms or rods extending from it. Equally balanced and properly adjusted, it will stand. Remove the stake, and hug close around the stook, to press the whole gently together; bend over the tops and tie them down, and it is done.

One stake will answer for the whole piece. There will be no bundles mouldering under the bands, but the whole will be exposed to the air, and become well cured. These stooks will generally stand the wind and the storms; if well done it seldom falls. The fodder will be fine, and the grain excellent.

Some object to cutting up stout corn; but Mr. S. remarks that he secured a piece in this way last September, that produced, on a little less than an acre and a half, one hundred and ninety-two baskets of ears, which would make half a bushel or more to each basket. He hauls in his corn loose, laying the stooks all together into the cart, and sets it up loose in the barn, and finds it more convenient to husk than buts.

Mr. S. saves his fodder by cutting up the stalks,

and putting it in layers with cut straw, and adds a little salt. He says that it costs less to cut and stook the whole, than to do the same to the top stalks. From his piece of less than an acre and a half, and a suitable proportion of straw, the proportion of which we did not think to get, he filled a bay of twenty by ten feet, twelve feet high, which kept three cows from October to the 23d of March, in good condition, with only the addition of a very little meadow hay.

MILKING MACHINES. — Gutta percha patent milking machines are in use on Long Island, and it is said that they work well. The simple instrument is easily applied to the teat of the cow, without injury to the animal, and the milk flows in a regular stream until the fountain is exhausted.

CATTLE SHOWS AND EXHIBITIONS.

Massachusetts Horticultural Society, at their hall, Sept. 17, 18, and 19.

Massachusetts Charitable Mechanical Association, at Quincy Hall, Boston, commencing Sept. 11.

New York State Agricultural Society, at Albany, Sept. 4, 5, and 6.

American Pomological Congress, at Cincinnati. The meeting of this association is adjourned to Oct. 2, 3, and 4.

Ohio State Society, at Cincinnati, Oct. 2, 3, and 4.

Rhode Island State Society, at Providence, Sept. 18, 19, and 20.

New Haven, Ct., Agricultural and Horticultural Society, at New Haven, Sept. 24, 25, and 26.

New Hampshire State Society, at Concord, Oct. 2 and 3.

Maryland State Society, at Baltimore, Oct. 23, 24, and 25.

Michigan, at Ann Arbor, Sept. 25, 26, and 27.

Upper Canada, at Niagara, Sept. 18, 19, and 20.

American Institute, at Castle Garden, New York City, commencing Oct. 1.

Middlesex, at Concord, Sept. 18.

Franklin, Sept. 25. Address by Hon. J. T. Buckingham.

Essex, at Salem, Sept. 28.

Bristol, at Taunton, Oct. 10.

Hampden, at Springfield, Oct. 2, 3, and 4.

Addison, Vt., at Vergennes, Sept. 25.

Windsor, Vt., at Woodstock, Sept. 18 and 19.

Windham, Vt., at Fayetteville, Oct. 3 and 4.

Hillsborough, N. H., at Milford, Oct. 16.

Cheshire, N. H., at Keene, Sept. 19.

North Kennebec, Me., at Waterville, Oct. 1 and 2.

Aroostook, Me., at Houlton, Oct. 2 and 3.

PRUNING.

August and September are favorable times for pruning, particularly where large limbs are cut off; for if the wounds made by cutting large limbs or branches do not heal over soon, the parts become seasoned, and remain sound a long time. But if large branches are cut off in spring, the wounded part becomes black, from the fulness of sap in the wood, and it soon decays, seriously affecting the health and life of the tree.

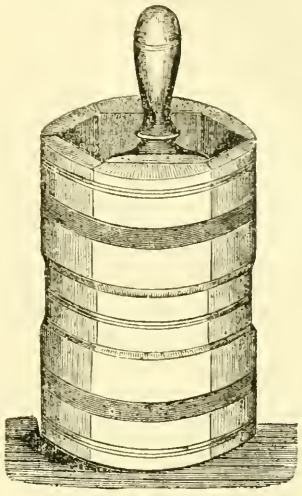
THE PLEASURES OF A COUNTRY LIFE.

Living, as we do, in a warm, densely-built city, where the air is sultry and oppressive, the occasional glimpse we may, in our walks or rides, catch of the green fields, the grassy meadows, and rural scenery in general, cannot convey an adequate idea of the pleasures of country life. We may experience much happiness in gazing on the beauties of Nature, and we may take pains, as far as possible, to profit by the lessons gathered from her open pages; but, even yet, we have not arrived at the true source whence springs the even life, the tranquil happiness, and the undisturbed pleasure of those who are born and nursed in Nature's lap, who grow up by her side, and who, at the close of a long life, free from care and sorrow, are buried in the village graveyard. There is no class of men who can look with as much substantial pleasure on their work, as farmers. They know they are working for the good and benefit of their fellow-men; they feel the crop which they are reaping will be disseminated through the land, and bring comfort wherever it goes, and that their harvest is watched for eagerly over the whole world; more than this, they love their way of life, they love to see the fields dressed in their robes of green, the golden tufted crops nodding in the summer air, while the ear delights in the merry carol of the bird as he sits on the limb of some majestic tree. Yet, not only the summer has charms for them, but they derive pleasure from blushing spring, from sober autumn, and from hoary winter; every season in its turn has charms for the farmer; he knows that an all-wise Providence created them, that His purpose was good and kind, desiring the comfort and happiness of the tiller of the soil. He feels this, and is happy. He is the man who knows to its full extent the pure happiness of country life. It may have its occasional crosses, crops may fail, harvest may not turn out right; yet, on the whole, the son of Nature alone can feel the real pleasures of a country life. — *N. A. Farmer.*

KENNEBEC GRAIN.

We called at the farm of Mr. Jabez Churchill, of Augusta, the other day, and found him busily engaged in harvesting fourteen and one half acres of winter rye, and three and one half acres of winter wheat; and better grain, or a more bountiful yield, is not often obtained, even in the best grain-growing districts of the west. The unfavorable weather of week before last turned the straw a little, but the grain itself is not injured.

Mr. Churchill has three varieties of winter wheat, all of which stood the winter well, and have produced grain of an excellent quality. The varieties are the Blue-stem Kloss, or Banner wheat; the Poland wheat, introduced by J. D. Lang, Esq., and cultivated by Moses Taber; and a variety of Genesee wheat, which was procured of Mr. Whittier, of Hallowell, who selected it for the purpose of grinding. Not more than half of the latter vegetated, from some cause or other; but what did grow spread well, and will probably yield a fair crop. These are all good varieties, and may be well adapted for general cultivation in this state; but Mr. Churchill, from what he has seen of them, thinks most favorably of the Blue-stem Kloss, or Banner wheat. — *Maine Farmer.*



CHURN THERMOMETER—BUTTER MOULD.

The smaller cut represents a neat and cheap thermometer, made expressly for dairy purposes. The body is of wood, which makes it firm and durable. On the lower part is a brass guard protecting the bulb of the thermometer, which turns on a rivet, and may be turned up when used, so that it will be necessary to immerse only the bulb in the cream or milk. A mark is made at which the mercury indicates that the temperature of the cream is at sixty-two degrees, the proper point for churning; and if it varies from this mark, the temperature may be readily changed by adding hot or cold water.

This implement is very important to the *dairyist*, as the exact temperature is obtained, instead of guessing at it, as is the case where one depends on judgment. No person who makes butter should be without a thermometer; and every one can afford it, even if he keeps but one cow, for this article, so well adapted to the purpose, costs only twenty-five cents.

The larger cut represents a butter mould, with stamps placed in the bottom, of various patterns. This mould is six square, a convenient form for packing, so as to leave no interstices between the lumps. The same form is used by bees in forming their cells, for which they have been complimented as perfect mathematicians. The mould holds just one pound of butter, so that this plastic production, with this simple and cheap apparatus, costing only one dollar, may be quickly put up in pound lumps, without the trouble of weighing, having the most convenient form for packing, as well as the best shape for use; and, at the same time, it may be stamped with any of the various designs, on the stamps, that the operator may choose.

We would commend these dairy improvements to those who have them not, as affording peculiar advantages, and at prices so low as to be within the range of the most rigid economy.

THE UTILITY OF THE MOLE.

"Some ten years since," says Mr. G. Wilkins, "when I came to my living, and commenced cultivating the little land I hold, it was, I may say, full of wire-worms. Nothing could have been worse, for my crops were in some places ruined by them entirely. What, then, did I do? I adopted a plan which I saw recommended and published in periodicals many years since, namely, encouraging moles and partridges on my lands. Instead of permitting a mole to be caught, I bought all I could, and turned them down alive; and soon my fields, one after another, were full of mole-hills, to the amusement of all my neighbors, who at first set me down as a lunatic; but now, several adopt my plan, and are strenuous advocates of it. My fields became exactly like a honey-comb, and this continued even among my standing and growing and ripening crops; not a mole was molested, but I still bought more. This summer I had fourteen bought, which I turned down, but they were not wanted; I have nothing for them to eat; all that moles live upon is destroyed, and so, poor things, they must starve, or emigrate to some distant land, and thus get bowstringed by savage men whom they aim to serve. Adopt my plan, and it will be sure to answer. If you have a nest of partridges, also encourage them; all the summer they live upon insects, wire-worms, &c.; and consider how many millions a covey will destroy in a single summer! Again, always remember that moles feed upon insects, and of which the wire-worm is the chief; if you doubt this, open a mole and peep into his stomach. Again, do not fear that moles injure your crops, either in a field or in a garden; it is a low and vulgar error to suppose that they root up young corn; they never go any where till the wire-worms have first destroyed the plants, and then, innocent things, they are punished for others' faults. If you do not like to see their hills, knock them about with a hoe, as I did; it is a healthy amusement, and they will do your lands good. Do not despise any plan because the farmers will not adopt it in your neighborhood; farmers will adopt nothing till driven to it, and nothing that is new and good."

A thing of beauty is a joy forever.

For the New England Farmer.

PEACH-LEAF CURL.

Mr. Editor: On the 29th of May last, I made an excursion from this place to Marshfield; the morning was rainy, but the day was a favorable one for travelling. On my way I was exhilarated by the splendid exhibition of Nature in her efforts at ornamenting the fruit-trees with an uncommon mantle of blossoms. I should think at Marshfield they were three or more days in advance of the fruit-trees in Wilmington. The 30th and 31st days of May, and the 1st day of June, were very cold, uncomfortable days for the season; the winds from the north-east, driving the clouds from the ocean, with the chilly air charged with mist from the icebergs drifting from northern climes, made an overcoat a necessary appendage to add to one's comfort. On the 1st day of June, some of the fruit-growers at Marshfield saw indications of blight commencing upon their peach-blossoms, which boded unfavorable omens to a coming crop. On my return home, I found our own peach-trees had been very roughly handled by the wind.

After the abatement of the storm, and the weather became mild, the young peaches began to show themselves, and the curl of the peach leaf commenced, and progressed rapidly until nearly every one existing upon the trees during the storm was completely crimpled. We examined the curled leaves, and could discern no indication of animal life in any form upon them, nor have we up to the present time. The leaves upon the peach-trees previous to the May storm have been gradually dropping from the trees to this time, and are nearly all fallen off; and those now upon the trees are mainly from new shoots, and appear green and healthy. There may be different causes for the curl in the peach-leaf, but I feel confident that the cold northerly and easterly winds in the month of May produced the blight on the leaf, followed by the curl. The violent and long-continued cold winds caused stagnation in the minute sap-vessels of the leaves, which produced premature decay and falling off, as in autumn.

The bodies and leaves of trees have their sap-vessels for the same purpose that animals have their blood-vessels; whatever takes place to the injury of either, in such manner as to destroy the circulation, will produce disease or mortification of the affected part, as well in trees as in animals.

As there has been considerable discussion upon the peach-leaf curl by writers on the subject of fruit-trees, I thought it possible that some light might be shed by the above remarks, which were carefully made from observation. With much respect,

SILAS BROWN.

Wilmington, *Aug.* 1, 1850.

Remarks. — The views of Dr. Brown are the same as our own, in regard to the blast on the peach-leaf. It came too suddenly and extensively to be the work of insects, and at a season that is unfavorable to their propagation and operations. It could not be caused by the effects of the winter on the trees, for the winter was favorable, and we had young seedlings seriously affected in the leaves, while every part of the tree, both root and branch, was perfectly sound. — Ed.

Emulation looks out for merits, that she may exalt herself by a victory; Envy spies out blemishes, that she may lower another by defeat.

For the New England Farmer.

FARMERS' DAUGHTERS.

Mr. Cole: Important as it is that farmers' daughters should be trained to fill the places of their mothers, it is almost wholly neglected. Since it has become *fashionable* for young ladies to be sent to boarding-schools as soon as they are of a suitable age, but very little is done in the way of training them for the more important stations in domestic life. What a sad neglect! Do farmers' wives ever think of this? Have they never considered that their places are to be filled by others, when themselves are worn out with the unceasing toils of the varied labors of the kitchen? Farmers' daughters can be as easily trained to make profitable wives for farmers now-a-days as they could fifty years ago. Our grandmothers and great-grandmothers saw matters in their true light. They did not send their daughters to fashionable boarding-schools to learn to make butter and cheese, &c., &c. Instead of this, they took them under their own charge; and well did they perform their tasks. They were sure to give them instructions in each and every department of household affairs, — thus fitting them for stations they would soon be called to fill; and while they did this, their education in other respects was not neglected. That there should be boarding-schools for young misses is very essential, but that every farmer's daughter should be sent to such schools, to the exclusion of every thing appertaining to the duties of a wife and mother, is quite a different matter. So long as the great and important business of agriculture is carried on, (and that will be as long as the world shall stand,) so long will there be need of agricultural women, — women who have been brought up and trained on the farm, and received a proper education as connected with the farm-house. We see no healthier women in our country than those brought up on the farm. This is evident from the fact that they have more exercise in the open air — one very necessary feature as regards the health of individuals. Mark the contrast between the boarding-school miss and the country farmer's daughter. One has bright eyes and rosy cheeks; the other, dull, sunken eyes and pallid cheeks.

O, give me back the good old days of our grandmothers — days when girls were willing to wear homespun frocks, and enjoy exercise in the morning air. Were things managed as they were in those days, how few would go down to premature graves victims of consumption! It is true that there have been great changes, great and important changes in the different modes of agriculture; but in regard to the training of farmers' daughters, the change has been indeed a sad one. A. TODD.

Smithfield, R. I.

For the New England Farmer.

REMARKS ON, AND CULTURE OF THE GENUS TAMARINDUS.

Mr. Editor: This genus contains two species, one from the East, and the other from the West Indies; which have both been long held in high estimation by many people, on account of the acid, yet sweetish taste of the fruit, which, after some preparatory processes, is rendered agreeable to the palate, and of much service in medicine.

Tamarindus indica, or East Indian tamarind, is a tree of great magnitude when full grown, often exceeding fifty feet in height, with corresponding branches. The season of its flowering is generally

about June or July, in which state it presents rather an interesting appearance; the calyx being of a straw color, the petals of a clear yellow, beautifully striped with red, the filament purple, and the anthers brown. The timber of the tamarind-tree is heavy, firm, and hard; sawn into boards, it is converted into many useful purposes in building. The pulp contained in the pods is used both in food and medicine. The tamarinds which are brought from the East Indies are darker, and dried, but contain more pulp; being preserved without sugar, they are fitter to be put into medicines than those from the West Indies, which are much redder, but, being preserved with sugar, are more pleasant to the palate.

The use of tamarinds was first learned from the Arabians. They contain a larger proportion of acid with the saccharine matter than is usually found in acid fruit. The epicarp of the pod is thin, and the acid pulp for which they are esteemed is the sarcocarp. Tamarinds are preserved in two ways; commonly by throwing hot water from the boilers on the ripe pulp; but a better method is to put alternate layers of tamarinds and powdered sugar in a stone jar. By this means the tamarinds preserve their color, and taste more agreeably. Preserved tamarinds should be fresh and juicy, and should have an agreeable acid taste; they should not have a musty smell; the seeds should not be soft and swollen, and the blade of a knife should not get a coating of copper by being immersed among them. Tamarinds contain sugar, mucilage, citric acid, supertartrate of potass, tartaric acid, and malic acid. In medicine, the pulp of tamarinds taken in the quantity of from two to three drachms to an ounce, or a little more, prove gently laxative and purgative, and at the same time, by its acidity, quenches thirst, and allays immoderate heat.

T. occidentalis, or West India, is a tree of much magnitude and beauty, attaining, in a full-grown specimen, the height of from thirty to forty feet, with branches in proportion. Its blossoms, which are produced in February, so much resemble the *T. indica*, that it will be unnecessary to mention them here. The difference in the two species is in the pods; in the West India species they are shorter and redder than those of the East Indies. They are propagated with great facility by cuttings, but better plants may be obtained from seeds.

BERNARD REYNOSO.

For the New England Farmer.

CURL IN THE POTATO.

Mr. Editor: The new potato disease, of which your correspondent speaks, has affected some varieties of the potato in this vicinity, much longer than the potato rot. I do not now recollect when it first made its appearance, but I think it was about fifteen years since, that we procured a few potatoes of a neighbor, which he called table potatoes, and which were of excellent quality, and, when we first obtained them, tolerably productive; but after planting them a year or two, a part of them gave a stinted growth of stalks, and a small yield of small potatoes, and the number of curled hills gradually increased, until we threw the variety aside as worthless.

Since that time we have had no curly potatoes until we commenced planting the Carter variety, which, with us, is more liable to curl than the Peach Blow. But these are not the only varieties which are affected in this manner. I have seen it to some extent in the Early Blue, the Long Red, and several other varieties.

The disease, I think, is caused in part by the nature of the soil, and is partly peculiar to particular varieties. My reasons for attributing a part to the soil are, that in the south and west parts of this town, where the soil is of a dark color, resembling muck, and rather moist, the curl has not been seen; and potatoes raised on such land will remain healthy for a time, even when planted on different soils.

If your correspondent will examine the potatoes produced from the curly hills of the Peach Blow, I think he will find them of a pale, dead color, while those which are healthy are of a bright, lively red; and the Carters, if he has them, instead of the clear white, natural to this variety, will exhibit a scurfy, yellow appearance. I have noticed, also, that when planted on the same land several years in succession, they were much more affected than when they followed some other crop. I do not know whether Mr. Lee intended to convey the idea that the curly hills were free from rot, or merely that the rot did not necessarily accompany the curl. If the former, I think he is mistaken, for although this is not always the case, still, I think generally the curly potatoes are more exposed to the rot.

The best way to avoid the curl is, undoubtedly, to cultivate hardy kinds; but if we wish to preserve a particular variety, it may be kept mostly clear by planting tubers selected from the best hills, of a clear, bright color, free from scurf, and taking care not to plant the same ground two years in succession.

W. F. B.

Ashfield, *Aug. 5.*

Remarks. — Our correspondent's opinions are in accordance with our own experience and observation. Our Peach Blows have been affected with the curl, while many others on the same piece of land, and under the same treatment, were sound. We once planted several varieties of potatoes imported from England, nearly all of which were affected with the curl. None were diseased excepting the foreign kinds. These facts prove that some varieties are more liable to the curl than others, or that some are very liable to it while others escape.

Our remarks on the 236th page of this volume confirm the opinion as to potatoes being less liable to curl on moist land, and more liable to this disease on land that has been in tillage several years.

BEES.

To the naturalist, this insect presents an object of delightful contemplation, and even to the casual observer, it is not entirely devoid of interest.

Perhaps a slight description of this little busy insect, in connection with a few facts, may be perused with interest and profit by the readers of your amusing and valuable sheet. When a hive becomes very full, by the increase of young bees in the spring, the old queen leaves it to seek a new home, and such of the other bees as choose to follow her fortunes (led by their great regard and affection for their sovereign) quit the hive at the same time, the rest remaining at home. This is termed *swarming*.

The bees which leave the hive, led by the queen, alight upon some neighboring bush or tree, entirely surrounding and covering up her majesty. Here, clinging to each other, in the form of a large ball, they will remain, if undisturbed, for a longer or shorter time, according to circumstances. Immediately after they have thus alighted, if carefully watched, a small number may be seen to leave the mass, and fly off in various directions. These would

seem to be a deputation which are sent out as spies, to discover a new home. Some of these may be seen frequently returning, as it were to make their reports; and as an evidence that honey had not been the object of their flight, no wax or pollen can be seen upon them, as is the case when they return to the hive upon ordinary occasions.

As soon as their spies return with a satisfactory report, (which is sometimes not until the next day,) they leave the bush, and, rising high in the air, start off in a perfectly direct line for their new habitation. This is sometimes at a distance of several miles, and may be located in an old hollow tree, or cleft of a rock. Sometimes they even enter the dwellings of men. A friend of mine in this town once heard a humming or buzzing noise over his head at night, as he was lying in his bed; thinking that it proceeded from the garret, he made an examination, when the noise seemed to be beneath his feet. The next day the mystery was solved, for being out in the yard, he saw some bees going in and coming out of a hole in the side of the house. He then went to the garret, and by listening attentively, discovered their exact location near one corner. He built a small room in this corner, and then sawed through and took up the board which covered them, thus giving the bees a large hive to work in; and work they did, for he told me years afterwards, that this room had supplied the family with an abundance of delicious honey up to that time.

I may as well here remark, that, for common use, large hives are injudicious, as the bees, if placed in them, never swarm, thus preventing any increase of the stock.

The swarm, however, is not often allowed to escape in the manner just described; for, being discovered by some of the family, they are immediately "hived." viz., an empty hive, or box, is placed upon the ground or table, and raised a few inches from it, then the branch or twig upon which the bees have alighted is cut off and placed under the hive, the inside of which has been previously rubbed with lemon balm leaves, (as it is thought that the fragrance of this herb is attractive to the bees,) and almost immediately they ascend and take up their abode within the hive. In the evening, after every thing is quiet, the hive is removed to the place which it is permanently to occupy.

A swarm usually leave the old hive in some very warm, clear day, between the hours of nine in the morning and four in the evening. It is frequently the case, that in eight or ten days after the swarm has left the hive, a second one makes its appearance, and is of course to be treated in the same manner as the first. It does not always happen, however, that two swarms are obtained in one season, though it sometimes occurs that three large ones are hived. A friend at the west had one spring but one hive of bees. They swarmed very largely and very early; it was a fine "bee season;" in a week the old hive sent out another colony, and, still later, a third. The swarm that came first also divided and sent out a strong colony.

The year was a good one, and they all did well, so that in the autumn he had five hives of bees, which yielded him, besides, nearly ten dollars worth of beautiful honey. But this was a rare case, and such astonishing success is by no means common. It is often the case that the third swarm is so feeble, and comes so late, that it is unable to lay up a sufficiency of food for the winter, and soon perishes. When the owner thinks that this is likely to be the case, he should remove the queen from the middle of the swarm, when they have settled upon the branch, and the bees will then return to the hive from which they came. It might at first seem a hazardous undertaking to open a swarm to remove the queen, but it is, with common caution, quite easy. I will not here give the process, for I fear that I shall spin out this article to an unreasonable length, and I have a number of other things to mention. If, however, it should seem to be the general wish, I may at a future time say more on the topic of bees, and also of some other insects. — *Dollar Newspaper.*

LIVE FENCES.

The particular advantage of any kind of fence depends on circumstances. Where suitable stones can be readily obtained, perhaps there is no fence to be preferred to a well-built, permanent wall. If the stones, in the outset, occupy the land so as to interfere with cultivation, the inducement for making wall is increased. In some places, the abundance and cheapness of suitable timber for fences render it most economical to construct them of that material.

The comparative advantages of live and dead fences, in general terms, may be thus stated: — Hedges can be reared where the materials for dead fences cannot be had, and excepting the best of walls, are greatly superior in durability; dead fences commonly occupy less room, shade the ground less, and neither exhaust its moisture or richness, as is done by hedges.

The best plants for hedges, in this county, are undoubtedly the Buckthorn and the Osage Orange. We think the various trials which have been made with different plants, support this conclusion. The Honey Locust, which was considerably tried a few years since, fails to grow thick enough at the bottom, and is generally straggling and open. The English Hawthorn does not stand our hot and dry summers, and is liable to a blight similar to the "leaf-blight," and "fire-blight," in pear-trees. The Newcastle, or American Cock-spur Thorn, and the Washington Thorn, have formerly been used extensively in some of the Middle States, particularly in Delaware, where they succeeded well; but, within a few years, the fine hedges of that section have all been destroyed by the borer, and this insect has also attacked the Hawthorn with equal fatality in many instances. It is true there are some neighborhoods where the Hawthorn has mostly escaped the casualties here mentioned, as in some parts of Seneca and Ontario counties, in this state; but its failure has been so general in most parts of the country, that it cannot be depended on as a hedge plant.

For the Northern States and the Canadas, we should prefer the Buckthorn. Our reasons for the preference are its hardiness, its comparative exemption from disease, and from the attacks of insects, its rapid growth, and the general facility with which it may be made to answer the purpose of an efficient fence. — *Albany Cultivator.*

TO MAKE A HORSE FOLLOW YOU.

You may make any horse follow you in ten minutes. Go to the horse, rub his face, jaw, and chin, leading him about, saying to him, Come along: a constant tone is necessary. By taking him away from other persons and horses, repeat the rubbing, leading and stopping. Sometimes turn him around all ways, and keep his attention by saying, Come along. With some horses it is important to whisper to them, as it hides the secret and *gentles* the horse; you may use any word you please, but be constant in your tone of voice. The same will cause all horses to follow.

MANURE.

Green brush (another species of vegetable manure) deserves to be mentioned among the modes I have recommended for improving poor lands. This sort of manure is to be found on every farm, however exhausted its ground may be. There are two ways of using it beneficially — 1st, spreading it over the surface for the protection of the earth from the too sultry rays of the summer sun, and enabling it in this way (should it be undisturbed for two or three years) to be converted into an excellent compost. 2d, where land is in high ridges and deep furrows, it may be laid in the furrows moderately thick, and then cut, and trodden down, and covered with the plough in the course of time. It thereby forms a most valuable manure. Land manured in this way may be sown with turnip seed by the 10th of August. Every farm has its barren spots, which are best managed by hauling and spreading leaves and top-soil from the woods there, and penning cattle upon them. Their dung, with a little straw mixed in with the leaves and soil, will soon bring these poor grounds into equal heart with the best lands. All the corn-cobs should be carefully saved, and frequently scattered in the barnyard or pig-pen. This is better economy than to burn them, for they are thus rendered more valuable. When hogs are put up to fatten, (if the pen is properly made,) they may be made to make a large quantity of manure, and every farmer well knows that there is no manure more efficacious and useful than that made by these animals. The pen should be without a floor, except that under the house for their shelter in rainy weather, and should be somewhat hollowing in the middle, so that the rains may wash the dung and urine into the centre. All the corn-cobs which daily accumulate in the pen should be gathered there also, so as to become saturated with moisture. An addition of ditch mud also increases both the value and quantity of this manure. By removing old standing fences, and ploughing up their sites, much good compost manure may be obtained, consisting of fertile mould free from producing grubs or other destructive worms, which are so often found on our lands and grain. Ashes, either leached or unleached, are very useful. They have been very extensively used in the United States, particularly on dry or sandy lands. This will do on clayey soil; and as this kind of land is naturally cold, they tend towards heating it. A gill of unleached ashes put around each hill of corn in a cornfield, after the first hoeing, makes the corn a great deal better, and is equal to nearly double the quantity of plaster of Paris; and every body who has studied agriculture knows that no other manure continues in the earth as long as ashes. Plaster is certainly a most valuable manure, and perhaps has been attended with better effects than most other vegetable or mineral substances where it has been fully tried by extensive use. No other, in combination with the different articles of compost manure, will so quickly renew poor lands. It is most beneficially used by rolling it with Indian corn, bushel for bushel; or, when spread over the coarse litter of an enclosed field, it makes it rot much more speedily. Marl is a good manure for sandy soils, if applied in due proportion to the quantity of ground, and afterwards dissolved. In fact, it will suit any soil, and our farmers should search for it early and late, for it will prove more valuable to our state than the famous mines of Potosi. It is found in low, flat lands, near the margin of ponds or rivers. There are three kinds of marl — 1st, calcareous or shell marl: 2d, argillaceous or clayey marl; 3d, siliceous or stony marl. The first is of a yellowish or brown color; it is of a loose texture, and when in connection with acids, it will effervesce. The 2d is mostly of a gray color, and requires aquafortis or some other strong acid to make it effervesce. Siliceous marl is of a lead color; although it effervesces, it does not dissolve so easily as the others, and sometimes it forms a very hard lump. A good artificial marl may be made by mixing equal quantities of lime and pure clay, and placing in layers on a heap, and exposing them to the action of the winter frosts.—*North American Farmer.*

FARMERS' RIGHTS.

This is a subject that should interest any good citizen, whatever may be his avocation, for all are necessarily identified in their comforts, their luxuries, and their pleasures, with the success and improvement of agriculture and horticulture. The merchant, the professional man, the mechanic, all know how to appreciate the bounties of a well-filled basket, the luxuries of a well-furnished table.

Why not, then, extend to the agriculturist the protection, encouragement, the patronage that is secured to other avocations, are inquiries that have tired the patience, and shook the confidence of many a persevering, sacrificing pillar in a community, when they have seen their hard-earned rights neglected, abused, and trampled upon, without remedy; because no adequate provision is made by the legislature to protect them against the continual annoyance of prowling vagabonds, principally strangers, who have escaped from the *galling aristocracy* of European countries, or the more strict regulations of our own cities, to scamper over and trample on the property and peace of the forbearing and unprotected agriculturist of a *free country*, on Sabbath and week day, summer and winter, seedtime and harvest, grain fields and meadows, garden and orchard, poultry and stock alike disturbed and destroyed by loafers and dogs, with perfect impunity.

When shall the end of these things be? Shall they continue? or will we take up the matter in earnest, and petition, and continue to petition, from all quarters of the state, this winter, and every other winter, until our rights are regarded, our labor protected, our enterprise encouraged, our calling exalted, as it should be, among the most honorable, as it is the most useful that has ever, or will be, worthy the attention of the good and the great among mankind?

In addition to improved and wholesome laws, a proper understanding, and organizations throughout the state to promote order and justice, and execute with promptness and rigor, on all such *rebels*, (irresponsible alike in purse and character,) the laws, if laws there be, and mutual assistance of money and influence; then will the tasteful be gratified, the enterprising encouraged, the industrious rewarded, and the legitimate *rights* will be secured to the farmer as well as any other member of the community.

BELLE VILLA.

Hamilton Co., O., 1850.

CLEANSING THE BARK OF FRUIT-TREES.

We have often recommended the use of whale oil, soap, potash, &c., for the cleansing the bark of fruit-trees, and supposed that no application could exceed it for this purpose. A few weeks since we visited the seat of Robert Rennie, Esq., near the Lodi Print Works, and there saw the cleanest fruit-trees it has ever been our lot to meet with. Mr. Rennie informed us that he used a solution made of one pound of best bleachers' soda dissolved in one gallon of water, and applied it to the surface of his trees. All the fungi, dead bark, &c., are softened, and readily exfoliate from the healthy part of the bark during the growth of the tree; the surfaces of the cherry, peach, plum, nectarine, apricot, and many other kinds of trees

seemed polished, and of a color more closely resembling the new growth at the ends of branches than usual; the trees were in excellent health, and we were informed that they bore superior crops to those not so treated. Within the last few days we have applied the soda wash to our trees, and, for the purpose of ascertaining if so strong a solution would injure the tender parts of plants, have sprinkled it over the leaves of many tender shrubs; but as yet they are uninjured, while the inert parts of vegetables are readily decomposed by it. — *Working Farmer.*

STARCH FROM INDIAN CORN.

Many of our readers are not aware of the extent of this new branch of manufacture, which we hope soon to see take the place of whiskey distilleries in the consumption of our great American staple, Indian corn. There is now in operation, at Oswego, New York, a manufactory that consumes 2,000 bushels of corn a week, which makes 40,000 lbs. of the whitest and most beautiful starch for all domestic purposes, whether for the laundry or pantry. The building is 130 by 190 feet, five stories high, (to which an addition is about being erected,) and contains 200 cisterns for precipitating the starch, eleven furnaces with drying rooms, and employs about 70 men, and manufactures upwards of $120,000 worth of starch annually. There are two other similar establishments in the United States, and yet the demand is constantly increasing.

It is found that this kind of starch is superior to any other for culinary purposes, because it is always made from clean, sweet corn, the gluten of which is separated by a peculiar process of grinding and washing, the corn being first steeped in a chemical liquor, then reduced to pulp, sifted, and filtrated, and passed into huge cisterns, whence it flows through long, narrow troughs, draining off the water through coarse cotton cloths. In twelve hours, the starch becomes like wet clay, capable of being handled and dried, a process that requires much care and a powerful heat. The residue of the corn is used for feeding hogs and other domestic animals.

This is a new use of Indian corn, but one, we hope, that will prove profitable to the manufacturer, and induce a very large consumption of this grain, and thereby increase the price to the grower. We should like to have some statistics of the other corn starch manufactories in the country for the purpose of noticing them as being intimately connected with the interest of the agricultural community, and the object of our journal. — *American Agriculturist.*

THE TOMATO.

This plant or vegetable, sometimes called *Love Apple, or Jerusalem Apple*, which belongs to the same genus with the potato, was first found in South America. The use of this fruit as food is said to have been derived from the Spaniards. It has been long used also by the French and Italians. The date of its introduction to this country is unknown. It is said that the tomato has been used in some parts of Illinois for more than fifty years. Its introduction on our tables, as a culinary vegetable, is of recent date. Thirty years ago, it was hardly known, but as an ornament to the flower garden, and for pickling. It is now cultivated in all parts of the country, and found either in a cooked or raw state on most tables. In warm climates it is said that they are more used than in northern, and have a more agreeable taste. It is now used, in various parts of the country, in soups and sauces, to which it imparts an agreeable acid flavor; and is also stewed and dressed in various ways, very much admired, and many people consider it a great luxury. We often hear it said that a relish for this vegetable is an acquired one; scarcely any person at first liking it. It has, indeed, within a few years, come into very general use, and is considered a particularly healthy article. A learned medical professor in the west pronounces the tomato a very wholesome food in various ways, and advises the daily use of it. He says that it is very salutary in dyspepsia and indigestion, and is a good antidote to bilious disorders, to which persons are liable in going from a northern to a warmer climate. He recommends the use of it also in diarrhœa, and thinks it preferable to calomel. The tomato is a tender, herbaceous plant, of rank growth, but weak, fetid, and glutinous. The leaves resemble those of the potato, but the flowers are yellow, and arranged in large divided branches. The fruit is of a light yellow, and a bright red color, pendulous, and formed like the large squash-shaped pepper. There are smaller varieties, one pear-shaped variety, and also red and yellow. These are eaten and relished by many from the hand. The red are best for cooking; the yellow for slicing like cucumbers, seasoned with pepper, salt, and vinegar, and eaten raw. The seed should be sown in the early part of March, in a slight hotbed, and the plants set out in the open ground in May. In private grounds, it will be necessary to plant them near a fence, or to provide trellises for them to be trained to, in the same manner as for nasturtions; they will, however, do very well if planted out four feet distant from each other every way. But a nice way to keep the plant erect, and the fruit from the ground, is to drive down four stakes, so as to make a square, sow two feet each way, around the stakes. These will keep the vines from falling, and expose the fruit nicely to the sun for ripening. They will bear till frost. — *Journal of Agriculture.*

WOODEN BOOKS.

Mr. Vattemare proposes specimens of our forest trees in the form of books. In a collection of the kind in Warsenstein, near Cassel, the back of each volume is formed of the bark of the tree, the sides are constructed of polished pieces of the same stock, and when put together, a box is formed, inside of which is stored the fruit, the seed, and leaves, with the moss that grows upon the trunk, and the insects which feed upon the tree. Every volume corresponds in size, and the collection altogether, as may well be imagined, has an excellent effect. — *American Artisan.*

To destroy Rats. — Professed rat-catchers in England use the following compound, and so affected are rats by this perfume that they can be taken by hand with impunity.

Powdered assafœtida, one quarter grain; oil of aniseseed, one drachm; essential oil of lavender, one scruple; essential oil of rhodium, three drachms. Mix this compound, and spread it on the bait in the trap.

Covering for Gravel Walks. — Decomposed sandstone is an excellent covering for walks, in order to bind any loose material of which they may be formed. Soon after its application, the surface becomes perfectly smooth, and almost as firm as a flag. The walks may be swept during wet weather, nearly as well as when it is dry. — *Gardeners' Chron.*

JEFFERSON PLUM.

This plum has been brought into public notice within a short period. A few years ago it was recommended by some writers as the very best of plums, and this high commendation has led to its extensive dissemination. Although this is an excellent plum, all things considered, and it should be ranked with the first, yet it is not *the* best in every respect. The Green Gage excels it in quality; the Peach, Manning's Long Blue, Lombard, Prince's Imperial Gage, and many others excel it as growers, and several kinds are larger. Yet the Jefferson is a tolerably good grower, the fruit is large, and in quality it ranks as first rate, for we have several varieties of plums classed as best, though not hardly equal to that standard of high excellence, the Green Gage. Here we would remark, that as tastes differ, some persons prefer plums of a spirited, vinous flavor, to the sweet and luscious.

The fruit is large, roundish-oval, slightly narrowed at the base, slight suture; greenish-yellow, and when fully ripened in the sun, a golden yellow, and a blush of purplish-red, thin white bloom; stalk about an inch long, rather stout, in a slight cavity; flesh a rich orange, rather fine, juicy, of a high, rich flavor; nearly freestone. Ripens from the last of August to September 15 or 20. A good bearer, and a tolerably vigorous grower, but it grows unpleasantly in the nursery, as it is disposed to branch low. The fruit will hang long on the tree, and is not very liable to rot. Originated by the late Judge Buel, Albany, N. Y.

We had some fine specimens of this plum from our generous friend, Andrew Lackey, Jr., Marblehead, from which our engraving is made. Mr. L. obtained the Jefferson by mistake, for some other plum, several years ago, and when considerable stir was made in regard to the great excellence of this plum, and many were anxious to see the fruit raised in New England, he was so fortunate as to have a good-sized tree in full bearing.

HOW TO EXAMINE WELLS.

The following simple mode of examining a well, to ascertain whether it contains any offensive substances, has been recommended as efficient: Place a common mirror over the well in such a position as to catch and throw the rays of the sun directly to the bottom of the well, which will instantly be illuminated in such a manner that the smallest pebbles, &c., at the bottom, can be as distinctly discerned as if they were held in the hand. The sun is in the best situation to be reflected in the morning or afternoon.

Plants in Pots. — Your camellia does not bloom, because it did not set any flower-buds last spring, when it made its growth for the season, and it probably did not form buds then, for want of proper soil or water at that time. It is precisely during the two or three weeks while it is growing, that it requires especial care. At that time, plenty of water, air, and sun, and twice a week some guano water, will give you an abundance of flowers next year. — *Horticulturist.*

Domestic Department.

Swing Shelves for Cellars. — This very essential convenience should be the occupant of every cellar, especially the farmer's. They are very convenient for setting milk, cakes, pies, bread, &c.; and when properly made there can be nothing better. If made with wooden arms, they are sometimes visited by mice. This being the case with one in my cellar, I contrived almost every way to keep them off, but did not succeed until I hung the shelf on wire, which I find answers a very good purpose, and I think there can be no cheaper nor better way.

To make a double shelf, twelve feet long, with four cross bars, it requires about ten yards of wire, eight for the upper, and two for the lower shelf. The reason why the upper shelf requires more than the lower is, because it is hung farther from the point of fastening, and it requires two strands instead of one, as the whole weight of the two shelves comes upon the upper wires; four strands eighteen inches long is all that is required for the lower one. A shelf made after the above plan will require some bracing, in order to keep it steady; this should be done with wire, as wooden braces would be worse than wooden arms. The wire I used was No. 12. — *Rural New-Yorker.*

To make Tomato Preserves. — Wash your tomatoes, then pare them; and for every pound of tomatoes, take half a pound of refined loaf sugar; dissolve the sugar in a sufficient quantity of water to make it into sirup, in a preserving kettle over a slow fire; when your sugar is dissolved, put your tomatoes and the third of a lemon, sliced, into the sirup, and boil slowly, until the tomatoes are cooked; then take the tomatoes carefully out of the sirup, and cool them on a dish; continue to boil the sirup slowly, until the tomatoes are cooled; then strain your sirup through a hair sieve, and put the sirup and tomatoes back into the kettle, and boil them very slowly, for half an hour; then, if the sirup is boiled to the consistence of molasses, your preserves may be put into jars as soon as cooled.

A good Cup of Tea. — M. Soyer recommends that before pouring any water in, the teapot, with the tea in it, shall be placed in the oven until hot, or heated, and the pot then filled with boiling water. The result, he says, will be, in about a minute, a most delicious cup of tea, much superior to that drawn in the ordinary way.

Youth's Department.

The best Recommendation. — A youth seeking employment in New York, on inquiring at a certain store if they wished a clerk, was told they did not. On mentioning the recommendations he had, the merchant desired to see them. In turning over his carpet bag to find his letters, a book rolled out on the floor. "What is that?" said the merchant. "It is the Bible, sir," was the reply. "And what are you going to do with that book in New York?" said the merchant. The lad looked seriously into the merchant's face, and replied, "I promised my mother I would read it every day, and I shall do it," and burst into tears. The merchant immediately engaged his services, and in due time he became a partner in the firm, one of the most respectable in the city.

Health Department.

The Bath — Hints for the Season. — There is a great deal of good sense in the following suggestions of some letter writer in the Mobile Tribune; suggestions, too, which are good for any latitude: —

To the young we earnestly say, As you are now throwing aside your winter clothing, bathe; if you would avoid colds, the sure precursors of all sickness, bathe; and if you would enjoy your youth, blitheness of limb, and cheer of spirits, bathe frequently. The ancients knew its efficacy, and practised it throughout, as the wisest of the moderns do. The theory of Beau Brummel has grown into a proverb — "There is no perfume like that of fresh linen; no cosmetic like pure water, and plenty of it." But what boy has not felt the invigoration of a swim, or what man fatigued, of a free ablution? Bathe then, if you would be healthy.

But while bathing is so important to the young, it is no less so to the mature. Of all the thousand ills that flesh is heir to, none can exceed these three common curses — dyspepsia, rheumatism, and gout. Though when these are once seated they are deemed immovable, the most experienced physicians assure us they can be prevented, as they are clearly traceable to the stopping up of the pores of the skin.

Then, if you would preserve your digestion, and enjoy the good things of this life, bathe. If you would avoid rheumatism, and indulge in that joyous exercise which brings health, and every other comfort, bathe. And lest you be bedridden, and tortured everlastingly with gout, bathe, and bathe freely.

With the best of motives, we again affirm, if there be a cheap luxury in the world, it is a hot, cold, or shower bath.

Mechanics' Department, Arts, &c.

The Using of Paint. — It is not an uncommon thing for some paints, especially when exposed to the atmosphere, to rub off like whitewash, after they had been put on for about six or eight months. We have known white paint to do this, although both the oil and white lead were said to be good. In respect to white paint, which is most extensively used, there are three things which may be the cause of its inferiority and rubbing off. These are bad oil, bad lead, and too much turpentine. The best linseed oil only should be used, and it should be boiled, but not too long, nor at too great a heat. Linseed oil is frequently adulterated with sunflower oil, which is very inferior to that of linseed.

Sometimes white lead is sold which is very inferior to others, but painters know how to judge between the good and bad. The best can easily be ascertained by painters, from the quantity of oil required to give it proper consistency. In mixing paints, there should be no turpentine at all used for outside work, (at most the smallest possible quantity,) because the turpentine makes a soap of the oil; consequently, it soon will rub off, or be washed away by storms, &c. The only benefit of boiling linseed oil is to drive away its moisture and ammonia, so that the gluten of the oil will form a beautiful skin of varnish when dry,

to protect the lead from the effects of the atmosphere: while turpentine forms a good varnish with resins and gums, its combination with oil is altogether different, forming a soap; hence, those who know not this fact, and use too much turpentine with their paints for outside work, may expect to see it disappear before it is very old. The best way to put on white lead for outside work, is to commence with a very thin coat, and let it dry perfectly. It is better to put on four thin coats, one after another, than two thick ones. The labor, to be sure, is more expensive, but those who buy their own paint, and use it in the country, will find out that it will be a saving in the end. — *Scientific American.*

OUR COUNTRY VILLAGES.

Without any boasting, it may safely be said, that the natural features of our common country (as the speakers in Congress call her) are as agreeable and prepossessing as those of any other land, whether merry England, *la belle France*, or the German fatherland. We have greater lakes, larger rivers, broader and more fertile prairies than the old world can show; and if the Alleghanies are rather dwarfish when compared to the Alps, there are peaks, and summits, "castle hills," and volcanoes, in our great back-bone range of the Pacific, — the Rocky Mountains — which may safely hold up their heads along with Mont Blanc and the Jungfrau.

Providence, then, has blessed the country — our country — with "natural born" features, which we may look upon and be glad. But how have we sought to deform the fair landscape here and there, by little, miserable, shabby-looking towns and villages; not miserable and shabby-looking from the poverty and wretchedness of the inhabitants, for in no land is there more peace and plenty; but miserable and shabby-looking from the absence of taste, symmetry, order, space, proportion, all that constitutes beauty. Ah, well and truly did Cowper say,

"God made the country, but *man* made the town;"

for in the one we every where see utility and beauty harmoniously combined, while the other presents us but too often the reverse; that is to say, the marriage of utility and deformity.

Some of our readers may remind us that we have already preached a sermon from this text. No matter; we should be glad to preach fifty; yes, or even establish a sect, as that seems the only way of making proselytes now, whose duty it should be to convert people living in the country towns to the true faith; we mean the true rural faith, viz., that it is immoral and uncivilized to live in mean and uncouth villages, where there is no poverty or want of intelligence in the inhabitants; that there is nothing laudable in having a piano-forte and mahogany chairs in the parlor, where the streets outside are barren, and destitute of shade trees, destitute of sidewalks, and populous with pigs and geese.

We are bound to admit (with a little shame and humiliation, being a native of New York, the "Empire State") that there is one part of the Union where the millennium of country towns, and good government, and rural taste has not only commenced, but is in full domination. We mean, of course, Massachusetts. The traveller may go from one end of that state to the other, and find flourishing villages, with broad streets, lined with maples and elms, behind which are goodly rows of neat and substantial dwellings, full of evidences of order, comfort, and taste. Throughout the whole state, no animals are allowed to run at large in the streets of towns and villages. Hence so much more cleanliness than elsewhere; so much more order and neatness; so many more pretty rural lanes; so many inviting flower gardens and orchards, only separated from the passer-by by a low railing or hedge, instead of a formidable board fence. Now, if you cross the state line into New York, — a state of far greater wealth than Massachusetts, as long settled, and nearly as populous, — you feel directly that you are in the land of "pigs and poultry," in the least agreeable sense of the word. In passing through villages and towns, the truth is still more striking as you go to the south and west; and you feel little or nothing of that sense of "how pleasant it must be to live here," which the traveller through Berkshire, or the Connecticut valley, or the pretty villages about Boston, feels moving his heart within him. You are rather inclined to wish there were two new commandments, namely: Thou shalt plant trees, to hide the nakedness of the streets; and, Thou shalt not keep pigs — except in the back yard.

Our more reflective and inquiring readers will naturally ask, Why is this better condition of things, a condition that denotes better citizens, better laws, and higher civilization, confined almost wholly to Massachusetts? To save them an indefinite deal of painstaking, research, and investigation, we will tell them in a few words: *That state is better educated than the rest.* She sees the advantage, morally and socially, of orderly, neat, tasteful villages in producing better citizens, in causing the laws to be respected, in making homes dearer and more sacred, in making domestic life and the enjoyment of property to be more truly and rightly estimated.

And these are the legitimate and natural results of this kind of improvement we so ardently desire in the outward life and appearance of rural towns. If our readers suppose us anxious for the building of good houses, and the planting of street avenues, solely that the country may look more beautiful to the eye, and that the taste shall be gratified, they do us an injustice. This is only the external sign by which we would have the country's health and beauty known, as we look for the health and beauty of its fair daughters in the presence of the rose on their cheeks. But as the latter only blooms lastingly there, when a good constitution is joined with healthful habits of mind and body, so the tasteful appearance which we long for in our country towns, we seek as the outward mark of education, moral sentiment, love of home, and refined cultivation, which makes the difference between Massachusetts and Madagascar.

We have, in a former number, said something as to the practical manner in which "graceless villages" may be improved. We have urged the force of example in those who set about improving their own property, and shown the influence of even two or three persons, in giving an air of civilization and refinement to the streets and suburbs of country towns. There is not a village in America, however badly planned at first, or ill-built afterwards, that may not be redeemed, in a great measure, by the aid of shade trees in the streets, and a little shrubbery in the front yards; and it is never too late or too early to project improvements of this kind. Every spring and every autumn should visit a revival of associated efforts on the part of selectmen, trustees of corporations, and persons of means and influence, to adorn and embellish the external condition of their towns. Those least alive to the results, as regards beauty, may be roused as to the effects of increased value given to property thus improved, and villages thus rendered attractive and desirable as places of residence.

But let us now go a step farther than this. In no country, perhaps, are there so many *new* villages and towns laid out every year as in the United States. Indeed, so large is the number, that the builders and

projectors are fairly at a loss for names,— ancient and modern history having been literally worn threadbare by the godfathers, until all association with great heroes and mighty deeds is fairly beggared by this rechristening going on in our new settlements and future towns, as yet only populous to the extent of six houses. And notwithstanding the apparent vastness of our territory, the growth of new towns and new states is so wonderful — fifteen or twenty years giving a population of hundreds of thousands, where all was wilderness before — that the plan and arrangement of new towns ought to be a matter of national importance. And yet, to judge by the manner in which we see the thing done, there has not, in the whole duration of the republic, been a single word said, or a single plan formed, calculated to embody past experience or to assist in any way the laying out of a village or town.

We have been the more struck by this fact, in observing the efforts of some companies who have lately, upon the Hudson, within some twenty or thirty miles of New York, undertaken to lay out rural villages, with some pretension to taste and comfort; and aim, at least, at combining the advantages of the country with easy railroad access to them.

Our readers more interested in such matters (and taking our principal cities together, it is a pretty large class) will be interested to know what is the beau ideal of these companies, who undertake to buy tracts of land, lay them out in the best manner, and form the most complete and attractive rural villages, in order to tempt those tired of the way-worn life of sidewalks into a neighborhood where, without losing society, they can see the horizon, breathe the fresh air, and walk upon elastic greensward.

Well, the beau ideal of these newly-planned villages is not down to the zero of dirty lanes and shadeless roadsides; but it rises, we are sorry to say, no higher than streets, lined on each side with shade trees, and bordered with rows of houses. For the most part, these houses (cottages, we presume) are to be built on fifty feet lots; or if any buyer is not satisfied with that amount of elbow room, he may buy two lots, though certain that his neighbor will still be within twenty feet of his fence. And this is the sum total of the rural beauty, convenience, and comfort of the latest plan for a rural village in the Union.* The buyer gets nothing more than he has in town, save his little patch of back and front yard, a little peep down the street, looking one way at the river, and the other way at the sky. So far from gaining any thing which all inhabitants of a village should gain by the combination, one of these new villagers actually loses; for if he were to go by himself, he would buy land cheaper, and have a fresh landscape of fields and hills around him, instead of houses on all sides, almost as closely placed as in the city, which he has endeavored to fly from.

Now, a rural village, newly planned in the suburbs of a great city, and planned, too, specially for those whose circumstances will allow them to own a tasteful cottage in such a village, should present attractions much higher than this. It should aim at something higher than mere rows of houses, upon streets crossing each other at right angles, and bordered with shade trees. Any one may find as good shade trees, and much better houses, in certain streets of the city which he leaves behind him; and if he is to give up fifty conveniences and comforts, long enjoyed in town, for the mere fact of fresh air, he had better take board during the summer months in some snug farm-house, as before.

* We say *plan*; but we do not mean to include in this such villages as Northampton, Brookline, &c., beautiful and tasteful as they are. But they are in Massachusetts.

The indispensable desiderata, in rural villages of this kind, are the following: First, a large, open space, common, or park, situated in the middle of the village; not less than twenty acres, and better if fifty or more in extent. This should be well planted with groups of trees, and kept as a lawn. The expense of mowing it would be paid by the grass in some cases, and in others, a considerable part of the space might be enclosed with a wire fence, and fed by sheep or cows, like many of the public parks in England.

This park would be the nucleus or *heart of the village*, and would give it an essentially rural character. Around it should be grouped all the best cottages and residences of the place; and this would be secured by selling no lots fronting upon it of less than one fourth of an acre in extent. Wide streets, with rows of elms or maples, should diverge from the park on each side, and upon these streets smaller lots, but no smaller than one hundred feet front should be sold for smaller cottages.

In this way, we would secure to our village a permanent rural character; first, by the possession of a large central space, always devoted to park or pleasure ground, and always held as joint property, and for the common use of the whole village; second, by the imperative arrangement of cottages or dwellings around it, in such a way as to secure, in all parts of the village, sufficient space, view, circulation of air, and broad, well-planted avenues of shade trees.

After such a village is built, and the central park planted a few years, the inhabitants would not be contented with the mere meadow and trees, usually called a park in this country. By submitting to a small annual tax per family, they could turn the whole park, if small, or considerable portions, here and there, if large, into pleasure grounds. In the latter there would be collected, by the combined means of the village, all the rare, hardy shrubs, trees, and plants usually found in the private grounds of any amateur in America. Beds and masses of ever-blooming roses, sweet-scented climbers, and the richest shrubs would thus be open to the enjoyment of all during the whole growing season. Those who had neither the means, time, nor inclination to devote to the culture of private pleasure grounds, could thus enjoy those which belonged to all. Others might prefer to devote their own garden to fruits and vegetables, since the pleasure grounds, which belonged to all, and which all would enjoy, would, by their greater breadth and magnitude, offer beauties and enjoyments which few private gardens can give.

The next step, after the possession of such public pleasure grounds, would be the social and common enjoyment of them. Upon the well-mown glades of lawn, and beneath the shade of the forest trees, would be formed rustic seats. Little arbors would be placed near, where, in midsummer evenings, ices would be served to all who wished them. And, little by little, the musical taste of the village (with the help of those good musical folks, the German emigrants) would organize itself into a band, which would occasionally delight the ears of all frequenters of the park with popular airs.

Do we overrate the mental and moral influences of such a common ground of entertainment as this, when we say that the inhabitants of such a village, enjoying in this way a common interest in flowers, trees, the fresh air, and sweet music, daily, would have something more healthful than the ordinary life of cities, and more refining and elevating than the common gossip of country villages?

"Ah, I see, Mr. Editor, you are a bit of a communist." By no means. On the contrary, we believe, above all things under heaven, in the power and virtue of the *individual home*. We devote our life and humble efforts to raising its condition. But

people *must* live in towns and villages, and therefore let us raise the condition of towns and villages, and especially of rural towns and villages, by all possible means!

But we are *republican;* and—shall we confess it?—we are a little vexed, that as a people generally, we do not see how much in America we lose by not using the advantages of republicanism. We mean now, for refined culture, physical comfort, and the like. Republican *education* we are now beginning pretty well to understand the value of; and it will not be long before it will be hard to find a native citizen who cannot read and write. And this comes by making every man see what a great moral and intellectual good comes from cheerfully bearing a part in the burden of popular education. Let us next take up popular refinement in the arts, manners, social life, and innocent enjoyments, and we shall see what a virtuous and educated republic can really become.

Besides this, it is the proper duty of the state, that is, *the people*, to do in this way what the reigning power does in a monarchy. If the kings and princes in Germany, and the sovereign of England, have made magnificent parks and pleasure gardens, and thrown them wide open for the enjoyment of all classes of the people, (the latter, after all, having to pay for it,) may it not be that our sovereign *people* will (far more cheaply, as they may) make and support these great and healthy sources of pleasure and refinement for themselves in America? We believe so; and we confidently wait for the time when public parks, public gardens, public galleries, and tasteful villages, shall be among the peculiar features of our happy republic. — *Horticulturist.*

COMPOSITION OF SOILS.

Clay is a compound of silica and alumina, chemically combined. Much of the ordinary clay observable in this country, and, indeed, wherever this earth exists, contains an extra quantity of silica in the form of sand, and of various degrees of fineness. This, however, may be easily separated by boiling in water; that portion of it which is in a state of actual combination with it, can be separated only by the action of chemical re-agents. In all clays there is found a quantity of iron in a state of greater or less oxidation, and it has been supposed that this metal constitutes an essential part of every clayey mass. Hence we have clays of various colors — black, and yellow, brown, and red; the shade or distinguishing hue varying in accordance with the different degrees of oxidation — the black designating the lowest, and the red the highest. Oxygen of iron is also frequently combined with acids, especially phosphoric, in marshes, where the latter is produced by the decomposition of vegetable matter.

The origin of clay is no doubt traceable to the disintegration and decomposition of rocky masses. Pure clay, or that which is ordinarily contemplated in this light, is wisely eschewed by the practical cultivator, familiar with the characteristics of soils, as totally unsusceptible of profitable cultivation. When wet, it adheres in plastic glutinous masses, retaining water, and exhibiting a nature so adhesive as not to admit of being worked. When dry, it is compact, solid, and impermeable. Lands ordinarily denominated clayey are among the best grass soils, producing abundantly, and maintaining their vegetative powers unimpaired for years. In all such soils, however, there will, upon examination or analysis, be discovered a very large per cent. of silex, or earth of a diametrically opposite nature. The action of this upon the clayey corpuscles, or atoms, is to destroy their adhesiveness, and impart to the mass a degree of pulverulent power, which has a most emendatory effect in preparing the soil for the successful action of the plough, and the sustenance and support of valuable crops of vegetables, grass, and grains. Fields which the utmost ingenuity of man will fail to render productive, and which the application of whole cargoes of putrescent manure would be insufficient to render permanently productive, in consequence of the fatal predominance of this primitive earth, may, however, be ameliorated, and brought to a condition of great and astonishing fruitfulness, by the use of sand. The quantity necessary to be applied to insure this amelioration, of the constitutional texture, we can decide accurately only by experiment. One thing, however, is certain: no clayey soil will be likely to receive injury from large applications, and the probability is, that, as a general thing, too little will be accorded, rather than too much.

It may here be proper to remark that the three ingredients of which clay is composed, namely, alumina, silica, and oxide of iron, are united in it in very variable proportions. So great, indeed, is this discrepancy, that two specimens are rarely to be met with which are not distinguished by some appreciable difference. The predominance of silica is often so great, that it amounts to not less than ninety-three parts in one hundred. Alumina seldom constitutes the principal part of it, but such is the peculiar nature of the latter, that when clay has been freed from silica by washing it, it is still found to exist in two different states, — first, a sort of sediment or deposit, which is discoverable after the clay has been boiled a considerable time in a sufficient quantity of water, and which cannot be called *sand*, though it consists of grains or granules of exceeding minuteness, and smaller, even, than the atoms precipitated from a solution of flints. These matters, however, pertain rather to the laboratory than the field: to follow them out may be productive of important advantages in the details and application of science, but they are involved in too much abstruseness to be profitably dwelt upon here.

It is enough for the practical farmer to know, that by a liberal application of sand to his viscid and glutinous clays, together with a quantity of fermentable manure, he may so far ameliorate their texture as to render them susceptible of profitable cultivation; and that lands once thoroughly ameliorated by the application of this constitutional alterant, are possessed of a *permanent* value which can never be imparted to them in any *other* way. A friend writing to me not long since, on a topic associated indirectly with this subject, in concluding his letter, says,—

"I have recently attempted the improvement of a portion of my estate by the means you recommended in your letter of last June, and am confident that the means used will more than realize my most sanguine expectations, as I have since noticed the beneficial effects of it on a farm in an adjoining town. The land was a clay field, so poor that nothing had grown upon it, that could be considered valuable, for many years. It was ploughed, harrowed, and *sanded* — not less than two hundred cart-loads of fine road sand having been applied to an acre, and *harrowed* in. After this, about ten cords of long manure were applied, and covered by the same implement. The field was then struck off into rows eighteen inches apart, and potatoes dropped in the usual manner of planting that crop. *The yield was exuberant!* I have not been able to ascertain with accuracy the amount, but my friend, the owner, informed me that it was the heaviest ever produced on his farm. Gypsum, after the rate of three bushels to the acre, was applied directly to the plants after hoeing."
— *Germantown Telegraph.*

CULTIVATION OF WINTER WHEAT.

Dr. Holmes: Once more I wish to call the attention of the farmers of this state to the importance of raising winter wheat, believing, as I now do, that it may be grown to better advantage than spring wheat *ever* has been. I ground my opinion on the fact, that when a proper method of cultivation has been pursued, the average crop for six years past has been about twenty bushels to the bushel of seed sown, and in no instance a failure, or less than fifteen bushels per acre. But once has the rust injured it at all, and then but slightly; smut, none; and weevils, never, unless very late sown, (late in 10th mo.)

The variety I sow was imported from Poland, latitude north of us; and whether it is hardier than other sorts sown hereabouts, I know not, never having sown any other; but this has stood hard freezing, as well as English grass along side of it, as I had a fair experiment in the winter of 1848–9. My wheat was on a ridge of land exposed to the winds from all quarters. Nearly all winter a portion of the ground was bare of snow. In the spring, the plants above ground were as dead and dry as old stubble; but a few warm days brought up green blades that produced fine wheat. I have raised this wheat on all the varieties of dry soil commonly cultivated in this state — upon old ploughed ground, green sward, and clover sod, turned over after a hay crop was taken off, and with light top-dressings of compost, leached ashes, lime, and rotten, strawy manure from the stable. The compost gave the best crop.

Our present crop is ready for the sickle, and it is judged that it will produce twenty-five bushels to the acre. It is growing on clover sod, ploughed soon after the hay was taken off last summer. One half the lot had twenty single horse-cart loads of compost to the acre, the other half had none. The seed was sown the 25th of 8th mo., one bushel per acre, and covered about two or three inches with a light, single-horse plough, (the plough being gauged to keep it from going deeper,) and rolled with a large single-horse roller. This land has been manured but moderately for many years; consequently the growth of wheat is not so large as some I have seen the present season. Had the clover been ploughed under in the 6th month, no doubt the crop would have been increased many bushels.

The time of sowing depends much on the state of the land. If green sward, or land lightly manured, from the 10th to the 25th of the 8th month is the desirable time, though I would not discourage sowing it later, if it cannot otherwise be done. On land in high cultivation, it may safely be sown till the 20th of the 9th month. I have known thirty bushels to be raised to the acre on land where corn had been raised the same year the wheat was sown, and taken off about the 18th.

The object of early sowing is, that the grain may get deep root, ripen early, and thereby escape the weevil; and also that the surface of the ground may be well covered in autumn, to protect it against hard freezing. If a large growth is obtained in autumn, turn on calves and sheep to feed it; otherwise there is danger of its falling so thick as to mould, and nearly stifle the plants. A friend of mine lost half his crop in this way last year.

On mellow, rich soil, one bushel of seed is quite sufficient for an acre; on weaker land, two to four quarts more are required.

If any portion of these hastily written, desultory remarks are worth spreading before the readers of the Farmer, thou art at liberty so to do; and if a few farmers thereby may be induced to give their attention to the growing of winter wheat, we shall be fully remunerated. I would adopt the sentiment of a good citizen farmer, who came to buy buckwheat for sowing: "Although I shall not from this seed grow grain that will make superfine wheat flour, I hope to get a tolerable substitute, saving a few dollars that would otherwise go to purchase western flour, and thereby do the state some service."

I am truly thy friend,

M. TABER.

Vassalboro', 8*th mo.*, 2d, 1850.

— *Maine Farmer.*

PROPOSED REMEDY FOR STEALING FRUIT.

Many farmers in this vicinity are deterred from cultivating fruits, from the fact of its liability to be stolen by unruly boys, not to say men, or animals in the shape of men. Now, if we lived among Arabs, we should probably expect this; but in a civilized community, governed, as we claim to be, by laws, and where a very large proportion of the inhabitants are themselves cultivators of the soil, this state of things is really too bad. Having seen various remedies suggested, such as bull-dogs, tartar emetic, hedge fences, &c., I have thought of proposing a plan, which, if thoroughly carried out, I have no doubt would be more effectual than all others combined. Let every person, who occupies a single rod of ground, plant a grape-vine, a peach-tree, a pear-tree, an apple-tree, and if natural fruit, graft or bud them with some of the best varieties in the neighborhood. Plant also a few cherry-stones, if you can find no tree that you are able to buy; set out a currant bush, or raspberry plant, by the side of the fence, — and almost any person can have these given to him if he will only take the trouble to set them in the ground; or, if not given him, the expense is a mere trifle, a few shillings at most, and my word for it, no man who knows the pleasure, yes, the *pleasure* of cultivating, and the vexation of having them stolen, will ever be guilty, nor suffer his children to be guilty, of such meanness afterwards.

But it may be said, "I have no land to spare for such things as these; I must raise what will turn to the most profit." Now, I ask, what will pay better than fruit of almost every kind, at the present day? Besides, would you not prefer being at a little trouble, or even a trifling expense, to raise these things, rather than have your children pilfer, or even beg them of your neighbors? But it will be said, "I shall not live long enough to enjoy them, if I do take all this trouble." Are you sure of that? You can probably get a fair crop of grapes in two or three years, if you will simply train a vine to your house, or plant it in your garden or yard, and set a pole by the side of it to run upon; and so with almost every kind of fruit-tree. They will bear in much less time than is generally supposed, if they are only taken care of. But supposing you do not live to enjoy it yourself, do you wish to do nothing for your children? or do you wish the world to be no better for your having lived therein? If so, go on in the "even tenor of your ways," and encourage your children to "follow in your footsteps," and your wish will probably be gratified. S. E.

— *Am. Agriculturist.*

A Curious Fact.—The blubber on a fat whale is sometimes, in its thickest parts, from fifteen to twenty inches thick, though seldom more than a foot; it is of a coarser texture and much harder than fat pork. So very full of oil is it that a cask closely packed with the clean raw fat of the whale will not contain the oil boiled from it, and the scraps are left beside: this has been frequently proved by experiment.

VIRTUES OF MILK.

It is a most perfect diet. Nothing like it — it contains curd casein, which is necessary for the development and formation of muscle — butter for the production of an adequate supply of fat — sugar to feed the respiration, and thereby add warmth to the body — the phosphates of lime and magnesia, the peroxide of iron, the chlorides of potassium and soda, with the free soda, required to give solidity and strength to the bone — together with the saline particles so essentially necessary for other parts of the body. It contains lactic acid, or the acid of milk, which chemists inform us is the acid of the gastric juice, so requisite for the proper dissolving of our food in the stomach. It is therefore obvious that milk should be chemically correct in all its constituents, and that its beneficial effects on the constitution should not be neutralized by adulteration; it is, Dr. Prout properly states, "the true type of all food." How necessary, therefore, is it that it should be pure! otherwise this wonderful and wise provision of Providence will be a curse rather than a blessing. — *Bugg's Observations on Milk.*

THE FREJOLE BEAN.

This is the true name of the Mexican Black Bean, which we have been recommending for several years past, and which we still think is *decidedly* the best winter bean ever cultivated in this region. There is no other comparable with it — the Lima, for winter use, being entirely thrown in the background. — They ought to be planted from the first to the middle of May.

We have a small quantity on hand to give away; and if any of our friends think this cheap enough, we shall be happy to supply all with a small package, sufficient to provide seed for another year. We are sure no lover of a good bean, who eats the *frejole* (pronounced *freholy*) once, but will be desirous to have another "dig" at them. They are a bunch bean, and are grown with the least possible trouble. — *Germantown Telegraph.*

Mr. Isaiah Crosby, of Shrewsbury, has a cow, from which has been made, in nine months, 212 pounds of butter, besides selling 245 quarts of new milk. The money produce of the cow was as follows: —

212 pounds butter sold at 22 cents,	$46 64
245 quarts of milk, at 4 cents,	9 80
Skim milk sold,	1 02
Calf fatted and sold,	8 00
Total,	$65 46

Besides this, a pig of 300 pounds weight was reared and partially fatted on the skim milk. — *American Republic.*

Housing Manure. — It is miserable economy to throw manure out into the open air, and leave it exposed to all the variations of the weather till it is wanted for use. Some build sheds over their hovel windows, to protect their manure heaps. This is a good improvement, but a manure cellar is better.

There has been a great and sudden rise of water on Sandy River, causing much damage to farmers on the intervals. A large quantity of hay left in the fields was swept away. — *Maine Cultivator.*

NOTICES OF PUBLICATIONS.

The Literary Readers, for Academies and High Schools; consisting of Selections in Prose and Verse, from American, English, and other foreign Literature, chronologically arranged; including Biographical Sketches, and Remarks on the Art of Reading. By Miss A. Hall, Author of the "Manual of Morals." Boston, published by John P. Jewett & Co., Nos. 17 and 19 Cornhill.

In this work we have a choice compilation from the wide field of literature, admirably adapted to the school, to the family, and the general reader. The talented author, whose former work has high merit, has evinced great labor, good taste, and nice discrimination, in the preparation of this valuable book. Besides its high merit in other respects, it has a new and important feature, which should give it a decided preference. Preceding the articles of each author is a short and comprehensive sketch of his life: this not only adds great interest to the work, but it communicates important facts in the history of literature, that are easily learned and remembered. We would commend this as the best work of the kind that has come within our observation; and we are pleased to see fair authors coming before the public with superior claims.

The Farmer's Guide. — This valuable work has reached the seventh number. The sixth number was embellished with a beautiful engraving of Short Horn cows; the seventh is finely adorned with a Leicester ewe and lamb. The English author, Stephens, ranks among the ablest of his countrymen; and the American author, Prof. Norton, is well known for his valuable contributions to agriculture. Messrs. Fetridge & Co., agents, Boston.

Mr. Livingston's Strong Arguments against Capital Punishment reviewed. Messrs. Redding & Co., Boston. Price 10 cents.

Theatrical Reminiscences. — A Peep behind the Curtain. Messrs. Redding & Co. Price 25 cents.

Boston Female Medical School. — A few pages reviewed, in regard to this institution, show that it is gaining favor in the public mind, as needs it must, as the subject becomes investigated. The object is to educate intelligent women for the important office of physicians. In numerous cases, they are best fitted by nature and their habits to have the management of the sick.

ACKNOWLEDGMENTS.

Of John Washburn, Plymouth, Manomet Sweeting apple. This is a new fruit, of great beauty and excellent quality. It promises to be one of the best varieties. It ripens a little later than the Sweet Bough. Also, Sassafras Sweet. This is a large, fair fruit, very tender, and of a fine high flavor, excellent both for baking and for the dessert. Though it is early for this fruit, the specimens of Mr. W.

were fine. It is usually in use from September into November, and is one of the finest sweet apples of its season. It is a good grower and bearer.

Of Dea. S. P. Fowler, Danvers New Mills, a few quarts of Black Grape currants. This is a valuable fruit for medical purposes. We have been indebted to Dea. F. for some bottles of wine or cordial made from this currant, which we used to good advantage in a case of general debility. With proper attention, we can raise materials, and make better medicine than the apothecary shops afford, and thus avoid the danger from adulterated drugs and mineral poisons, to say nothing of the danger of taking doses often dealt out by those who are ignorant of the science of the trade they practise.

Of Samuel Walker, Chelsea, fine specimens of the Peach plum. This is a large fruit, and one of the finest in its season.

Of Henry Vandyne, nurseryman, Cambridgeport, a box of Prince's Yellow Gage plum. This ripens a little later than the Peach plum, and is one of the best early varieties.

Trust him little who praises all — and him less who censures all — and him still less who is indifferent about all.

For the New England Farmer.

Mr. Cole: I received by mail, a few days since, the enclosed manuscript, from a gentleman residing in Connecticut, who, in his last letter to me, says,—

"The enclosed hit at the fever is from a literary friend here, who loves a joke as well as poultry. It is forwarded at my suggestion, and I think all your poultry readers will enjoy it, if it suits your convenience to publish it."

I think it well suited to these times, and therefore send it to you for publication, hoping that your readers will be well pleased with it, and that the author will oftentimes favor them with the productions of *his* or *her* muse. Yours, &c.,

S. BRADFORD MORSE, Jr.

Remarks. — With great pleasure, we present our readers with the poetry in question, for we regard it as admirably adapted to the occasion. We need some Cervantes to portray truly the Quixotism in the poultry line, particularly at the present time, when, after a season noted for much loud crowing, there are in various parts of the big poultry yard some symptoms that *spurs* and *game bills* are coming into requisition. We would invite further effusions from the same source. — Ed.

THE HEN FEVER.

Æsop, who wrote in days of yore,
Tells of a wondrous goose,
That for its master every day
Would golden eggs produce.

But poulterers of the present day
Would such a fowl despise;
A Dorking or a Shanghae hen
They'd far more highly prize.

The modern poulterers include
The righteous and the bad,
The rich, the poor, the old, the young;
All have gone "poultry mad."

Lawyers, and doctors, and divines,
All practice have resigned,
And to improve the breed of hens
Their talents have combined.

And, after "laying" various plans,
They've "set" themselves at work
To find if in the poultry tribe
New qualities may lurk.

The praise of hens of various breeds
From every tongue is heard,
While all admit the crested cock
To be a "*gallus* bird."

A *hen*-pecked husband now is thought
Alone to know true bliss,
And if a *chicken* heart he owns,
It will not come amiss.

The *cock*-ney now is thought to be
With keenest wit adorned,
And 'tis a "feather in his cap,"
If, like the hens, he's *corn*ed.

Fowl-ers' are now the only works
Young ladies deign to read,
And *chick*-weed, *egg*-plant, *eg*-lantine,
The only flowers they'll heed.

Their suitors now are only asked
How many hens they own,
For by the care on these bestowed,
True love is only shown.

Vain *eg*-otists are they who think
Good looks or wit will make
Amends for empty poultry yards;
Eg-regious mistake.

Hen-ry and *Hen*-rietta now
Are lovely names indeed,
And those who bear these honored names
No other graces need.

"'Tis strange, 'tis passing strange;" the world
Is ever running wild;
Some foolish scheme will captive lead
Alike the sage and child.

HEN-RY.

Stonington, Ct., *July* 10, 1850.

Beware of little expenses; — a small leak will sink a great ship.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

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DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, SEPTEMBER 14, 1850. NO. 19.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

HORTICULTURAL EXHIBITIONS.

EXHIBITIONS of products of every kind, vegetable, animal, or mechanical, afford instruction as well as amusement to the beholder; and information obtained in this way is important, and it could not be communicated otherwise than through the medium of the sight. The greatest pomologist would try in vain to give a perfect idea of a fruit by description. Yet, however important it may be to see fruit in order to judge of its appearance, this mode of investigation gives but a small part of the information desired.

The growth and bearing properties of the tree, its hardiness against heat and cold; the hardiness of the fruit against blast, and various other adverse circumstances; the quality of the fruit, the purposes to which it is adapted, its time of use, &c., &c., are all important; and many of these things cannot be learned merely from an exhibition, and it is highly desirable that there should be an improvement, by which the general utility of our pomological exhibitions may be extended.

In an article in a late number of the Horticulturist, it is recommended to have a committee who shall designate a dozen — more or less — in each class of fruits, with the terms "good," "very good," "best;" a classification established by the Congress of Fruit-Growers; having it understood that all fruits not so marked were not proved to be good. This plan would be a good one, provided the committee took the general character of the fruits, and the habits of the tree, into consideration, which would be essential to correct information.

Some fruits are remarkably fine and handsome; but a skilful gardener, in a very favorable location, would spend five dollars to raise a peck of the fruit, and the farmer or mechanic, with common attention, would be still more unsuccessful. If such beautiful fruits were labelled "best," the inexperienced visitor would be deceived. We have frequently, at our shows, fruits that are very imposing in their appearance, and they are often highly recommended by writers; yet such fine fruit can only be raised in a warm loam, in a favorable location, in a long, warm season, and on well-managed dwarf trees. Let the common cultivator go into the raising of such fruits, and it will be poorer business than raising apples at twenty cents a bushel. Yet people are constantly led astray by specious shows, and the recommendations of amateurs, who with great zeal and attention, and with large expenditure, cannot raise fruit enough for their own use.

One great improvement may be made in our fruit shows, by having a competent committee to see that every known fruit is marked correctly. This is highly important. We have often seen fruits with false marks in the shows of some of the most enlightened associations in the country, and such marks have remained during the exhibition, deceiving many; for most visitors rely on the intelligence of such societies.

It is boasted that at some of our exhibitions, some persons have shown one or two hundred varieties of pears; but it is not added, though it might be of a truth, that not more than one tenth part of them are worth cultivating; and some of them make a very imposing appearance, and the inexperienced may be seen taking note of them, evidently about to waste his time and money in a fruitless attempt to cultivate them for profit.

If inferior fruits are shown, either to enable the visitor to identify the various kinds, or in compliment to the enterprise and zeal of the cultivator, they should be marked as inferior, or not worth cultivating, that the inexperienced may not be deceived by specious appearances, in the very hall of an intelligent society, and at the very exhibition designed for information.

If an arrangement could be made to dispose of fine fruits, near the exhibitions, it would afford the inquiring mind great advantages in its investigations; and the person who shows a fine plate of fruit could often furnish specimens for those who would try them. In this way new fruits would be thoroughly tested in quality, and the producer could turn superior kinds to good account, both for the public and himself, if profit should be an object. Sometimes splendid and beautiful new fruits are shown, and almost every cultivator who sees them is anxious to

procure so fine-looking varieties; but on tasting them, he would accept some, and discard others, and thus, in a few minutes, learn what would require as many years to learn without this advantage.

COWS HOLDING UP THEIR MILK.

A correspondent of the American Agriculturist states, that he had a cow that would not give down her milk; and, as he had heard that putting a weight on the back of a cow would make her give down her milk, he laid a bushel of grain on her back, but without effect. He then put his elbows on the centre of her back, and bore on till her back became hollowed, and then she gave down her milk freely.

In the American Veterinarian, we remark that the holding up of milk is done by an effort of the cow, of which she will tire after a while; and if a person will deal gently with a cow, and sit down and perform the usual operation of milking, persevering steadily, the milk will flow freely in a short time. The discovery of this simple and gentle method was made by a boy only nine years of age, who could by mild means milk the most refractory cows, which strong men had tried in vain to subdue. When does a person arrive to the years of discretion?

PRESERVING FRUIT.

In the article which we copy from the Germantown Telegraph, various modes of preserving fruit are recommended. We have made very exact experiments in saving apples in sand, plaster, charcoal dust, and ashes; but none of these substances had any useful effect of consequence, and their use was attended with much trouble and inconvenience.

Mr. Editor: Fruit of almost every description may be preserved simply by packing it in kiln-dried bran. Sand is frequently used for the same purpose; but it is a ponderous article, and on several accounts far less eligible than bran. Dr. Underhill, of the New York Farmers' Club, stated, some years since, that a friend of his obtained a quantity of ground cork, in which grapes had been imported. He dried it thoroughly in a kiln, and packed some grapes in it, which kept sound and good till the following July. He also remarked that he had succeeded in preserving grapes in kiln-dried wheat bran; and that, in preserving all fruits, they should be kept as cool as possible, without incurring danger from frost. The temperature, therefore, ought never to be below 32°, nor above 35°.

Mr. Hall, at one of the meetings of this "Club," remarked that the Spaniards export more grapes than all the rest of the world, and that they preserve them by packing in kiln-dried oak sawdust, and hermetically sealing the vessels in which they are deposited. Noah Webster, of Lexicon and Spelling-book memory, was accustomed to preserve his apples in sand. Plaster of Paris is also had recourse to by many for the same purpose, but it is no less objectionable than the latter article, being heavy and difficult to handle. I have known apples and pears preserved in an excellent state till August, in the following manner: As soon as the weather becomes cool, *pick* the fruit carefully from the boughs by hand, placing them one by one in a basket, to prevent bruising. Spread them for a week or two in a cool place, and then enclose each apple closely in an envelop of paper. Have a clean barrel, well lined with cotton batting or old newspapers, and pack in the enveloped fruit as closely as it can be placed; head the barrel carefully, and set it away in a cool place. In this way fruit will generally keep sound and good. H.

A CURIOUS FACT.

The relation of the study of plants with agriculture will be well understood by the following extract from Professor Johnston's lectures: —

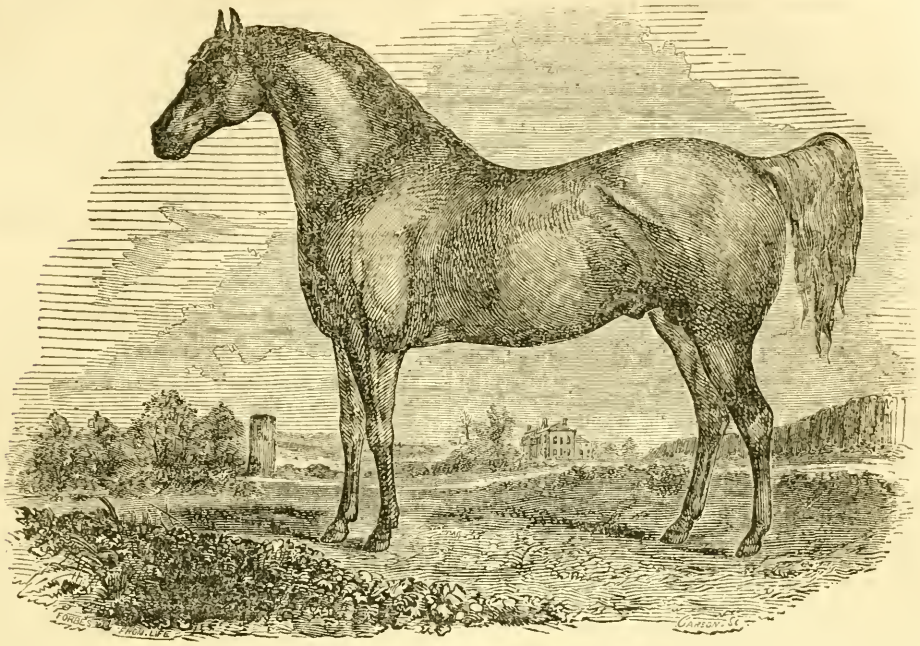
"It is a fact familiarly known to all of you, in addition to those circumstances by which we can perceive the special functions of any one organ to be modified, there are many by which the entire economy of the plant is materially and simultaneously affected. On this fact the practice of agriculture is founded, and the various processes adopted by the practical farmer are only so many modes by which he hopes to influence and promote the growth of the whole plant, and the discharge of the functions of all its parts. Though the manures in the soil act immediately through the roots, they stimulate the growth of the entire plant; and though the application of a top-dressing to a crop of young corn or grass may be supposed first to affect the leaf, yet the beneficial result of the experiment depends upon the influence which the application may exercise on any part of the vegetable tissue. In connection with this part of the subject," he adds, "I shall only further advert to a very remarkable fact mentioned by Sprengle, which seems, if correct, to be susceptible of important practical applications. He states that it has frequently been observed in Holstein, that if, on an extent of level ground sown with corn, some fields be marled, and others left unmarled, the corn on the latter portions will grow less luxuriantly, and will yield a poorer crop than if the whole had been unmarled. Hence," he adds, "if the occupier of the unmarled field would not have a succession of poor crops, he must marl his land also. Can it really be that the Deity thus rewards the diligent and the improver? Do the plants which grow in a soil in higher condition, take from the air more than their due share of the carbonic acid, or other vegetable food it may contain, and leave to the tenants of the poorer soil a less proportion than they might otherwise draw from it? How many interesting reflections does such a fact as this suggest! What new views does it disclose of the fostering care of the great Contriver — of his kind encouragement of every species of virtuous labor! Can it fail to read us a new and special lesson on the benefits to be derived from the application of skill and knowledge to the cultivation of the soil?"

AN ACT REGULATING THE MEASUREMENT OF CRANBERRIES AND OTHER BERRIES.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows: —

Sect. 1. Cranberries and all other berries, hereafter sold, shall be measured by the strike or level measure, that is, in the same manner as flaxseed and other similar articles are measured.

Sect. 2. This act shall take effect from and after the first day of August next. [*Approved by the Governor, April* 30, 1850.]



MORGAN HUNTER.

We are indebted to Luther Tucker, Esq., editor and publisher of the Albany Cultivator, for this cut, and we copy from that excellent paper the following account: —

It has been well remarked, that though a picture may convey too favorable an idea of a defective animal, yet it is impossible to portray all the excellences of a good one. Making due allowances for the latter difficulty, the above figure may be considered a correct likeness of the horse from which it was taken.

"Morgan Hunter" is six years old; was bred, as we are informed, by Mr. Exwell, of Springfield, Vt.; was got by Gifford Morgan, dam by the same horse. He was sold by F. A. Wier, of Walpole, N. H., in May last, to Messrs. Ackley & Gilbert, of East Hamilton, Madison county, N. Y.; and stands the present season at the stable of S. A. Gilbert, in that town. He is a capital specimen of the Morgan family of horses. In his general form, he possesses, in a remarkable degree, what Youatt lays down as the most important requisite in a stallion — *compactness* — "as much goodness and strength as possible, condensed in a little space." His head is fine, and his eye large and brilliant; his chest capacious, barrel round, loin very broad, back short, quarters long and muscular, flanks deep and full, limbs short-jointed, flat, and sinewy. In temper and spirit, he exhibits the intelligence and docility which characterize most of his near relatives. Like the high-mettled Arabian, he unites the playfulness and good humor of a pet lamb with the courage and power of the war-horse, whose "neck is clothed with thunder" — "who rejoiceth in his strength," and "mocketh at fear."

The history of the Morgan stock of horses has been fully given in previous pages of the Cultivator. Some people, however, who have not fully investigated the matter, seem to entertain the idea that they originated with a cross of the French or Canadian horse. We have never seen the least evidence that the original, or, as he is called, the Justin Morgan horse, possessed any of this blood; and of the four stallions which were kept of his get, we believe the Bulrush, or Chelsea Morgan, was the only one that inherited any French blood through the dam.

We notice various advertisements and cuts of horses, as "Morgans," in the papers of different parts of the country. A comparison of those descriptions and their originals, with the cut at the head of this article, may serve, in some degree, to show whether the animals truly represent the stock whose name they bear, or are only counterfeits.

MASS. HORTICULTURAL SOCIETY.

The exhibitions of this association have been, of late, very good, both in fruits and flowers. On Saturday of last week, the show of fruits was excellent. These exhibitions afford much instruction, and those who can conveniently attend them will be gratified in seeing the best and finest fruits.

The annual show of this society will take place at their hall in School St., on Tuesday, and continue three days. To make the more room for the large show that is expected, the store under the hall will be occupied also. As this association has been liberal, and opened their doors to the public, we hope that there will be liberality in return, and that a very large number of visitors will attend the show.

He that would know what life is must have its trials as well as its joys.

For the New England Farmer.

M'LAUGHLIN PLUM.

S. W. Cole, Esq. Sir: As I have had some agency in introducing the M'Laughlin plum to notice, I regret that a great number of scions and buds which have been disseminated by Mr. James M'Laughlin, who originated it, not only in this vicinity but in Massachusetts and elsewhere, are not the *true* variety. I find, in some instances, the Penobscot plum has been sent out as the M'Laughlin; and in other cases some other plum than the *true* one.

I found most of those I had of Mr. M'Laughlin, both trees and scions, for my own garden, have also proved false, though I now, at last, by previously going to the *original tree*, and procuring scions for myself and Charles Downing, Esq., have the *true variety in bearing*. I found Mr. M'L. placed no labels on his trees, but depends on his memory — hence the errors. He says he himself has made many mistakes in grafting in his own garden, by taking scions from young trees which have since proved false.

The *true* plum is large, and rather flat, and when it is exposed to the sun, it has *much red* round the stalk, and frequently covering about one third of the plum.

My plum-trees this year are *very* productive, so much so that I am obliged to prop and tie up the branches of my Imperial, Bleecker's, Green and Purple Gages, the Jefferson, Columbia, Lombard, and Purple Favorite, on account of the weight of fruit on them, notwithstanding I thinned them out, but I think not sufficiently. Some of your members of the Massachusetts Horticultural Society have lately visited my garden; also the garden of B. F. Nourse, Esq., adjoining, which is equally productive. Coe's Golden Drop, Washington, Imperial Ottoman, and Yellow Gage, and some others, each bear a fair crop.

I think the soil and climate on this Penobscot River are congenial to the growth of the plum, as we have thus far succeeded admirably with all the valuable varieties. Respectfully,

HENRY LITTLE.

Bangor, *Aug.* 24, 1850.

As we had received trees of the M'Laughlin plum of C. Downing, Esq., also of Mr. Beckwith, we named these facts to Col. Little, and inquired whether all the scions which he furnished to Mr. Downing were true. The following reply is useful to the public in examining this subject. As we have distributed scions of the M'Laughlin plum, we would remark, that our trees of Mr. Downing and those of Mr. Beckwith are alike, and different in wood and leaf from the Penobscot. As. Mr. Downing is well acquainted with Col. Little, and has a communication with him on fruits, it is probable that he obtained all his M'Laughlin scions of him. We would add further, that a friend who has had M'Laughlin scions of Mr. Beckwith, has some of the fruit in bearing, and the most of his trees are correct; but a few are false, as he finds by the growth of the wood.

Mr. Cole: Yours of the 28th is received. I saw every scion cut from the *original M'Laughlin plum-tree*, which I carried personally to Charles Downing, in the spring of 1847; also some scions of the Penobscot plum. I therefore cannot believe there can be any mistake in Mr. Downing's trees. I was well aware how important it was to have the *true variety* delivered to *one* who would disseminate them all over the United States, and the countries in Europe. He has already done it. Elijah Beckwith, now in California, grafted plum-trees for James M'Laughlin, and took scions of the M'Laughlin plum to his home, and set them for himself. He said he cut them from the *original tree*. I believe that those that have trees of C. Downing, Esq., will find them to be true. I know of no reason we have to doubt those that came from Beckwith. All the mistakes we have as yet discovered can be traced to *M'Laughlin himself*.

Respectfully,

HENRY LITTLE.

Bangor, *Aug.* 30, 1850.

For the New England Farmer.

POTATO ROT.

Mr. Cole. Dear Sir: My attention having been called, to-day, to the examination of the fields of Mr. Lyman Mason, near West Beach, in Beverly, (who is one of the most experienced and successful cultivators of vegetables in Essex,) I was struck with his explanation of the fallen condition of his potatoes, commonly called *potato rot*. These potatoes were planted on a piece of reclaimed meadow, that had been drained and thrown in ridges. Their growth in the early part of the season was luxuriant, but within a few weeks the vines have blackened and decayed. This effect Mr. Mason thinks to have been caused entirely by an insect, which he described as a *slug*, and said he had often found them abundant on the under side of the vine, near the ground. On turning up the vines, the marks of their excoriating ravages were apparent. Accompanying these *slugs* is a *striped yellow bug*, much resembling that which appears on the cucumbers and melons early in the season. I discovered many of the bugs, but did not see the slugs; but he said they could be found on vines less decayed. Mr. M. appeared entirely confident that these insects were not only the invariable accompaniment, but the cause, of the *potato rot*, so called. I cannot doubt that the decay of the potatoes in this field were caused in this manner. What surprises me is, that so obvious a cause of an evil so general should have been so little noticed. Perhaps your experience in matters of this kind will enable you to clear away all doubts respecting it.

The sudden decay of the potato vine is often attributed to atmospheric influences; and when not so explained, it is charged to the operations of insects so minute, as to be seen only by the aid of magnifying glasses. I state the facts as given to me, without presuming to express an opinion of the sufficiency of the explanation. Mr. M.'s success in raising acres of melons, cabbages, and onions, that will compare well with the best that I have seen, entitle his opinions to much regard. It not unfrequently happens that the every-day observations of the practical cultivator contain more valuable instruction than the most elaborate propositions of the most scientific theorist.

The prevalence of the *blight* upon the potato, in this vicinity, is matter of serious concern to the cultivator; a large part of many fields being thus affected. Until some remedy can be discovered, it may be useful to note such *facts* as are well authenticated. *Inferences* should be adopted with caution.

Very truly yours,

J. W. PROCTOR.

Danvers, *Aug.* 28, 1850.

Remarks. — We are pleased in having an opportunity to publish any facts in relation to so valuable a production as the potato; and it is very desirable that we get more light on that destructive malady,

the rot. We have occasionally given our views on the main cause of this disease. We consider it atmospheric, and yet there are other predisposing or secondary causes, such as wet, heat, soil, manure, sudden alternations from heat to cold, and the reverse, &c. The tenderness of some varieties is another predisposing cause.

We can tell whether potatoes are rotting, generally, without inquiry or examination, from the peculiar state of the atmosphere. Yet this is not the main cause, for the state of the weather which favors the rot has occurred occasionally almost every year since our remembrance, and the severest cases used to cause rust only, with one exception.

Early in August, year before last, we observed that potatoes would rot extensively, and we were laughed at for the remark, for they never looked more luxuriant than at that time; but the truth of our assertion was soon evident.

We have no doubt that insects, and various diseases in the potato, may act with the rot, or operate on the potato at the same time; and hence they may be regarded as a cause. Sometimes the course of the rot seems to be along almost on a line, and it comes suddenly, like the passage of a breeze, a current of fog, or a volume of smoke, very unlike the operations of insects, both in its passage, places of operation, and suddenness of action. Last year it was evident, even to the last of September, that there had been but very little rot; and some thought that it was disappearing, and that we soon should have the pleasure of seeing it no more forever. But we took no such view of the case, for the weather, last season, was remarkable for being unfavorable to the rot.

This season, at one period we had rain nineteen days out of twenty-two successive days, and part of the time the weather was exceedingly warm, and there were occasionally interspersed cool nights. After this, it was not necessary to examine the potatoes in order to see whether they were rotting.

There is a simple and convenient remedy or prevention of the rot, which is, to cultivate hardy kinds of potatoes; but farmers will not follow this safe rule on account of the popularity of Chenangoes, and some other kinds in the market. They will run the risk of losing half of their crop, for the sake of having a ready sale for the other half. Although it is well known that the Chenango is very liable to rot, and almost every farmer has lost them to a great extent, yet it is the principal kind cultivated. — Ed.

For the New England Farmer.

VALUABLE PROPERTIES OF TAN.

Mr. Editor: I propose to write an article on what is usually called *tan*, and I shall speak of its valuable properties when used for horticultural purposes. And first, let me say, what I shall write upon the subject will relate wholly to the spent bark of the hemlock spruce, and not to any species of the oak. A great deal is said, at the present time, in our horticultural journals, in regard to the properties of tan, without informing us to which of the kinds they refer.

It should be known, that tan from the bark of the oak possesses entirely different properties from that obtained from the hemlock. The former, when suffered to remain in a heap, quickly engenders heat, and is comparatively easily decomposed; while, on the contrary, the latter is very slow in decomposition, and will usually engender but a very little, if any heat, and is generally known to possess the property of preserving ice, when placed around it. The gallic acid, or tanning principle, is not so great in the bark of the oak, and is given out more readily and entirely than it is from the bark of the hemlock; for in the latter kind of bark, in consequence of the resin it contains in its ross or epidermis, it retains a portion of its astringency after it has been for a long time steeped in a vat, more especially that portion laying immediately over the liber.

It is probably for this reason that fresh hemlock tan applied to a tree or plant, by placing it near its roots, injures it, and stops its growth; and it is from the same cause that the growth of grass around trees is prevented. We have seen a hyacinth, grown upon water in a glass, soon checked in its growth by placing a small piece of hemlock bark in the water — the plant feeling the bad effects of its astringency by the contraction of its roots. Hence it is obvious that tan fresh from the vat should not be placed near the roots of trees or plants. Now, this astringency, gallic acid, or tanning principle, is nearly lost or destroyed in a few months, and it can then be safely used for horticultural purposes; but, as a general rule, the more decomposed or rotten it is, the better. It decomposes more rapidly when mixed with earth or other substances, more particularly lime. Its properties, when rotten, are the same, I should think, as decayed wood or chips; and in this state, when placed around fruit-trees, it is very serviceable, by rendering the earth more light and moist, in which the roots delight to grow and creep.

We have found gardens with a heavy soil, much improved by ploughing in old tan, thereby rendering it more light. Tan forms a good material for walks and paths in a garden, they being easily made and kept in repair, pleasant to tread upon; and it has this advantage over gravel — should it ever become necessary to make an alteration in them, it could without injury be ploughed into the soil of the garden. We have found it particularly serviceable when placed around strawberry plants in autumn, as it protects the roots from the frosts of winter, and in summer answers the purpose of mulching, by keeping the ground moist and the fruit clean, and in its decay forms a light mould, in which its roots love to penetrate and fasten.

We need no better proof of the fondness of plants or trees for old hemlock tan in a state of decay, than from the fact that if when shooting forth their roots, they enter a tan walk or path, they will traverse it lengthwise, creeping in it a great distance, without leaving it for the rich soil around it.

A very great amount of good matter, suitable for horticultural purposes, could be collected every year in Danvers and Salem, from their numerous tanneries; consisting of substances always accumulating in tan-yards, such as hair, lime, the emptyings of drenches, and water pits, the fleshings of hides, &c.; these collected and mixed together with a large portion of tan, would form a valuable compost. It is by these, scrapings of a tan-yard, that we have been able to bring a large garden to a high degree of cultivation in a few years. We can therefore with confidence recommend tan, when suitably prepared and applied to heavy soils, for horticultural purposes. We have had no experience in applying hemlock tan to light soils.

Yours,

S. P. FOWLER

Danvers New Mills, *Aug.* 21, 1850.

Remarks. — As Dea. Fowler has been an amateur horticulturist, and a very close observer for twenty-five or thirty years, and has had spent tan constantly on hand for experiment, we consider his opinion entitled to great weight; and we think there should be moderation, and small experiments made before cultivators use tan fresh from the vat, indiscriminately for horticultural purposes, as some have hastily recommended. Some plants may bear the use of tan, and even be benefited by it, while it is destructive to others. In the American Fruit-Book, we state that tan had been used with success around cherry-trees; and yet we advise its use, even for that purpose, with caution, as fresh tan has generally been found destructive to vegetation. A correspondent in Westchester county, N. Y., has informed us that he had used tan with success for cherry-trees. — Ed.

For the New England Farmer.

WINTER WHEAT.

Mr. Cole: The undersigned would respectfully take the liberty to recommend to farmers the cultivation of winter wheat. It has been generally supposed that our *soil* had lost its necessary elements to produce winter wheat, and that our *climate* was adverse to its growth. Hence the natural conclusion to *abandon* it without trial.

Now, to this universal error, our own experience justifies us in giving an unqualified negative, though it is a long-conceived opinion. An experience of years, with some of the subscribers, would seem to be the best evidence in the case.

We often hear it said, it is an "uncertain crop." Does not this argument apply to all the smaller grains to a certain extent? The farmer's experience need not be asked on this point.

We have all been winter rye growers, and we are now convinced winter wheat is as safe from "blast," "winterkill," and the like evils, as rye. In *quantity*, it yields fifty per cent. more; and in *value*, it is a matter for farmers to decide upon.

This season has been too wet for complete success with us, but we are gratified to report fifteen to twenty-five and a half bushels per acre.

Grass seed may be sown with the wheat, if done early in September. We should recommend that wheat be sown by the 15th of September. Deep planting is best; the cultivator is better than the harrow. (See N. E. Farmer, July 6.)

Grass land, or mowing stubble, is better than land which has been long up; there are less weeds. To produce a good crop, (of any product,) *manure* is the great element. Ashes or slaked lime are doubtless a good application, but to say they are indispensably necessary, we are not all prepared. Some of us have succeeded with, and some without them. However, we know of no crop which does not acknowledge the benefit of ashes.

In coming before the public, we trust our object will be appreciated. The products of a New England farm (unlike the west in many respects) are various, and it should be the object to produce that crop which is most essential for home consumption.

Every farmer feels himself bound to raise a few of the small grains. Why not take up a new thing, (if such it be,) which sustains the world with its "daily bread," and the sweat of its brow?

Leisure is now at hand, manure can be gathered up, seed can be obtained; now we would say, *try once*, nay, *twice*, and we doubt not winter wheat will become one of the standard crops of our state, and of New England.

HENRY POOR,
BAILEY LORING,
FARNHAM SPOFFORD,
JOHN P. FOSTER,
JOSEPH FARNHAM.

North Andover, *Aug.* 26, 1850.

For the New England Farmer.

HARVESTING CORN.

Mr. Editor: In your very useful paper of August 31st, there is a piece on harvesting corn. Your correspondent justly remarks, "A great deal is said about it." I have been in the habit of cutting up corn at or about the time the top stalks are usually taken off, for near forty years, and shall probably cure some in the same way this year. But, sir, I never do it for the sake of saving time, nor for the sake of better fodder. When cut at the bottom, if the season is fair, the corn and fodder, taken together, are saved better than when the top stalks are taken off. But if the season proves wet and warm, neither are as good. The top stalks are always better cut and cured in the old way. The buts are better when cut at the bottom green. In my experience, I am decidedly of the opinion, that year after year, when corn is in a fair way to ripen off well, and not in danger of frost, the best way is to let the grain stand until it is fit to crib up. As to saving labor, for me it is none. Your correspondent represents the labor much less when grain and stalks are cut at the same time; and if it can be cut up "for fifty cents per acre, or by a half day's labor," then I admit it as a fact; for the top stalks cut in the old way cannot be secured for that sum, where there is a yield of fifty bushels per acre. I once supposed I could do a fair day's work on a farm, and not exactly slow at cutting up corn, and can say, I believe, without fear of contradiction, we have no such laborers in our region. But this question is easily settled by any of my brother farmers, entirely to their satisfaction.

But still there is good reason for cutting up corn at the season referred to, occasionally. When corn is not ripe enough to endure a frost without injury, then cut it up and stook it, and the crop is saved. If the ear is only filled in the milk, the grain will be good for bread, and if well cured is safe to plant. This is my experience, and my opinion is made up from it. Perhaps I am wrong, but I hope others will try each way for a series of years, upon such a scale as will be safe to themselves and others.

Yours respectfully,
OTIS BRIGHAM.

Westboro', *Sept.* 3, 1850.

POTATOES AND TOMATOES.

It is not so generally known as it deserves to be, that the tomato, when grown among corn, is far superior in flavor to those produced in the common way. They must of course have a fair chance of room to grow, and not be too much crowded by the corn. Those who can appreciate the good qualities of this vegetable when in perfection, will find this mode of growing them to secure all they can ask; at least such has been my experience.

It is maintained by some respectable experimenters, that potatoes planted among corn are not so liable to rot; and this opinion has been confirmed by a sufficient number of trials to render it worthy of attention.

The soundness of potatoes in these cases, and the superior flavor of the tomatoes mentioned above, are probably owing to the same cause, which is, that corn, from its superior powers of attraction and assimilation, approximates to itself the soluble nitrogenous matters contained in the soil, and thus prevents the less energetic plants in its neighborhood from absorbing those compounds of nitrogen which experience has shown to be injurious to the quality of their products. The best potatoes are those which contain the largest proportion of starch, and this is but carbon and the constituents of water in another shape. Azotized manures, which are found so essential in the cultivation of grain, are, on the contrary, detrimental when absorbed into the circulation of a plant which does not require them for the perfection of its product, and which is, in fact, unable to digest such concentrated nutriment. Every one knows how much inferior the sweet potato becomes when grown upon clay soil; and Liebig speaks of a peculiar kind of turnip, which, under the same circumstances, loses all the good qualities for which it is noted when cultivated in sandy land.

Those plants in which compounds of carbon predominate may be said to form a lower grade, in the scale of vegetable life, than that occupied by those containing more nitrogen. The former are the unassisted products of nature — the forests and the wild grasses with which a fertile country is covered, before the busy hand of man has entered upon its labor; and the latter are the golden harvests which his skill and industry secure, to increase his comforts, or add to his wealth.

A portion of nitrogen is undoubtedly necessary to all vegetables, but it is equally certain that we sometimes apply more of the substance than is required to produce the best results. If we admit, with Liebig, that "plants absorb all the soluble matters present in the soil, as a sponge absorbs water with all that it contains in solution indiscriminately," we must be impressed with the importance of adapting the supplies of food to the necessities of the plant, and of withholding, as far as possible, that which is useless or detrimental.

It is said of the Chinese, that they manure the plant more than the soil; and certainly, to do this understandingly and effectually, implies the perfection of the highest accomplishment within the ambition of a scientific farmer. — *Working Farmer.*

BEES *vs.* ANTS.

In answer to "Laborer," who wishes to be informed how to prevent ants from making inroads upon his bees, honey, &c., I would say, that after long experience, and many plans, contrivances, and expedients, I have hit upon the following method, which entirely prevents ants, or any thing of the kind, from troubling my bees or honey. I now give it to you for what it is worth, and to me it is invaluable. It is in this wise, namely: —

Take *cast-iron* posts ten feet long, set them two feet in the ground, and put them four or six feet apart; connect the posts together by No. 4 iron wire, running through the top of each post; then take another wire, still smaller, say No. 10 or 12, attached to the hive at each corner, (on the top,) then bring the four pieces of wire from the corners together, about six inches above the hive, then attach one strand of the small wire to them, and suspend the hive to the wire running horizontally, so as to bring the hive about four feet from the ground. It is the best method "out," and it is also an ornament. I have some eighty hives, with glass cases, &c., all suspended in this way, to "highly ornamented" cast-iron posts, extending around a beautiful garden. O, 'tis a treat to our city cousins, as they come "just to spend a *few* days," to take out a case filled with its delicious contents, surpassed by nothing in whiteness, *except* a slice of "aunt Betsey's" bread, which they spread it on. ONE OF THEM.

P. S. The posts and wire must be varnished. Japan varnish, with a mixture of lampblack, is the kind; it gives them a beautiful appearance, and prevents rust.

Durham Centre, Ct., 1850.

Another Remedy. — Noticing an inquiry from "Laborer," in your valuable "Newspaper," for a remedy to prevent ants, moths, &c., from destroying the bee-hives, I would in answer say, please nail around the bottom of your hive a thin piece of narrow sheet zinc, so that, to gain access, the insect will be obliged to pass the metal, and I have no hesitancy in saying none will cross the barrier. Try it.

I have been engaged in selling the patent bee-hive, known as "Colton's," for a few years, and have never heard that those who have used zinc, even in the common hives, complain of moths or ants troubling them in any respect. NEMO.

Bath, Me., 1850.

— *Dollar Newspaper.*

THE CHEESE TRADE.

Henry Kemp & Co., of New York, have issued a circular, in which it is stated that the supply of cheese brought to the tide-waters of the Hudson, for the year 1849, was 42,097,818 pounds, against 43,278,526 pounds in 1848. The decrease the past year is attributed to the severe drought of last summer in Western New York and Ohio. The export of cheese to Great Britain from New York is said to have reached last year 12,000,000 pounds, against 15,386,836 in 1848, being a decrease of one fifth. This decrease is attributed to the inferior quality of the cheese. Of good cheese, probably double the amount exported last year would be taken by Great Britain. The receipts of cheese at New York in 1834 were only about 6,000,000 pounds, from which they have gone on in regular gradation of increase to 1848, when 43,278,526 pounds were received. The exports to Great Britain commenced in 1840, with 700,000 pounds, and have increased to 15,000,000 pounds in 1848.— *Rural New-Yorker.*

TRAINING CATTLE AND HORSES.

Working animals, when well trained, are capable of doing much more work, and doing it easier, than when imperfectly broken. Knowledge is power to them, though in a different sense, and in a less degree, than in reasoning man. Yet, if they are taught *how* to draw, to back, and come round,— when to lay out their strength, and when to husband it,— they have the same advantage that a skilful woodsman has in the use of his axe, the mower his scythe, the reaper his cradle, and the ditcher his spade.

First procure animals of a good breed, naturally intelligent, and of good physical organization; adapt their food to their constitution and work; train and manage them properly, and you will find your account in it, as you do in sending your children to school, or teaching them to handle their tools skilfully.

DIANA GRAPE.

This valuable grape was raised several years ago, by Mrs. Diana Crehore, of Milton, in this vicinity, from seed of the Catawba. For several years the vine was neglected, and the fruit, being of course inferior, for want of good culture and management, attracted but little attention. After some years, the vine was pruned, and then it produced some fine bunches of fruit, which Mrs. Crehore sent to the exhibition of the Massachusetts Horticultural Society in 1843. The fruit was so fine and early, that the committee on fruits awarded to the worthy originator a gratuity of five dollars.

This mark of attention attracted a little notice; yet for several succeeding years but little attention was paid to this new variety, as some pomologists supposed that it did not differ materially from the Catawba, and that its earliness might be owing to a warm location; yet a few of the vines were distributed, and for two years past they have borne very fine fruit, in different locations, which seems to settle the question as to its merit and its time of ripening.

When we published the American Fruit-Book, we had not learned the true habits of this variety; for we stated that it ripened about the time of the Isabella, and that was the general opinion at that time. We also stated that it was vigorous, and mentioned some facts that tend to show that it is a prodigious grower. We had seen a very great growth on the original vine, and our own vines, which we raised from cuttings generously presented by Mr. Crehore, were in a moist, strong soil, where they made a great growth, so that these circumstances, with our

limited experience, induced us to believe that the Diana grape was a very great grower; and we still find that it may be forced to a great growth, though it is only a moderate grower under ordinary cultivation. But it grows fast enough, excepting in the view of those who are in haste to propagate vines for the present urgent demand.

The bunches of the Diana grape are medial, very compact, and frequently without shoulders; but the specimen from which our engraving is made is tolerably large, and well shouldered. The berries are medial size; round; pale red, more pale than the Catawba, with a grayish bloom; the flesh has but little pulp, very juicy, with a high, rich vinous flavor, and fine aroma; seeds two, small. It ripens the latter part of September, generally about a week or ten days earlier than the Isabella, and a month before the Catawba.

The quality of it is similar to its parent, the Catawba, but it has less pulp, and it is generally considered of a superior flavor to the Isabella or Catawba. Under common culture, the Diana is a moderate grower, the shoots rather slim, and the joints of the wood short; but in a strong, rich soil, it grows very vigorously, and the vines are stout. On such soil we have vines from layers, and a shoot from almost every bud, six to ten feet high; and one shoot, that started June 1st, grew fifteen feet in length in two months, and threw out laterals which all measured thirty feet. This vine is two inches in circumference, and some of the leaves are more than a foot in diameter. The leaves are generally of a moderate size, without lobes, and resemble the Catawba. The Diana is hardy, as much so as the Isabella. The tips of the small shoots of both these varieties are sometimes touched with the frost in a severe winter, but this is no disadvantage. We have never known the Diana killed at the root, though we have cultivated on dry land, and on a cold, heavy soil, where the Winnie and other hardy kinds have been killed.

The Diana grape is very easily propagated by layers, and the roots strike readily, and become strong and vigorous. Some cultivators say that it is difficult to propagate from cuttings, but we do not make this complaint. A few years ago, we put down several cuttings in a dry soil, and paid but little attention to them, and they took pretty well. This season we took more pains with cuttings, and we have vines a foot high, on an average, from two thirds or three fourths of the cuttings. As the majority must rule, it will probably be regarded as hard to grow from cuttings.

We have given our views of this grape as we have learned by several years' experience in its cultivation, and observation in others' grounds, and the opinions of those who cultivate it. It is generally regarded as the best grape for northern culture, by those who have given particular attention to the subject. Its production reflects great honor upon the lady whose name it bears, and it will be a living monument to her memory, that may outlast granite and marble.

Mr. Hovey, in his Magazine of Horticulture, says of this grape, "Last fall we had a full crop of large, fine clusters, ripe fully a week before the Isabella, and so superior to that variety, that they obtained the prize of the Massachusetts Horticultural Society as the best native grape." He also remarks, "It is a most abundant bearer, and has less of the taste peculiar to our native grape than any other variety. It also possesses a peculiarity which we have not noticed in other sorts: as early as the first of September, when the berries change to a grayish tinge, they are quite sweet, and agreeable to the taste; but they do not acquire the high flavor which constitutes its great excellence, until they assume their full color, when it is one of the handsomest grapes we have ever seen."

Mr. Downing remarks, in his Horticulturist, in speaking of this fruit, "Every fruit-grower will be glad that a new native grape has at last been proved, which is superior to the Isabella or Catawba. Such a grape, we are now prepared to say, is the Diana. It has fruited abundantly for two years past, in the garden of Woodenethe, the residence of our neighbor, H. W. Sargent, Esq. After tasting it repeatedly, we do not hesitate to pronounce it the best of American grapes."

CULTIVATING THE GRAPE.

Frederic Hobbs, Esq., of this city, who has for a few years past been very successful in cultivating the black Hamburg, and other choice grapes, under glass, has adopted the plan of cultivating grapes on the south side of a high, close fence, with a "lean-to" of sashes about eight feet long, reaching from the ground to the top of the fence. We visited his garden a short time since, and found many choice kinds of vines in a flourishing state. Mr. H. thinks there is no trouble, and but little expense, in cultivating grapes in this manner, and suggested that any person having a barn or shed, or close fence, with a southern exposure, could succeed in raising a sufficient quantity of grapes for the use of the family, with only a few feet of sash. We think this plan will generally be adopted in this vicinity, where the season is too short for the Isabella grape to ripen in the open air.

We learn that S. W. Cole, Esq., the able editor of the New England Farmer, succeeded in producing a seedling grape of great excellence, and which perfects its fruit some two or three weeks earlier than the Isabella. This grape we have on trial in our garden, alongside of the Isabella, and shall be able by and by to report upon the result. — *Bangor Whig.*

Remarks. — Friend Sayward has misunderstood us as to the grape we sent him. It was the strawberry, an early, hardy kind. — Ed.

SOAP-SUDS FOR THE GRAPE.

A. J. Downing says, "I have seen an Isabella grape produce three thousand fine clusters of ripened fruit in a single season, by the liberal use of manure and soap-suds from the weekly wash."

The effect of soap-suds on other plants is sometimes surprising. A cypress vine, which had remained stationary for a fortnight when about two inches high, immediately commenced growing after a good watering with soap-suds, and grew about six inches the first five days.

Domestic Department.

Woman — her Wrongs, Rights, Capacities, and Duties. — It is humiliating to consider the extreme lethargy that has fastened upon the female mind. Woman seems to be least interested in the subject that most interests her. But as humiliating as it is, it is too true. Thousands of females, and those of intelligence, too, readily believe they possess all the rights the God of nature designed them to have, and are as contented in their narrow sphere of dependence as the bird that has always lived in a cage. If this is not humiliating, it would puzzle one to know what is. All the rights God has designed for woman? Has she no higher sphere than that of dependence? Is she but a servant or toy? Is she the weaker sex? What is that beautiful, all-grasping mind given to her for? For man to clip and shape to suit his fancy? or, as the Father designed, for a universe of action — the depths of metaphysics, the sublimity of art, the grandeur of literature, the beauty of affection and love? Let the impress of God on her mind be the answer. When He writes an essay to man, He never makes blunders. And, in prescribing the limits of woman's sphere, He has written it in unmistakable characters upon her soul — *the organization of her mind.*

"But," says one, "should society give to woman rights equal with her brother, she would not receive them. She would spurn them from her, as an intrusion upon the sanctity of feminine modesty and grace." This all may be true as to a large majority, but it proves nothing, only that she has been so long crushed beneath man's heel, that she believes "what is is right." By the time she lives up to the appreciation of her calling and destiny, she will enter on them with joy and thanksgiving.

But what are her rights, in the light of reason and humanity?

Where is her *sphere* — throwing aside the kitchen, nursery, and drawing-room clamor of the times? Where is the circumference of her action, beyond which she is not to pass, at the peril of her womanliness? What are the boundaries of her world?

These are important questions, which must be answered soon. The world will eventually answer them — not now; it is too blind and deaf. Were the writer called upon to answer them, he would say, in all candor and sincerity, the *universe*, broad and boundless, is her *sphere*.

Wherever the intellect has climbed or penetrated, is hers to climb and penetrate. Wherever literature, polities, morals, and religion, beckon man, they also beckon woman; not to bedim her grace and loveliness, but that she may soften and vivify them by her refinement. It is a cheering truth, that whatsoever she touches does not so much mar her beauty, as she beautifies it.

To many, it is a startling proposition, that woman should be the compeer of man, in the investigation of science, making laws, and meting out judicial decisions. But it is only startling because it is new. The proposition that all men are brothers, once startled a mighty theocracy; yet that proposition was none the less true. The proposition that "all men are created equal," once startled our political mother across the waters; yet it was a "self-evident truth." Because it is startling, then, does not prove it false.

"But," says another, "would you have our mothers, wives, sisters, and daughters mingle with the rabble at the ballot-box, in legislative bodies, and temples of justice? Would you have them leave the peaceful fireside, and grapple with the toiling millions in the field, shop, and in commerce?" Ah, if they were admitted to the ballot-box, there would be no rabble; if they were admitted to our legislature, there would not be the wrangling, vulgarity, and blasphemy that now disgrace them. If they were elevated to the rank of judicial umpires, there would not be the cruel formality that now frequently outrages humanity and right. The grace and charms that now flow forth from woman, beautifying the social circle, would be taken into all the walks of life, dissipating the brutal sensuality that robes our land in gloom, and making the scientific, political, and religious circles, like the fireside, the home of affection, wisdom, and peace.

But it is asked if we would have woman go into the fields, shops, and marts of commerce. No woman wants to. All we ask is, an equal privilege in the fields of intellect. Give her that, and it is time to debate the extent of her physical duties. She has more physical labor than she ought to perform, in the common routine of household toil. When she needs more than that, it is time to tremble, lest she drive man from the field, the machine, and ship. I would like to ask those who so much fear the female mind would become gross, sensual, and masculine by its contact with all the mental struggles of the day, what is it that makes the fireside so peaceful and calm — so free from blasphemy and immorality? It is because man becomes so disgusted with strife, dissipation, and profaneness abroad, that he seeks peace and refinement at home. Woman is there. She has made it what it is. Were it not the case, how could we keep the vulgar rowdyism that now characterizes our elections and legislative bodies from creeping into the social circle? We go to the evening festival, the dance, the concert, and the most sensual and vicious are polite and affable. Why? Woman is there.

The low jest and blasphemies are hushed in her presence. Thus it would be abroad. Her smiles and grace would exert a hallowed influence on all around. Our elections would be civil, peaceable, and quiet, and law-making and executive assemblies calm, orderly, and humane.

God hasten the time when woman may send her influence thus throughout the world! — *Rev. H. L. D. Webster.*

Boiling Potatoes. — The correspondent of the London Times says, —

The following method of dressing potatoes will be found of great use at this season of the year, when skins are tough and potatoes are watery. Score the skin of the potato with a knife, lengthwise and across, quite around, and then boil the potato in plenty of water and salt, with the skin on. The skin readily cracks when it is scored, and lets out the moisture, which otherwise renders the potato soapy and wet. The improvement to bad potatoes by this method of boiling them is very great; and all who have tried it find a great advantage in it, now that good potatoes are very difficult to be obtained.

Youth's Department.

The Antidote. — A gentleman, some time since, whilst addressing a Sabbath school, related this circumstance: —

A lover of nature was one beautiful morning strolling in the woods, when his attention was attracted to a certain tree, by the fluttering and cries of a bird

in distress. He stopped to find out the cause, and to see if he could render any assistance to the distressed bird. On approaching the tree, he saw a bird's nest, with little fledglings in it, putting up their heads and chirping, as if asking for protection. The parent was near, fluttering around it, and apparently strewing a certain kind of leaf around it with all haste possible. The observer watched the motions of the bird intently, and saw her place leaf after leaf about her nest until it was entirely surrounded, when she retired to an adjoining limb of the tree, seemingly to rest, and perfectly composed. The impression upon the mind of the witness was, that she was awaiting the issue of some threatening danger at hand; but as yet the cause of the alarm was not discovered. Soon, however, on closer examination, there was seen a serpent slowly and stealthily approaching the nest, in search of the young birds. He had already come within a few inches of his prey, when he was seen, and in a moment he came in contact with the leaves with which the bird protected her young, when in an instant he recoiled from their touch, and returned to his secret place of retreat. The antidote was perfect. The leaf was poison to his viperous touch, and the bird by instinct had learned this lesson, and thus she saved her young from the deadly fangs of a voracious enemy.

How beautifully does this illustrate the value of revealed truth to the young, as a sure protection against that insidious enemy who is ever seeking their destruction! How invaluable the instruction of the Sabbath school, to guard the heart of youth, by fortifying it with knowledge of the Scriptures, and interweaving the wreath of principles around it, which will repel at once the every approach of the soul's enemy, and cause him to shrink back with shame to his dark abode!

Write early the truth upon the heart; imprint it deep upon its flexible nature; mould it in all the thoughts; entwine it with the earliest affections, and so instamp it upon the soul that its memory will never be lost; and neither change nor death itself, in after life, will destroy its influence.

Health Department.

Uses of the Black Currant. — The black English currant is represented to have qualities that entitle it to extensive propagation. A kind of wine has been manufactured from it, which is celebrated for its medicinal properties. The Boston Medical Examiner, quoted by Fessenden, said of this wine, "It has all the good properties of the best Port, without any of its heating or constipating effects. We could name several instances, where, in great debility and exhaustion, after protracted and severe fever, and from other causes, nothing else could be thought of or taken with pleasure or advantage, in which this wine proved grateful to the palate, and most friendly to the stomach; in which, indeed, it was the principal means of conducting the patient to health and strength. Its exhibition has been attended with remarkable success in the early stages of cholera and dysentery; and again in the later stages of these diseases, after the symptoms of inflammation or febrile excitement had ceased. It has been strikingly remedial in the low stages of typhoid and bilious fever. We have not room to enumerate many other morbid affections in which this wine has proved useful. In sore throat, it has for many years been considered almost a specific remedy."

These opinions are confirmed by other testimony. Kenrick, in his American Orchardist, says, "From the black currant a jelly is made, of considerable medicinal efficacy; a wine is also made from it, which possesses far superior medicinal virtues to Port wine. The jelly has been highly recommended for disorders of the throat, and as a necessary article in the stores of ships sailing to the East Indies. A liquor is prepared from the black currant, which, Mr. Forsyth states, is possessed of great medicinal efficacy in obstinate coughs, &c. The currants, for this purpose, are bruised, and being placed in a jar, whiskey or any other species of alcohol is poured over them; the jar is then covered close for a fortnight; after this, the liquor is strained and bottled."

The jelly from the black currant is further described as being fine for the table; and the wine as of peculiar flavor, which, to those long accustomed to its use, is delectable.

A friend of ours, who has many years made use of this currant in his family, as a remedy for some of the above-named affections, especially for diarrhœa, fully concurs in the foregoing estimate of its value. He considers it also excellent as a preserve. — *Michigan Farmer.*

Life is shortened by indulgence in anger, ill will, anxiety, envy, grief, sorrow, and excessive care. The vital powers are wasted by excessive bodily exercise in some cases, and want of a due portion in others.

Mechanics' Department, Arts, &c.

Electric Telegraph across the Atlantic. — This project, to which we have before alluded, is referred to in the Manchester Guardian as follows: —

The New York papers give full particulars of Mr. John Wilkes's plan for forming a line of electric telegraph between North America and Europe — for carrying out which, a company is stated to be formed in that city. He proposes to lay down, at the bottom of the sea, a wire of solid iron, well insulated, from the eastern coast of Newfoundland to the western coast of Ireland. On the good anchoring ground which lies five hundred miles distant from the first of these countries, he will establish a repeating station, by which the length of wire will be reduced to one thousand and six hundred English miles. However deep may be the Atlantic, he proposes to conduct his wire along the bottom. According to all appearances, he says, the depth nowhere exceeds two miles, and he has reason to believe that it is little more than one. But even supposing there may be submarine valleys of ten or twenty miles in depth, and fifty or sixty in width, he is of opinion that such hollows would present no great obstacle, as the wire might be made to pass over them by means of supports, fixed (we are not told *how*) at intervals of two miles or less, so that the wire should be kept always two hundred fathoms below the surface of the sea. Every hundred miles he would anchor a small raft with mast and flag, communicating with the wire, that the latter may be taken up when requiring to be repaired or renewed; but his opinion is, that there is no possibility of a wire laid at such a depth being injured. To lay down this telegraphic line, two ships, working by a very simple process of machinery, will, he says, suffice. The work will be done in two years, and will cost about $500,000.

Process of Engraving upon Ivory. — The Revue Scientifique, of Paris, gives the following exposition of the interesting process of ivory engraving: —

The process used to cover ivory with ornaments

and designs in black, consists in engraving in the ivory itself, and then filling in the designs with a black, hard varnish. To obtain finer and more regular designs, the ivory is to be covered with the common ground, and by means of the paint the designs are engraved upon it. They are then eaten in by a solution formed as follows: —

Fine silver	6 grammes.
Nitric acid	30 "
Distilled water	185 "

At the end of about a half hour, according to the depth to be given, it is to be washed with distilled water, and dried with bibulous paper. The design is then exposed for an hour to the solar light, and the layer of wax is removed by essence of turpentine.

The design has then a black color or a dark brown, which blackens entirely at the end of one or two days. Other colors may be produced by replacing the solution of nitrate of silver by a solution of gold or platina in aqua regia, or of copper in nitric acid.

SALT AS A MANURE—AGAIN.

The Press, no doubt, is the greatest blessing human ingenuity has conferred upon our race. Man is, or ought to be, a social being; and through the medium of your cheap and useful publication, Messrs. Editors, we can quickly convey to each other our ideas and sentiments. In the January number of this year, I gave my views, which are original, on *salt*, &c. In the March number I am called upon to give a little more light on the subject. I think friend Jewett does not read me correct, as he says I commenced by "putting on a small quantity of manure." I had not manured the land for four years, and then but very little. Again, I am called upon, in the April number, by R. H. J., of Lockport, to give some further information on this subject. This friend has also mistaken the reading of the second article. I meant a peck of soaked corn over a two or three acre field, not a peck of arsenic. I am not a chemist, but, like R. H. J., wanted to know what effect mother earth would have on arsenic. I inquired of Prof. Dewey, who informed me that the earth would not destroy its poisonous qualities.

Since I published my views on salt and insects, I have met with two paragraphs, which coincide with my views to a tittle. The first is the opinion of Prof. Agassiz, on the multitudes of insects that infest the earth: —

Insect Life. — Prof. Agassiz says, "more than a lifetime would be necessary to enumerate the various species of insects, and describe their appearance. Meiger, a German, collected and described six hundred species of flies, which he collected in a district of ten miles' circumference. There have been collected in Europe twenty-seven thousand species of insects preying on wheat. In Berlin, two professors are engaged in collecting, observing, and describing insects and their habits; and already they have published five large volumes upon the insects which attack forest-trees."

Only think of that, brother farmers—twenty-seven thousand different species of insects preying on wheat! This is a startling fact, and calls for the consideration of the best means for their destruction.

The following, on the use of *salt*, is from Bell's Messenger, (a London paper,) of May last: —

"The application of common salt as a manure produces this effect, in one mode, which is evidently doubly advantageous to the farmer. We allude to the destruction of insects, and the conversion of the substances of which they are composed into the food of vegetation. It is needless to enlarge upon the countless tribes of insects, of all kinds, which tenant the farmers' lands, and prey upon their crops. It will be more useful, on this occasion, to direct our attention to the powerful action of common salt in effecting their destruction. In producing some fresh evidence of this fact, it will be well to remember that this important use of salt is not a recent discovery, for it is now sixteen years since we find inserted, in a work on the uses of salt in agriculture, (Johnson on Salt,) reports from different counties, amply proving its powerful effect in the destruction, among other insects, of slugs and worms. There were, for instance, those of Mr. Jacob Busk, of Ponsbourn Park, in Hertfordshire. His valuable experiments extended over some hundreds of acres of wheat. To use his own words, 'In every situation, and at every time, the effect appeared equally beneficial.' The quantity per acre — 'about four or five bushels, sown out of a common seed shuttle;' the period — 'in the evening.' The effect — 'in the morning each throw may be distinguished by the quantity of slime, and number of dead slugs lying on the ground. In some fields it has certainly been the means of preventing the destruction of the whole crop.' In Oxfordshire, again, 'six bushels of salt per acre were applied by hand, in April, to a field of oats attacked by the slugs and worms, on the farm of Mr. John Slatter, of Drayeote, near Oxford. The crop was completely saved by this application, although an adjoining field, not salted, was completely destroyed by this sort of vermin.' It is ascertained that the salt readily penetrates sufficiently into the soil to destroy many of the insects in their cells. 'Common salt,' Prof. Way observed some time since, 'may be advantageously employed as a manure directly to the soil, or it may be mixed with the dung-heap. In the latter application of it, it must be borne in mind, that in large quantities it is capable of suspending fermentation altogether, so that if the farmer wants his dung to heat well, he must be careful in the use of salt; but in small quantity during the fermentation, or in full supply to the manure a short time before its application to the land, salt is likely to be of great service. Not only does it render the ammoniacal compounds less volatile, but it is capable of destroying the germs of both vegetable and animal life; for there is little doubt that we too often introduce into the soil, with the manure, the weeds which choke, and the insects which devour our crops. Salt will prevent all seeds from germinating when they are sufficiently saturated with a solution of it. No fear, however, need be entertained of its effect when the manure has been properly mixed with the soil; it is then too diluted to interfere with the germination of the turnip seed.'"

I am satisfied of the benefit of salt, and strongly recommend it to destroy insects; and I also believe in its fertilizing qualities. On fallow it should be used. I intend to try a single acre with three barrels. If I am spared, I intend, in a future number, to give some further views on the efficacy of salt. The busy season coming on at present forbids it.

JOHN PARK.

GATES, *7th mo.*, 1850.

— *Genesee Farmer.*

JERSEY CATTLE.

Col. Le Couteur, Bellevue, Island of Jersey, under date 18th June, writes us, —

That he has forwarded through his excellency Abbot Lawrence, in answer to our request, lithographic impressions of the Jersey breed of cattle, and the scale of points of a perfect animal of the breed, and also two essays written by Col. Le Couteur, one on the Jersey cow, the other on the culture

of the parsnip. The cost of a yearling bull of the pure Jersey breed would be from £10 to £12 sterling, ($48 to $58,) delivered at Southampton, and a yearling prize heifer would be furnished at from £10 to £15.

The breed of cattle familiarly known in Great Britain as the Alderney, and correctly termed in the article Cattle, of the Library of Useful Knowledge, the "crumpled horned," was originally Norman, it is conceived, as cows very similar to them, in form and color, are to be seen in various parts of Normandy; but the difference in their milking and creaming qualities is really astonishing, the Jersey cow producing nearly double the quantity of butter.

The race is miscalled "Alderney," as far as Jersey is concerned; for about seventy years since, M. Dumas, Esq., of St. Peter's, afterwards the chief magistrate, sent some of the best Jersey cows to his father-in-law, the then proprietor of Alderney; so that the Jersey was already at that period an improved, and superior to the Alderney race. It has since been vastly amended in form, and generally so in various qualities, though the best of those recorded at that period gave as much milk and butter as the best do now.

Ten years have elapsed since the attempt was first made, by fixed rules, to improve the form and quality of the Jersey cow. Two beautiful cows were selected, with the best qualities, as models. One of these was held to be perfect in her barrel and fore quarters, the other equally so in her hind quarters. From these two, points, thirty-six in number, were laid down to be the rule for governing the judges in all the cattle-shows of the Jersey Agricultural Society.

The accuracy of the arrangement is proved by the fact that no deviation from it has been made, the experience of ten years having only added to the scale of the points for general appearance and condition.

THE ATMOSPHERE OF STABLES.

The frequent and violent exertions which man requires of the horse render it a matter of the highest importance that the animal's physical condition be as perfect as skill and attention can secure; and as there are no organs of this noble animal so severely taxed during the performance of either fast or heavy work, as the organs of respiration, it is obvious that too much attention cannot be given to all circumstances which tend to secure perfection in the condition of that delicate apparatus which plays so prominent a part. A pure and uncontaminated atmosphere, in all respects suited to the process of respiration, is, therefore, a *sine qua non*; one cannot help, for these reasons, expressing surprise at the almost universal inattention to stable ventilation which so lamentably prevails in even many of our first-class establishments. But there is no circumstance connected with domestic life, that appears to me more extraordinary, than the almost universal want of attention to scientific arrangements in the construction of modern buildings of every description, both public and private, from the largest theatre, or assembly hall, down to the cottage of the most humble peasant. It is not, therefore, wonderful that gross errors may be discovered in the tenements devoted to the accommodation of our domestic animals. That these occur to a much greater extent than many intelligent persons are aware of, I shall presently show. I hope I may confidently presume that most educated persons are aware that air once breathed by an animal is, by the simple process of respiration, converted into a deadly poison, and therefore should be instantly removed from its presence, and replaced by a proper supply of pure and wholesome air. It is well known that the oxygen of the air is absorbed, and carbonic acid is thrown out at each expiration — a gas which neither supports life nor combustion; of the truth of this, the unhappy fate of the unfortunate sufferers in the Black Hole of Calcutta but too painfully demonstrates.

WORK—FAINT NOT.

There are times when heaviness comes over the heart, and we feel as if there was no hope. Who has not felt it? For this there is no cure but work. Plunge into it, put all your energies into motion, rouse up the inner man — *act;* and this heaviness shall disappear as mist before the morning sun.

There arise doubts in the human mind which sink into lethargy, wrap us in gloom, and make us think it were bootless to attempt any thing. Who has not experienced them? *Work;* that is the cure. Task your intellect, stir up your feelings, rouse the soul, and these doubts, hanging like a heavy cloud upon the mountain, will scatter and disappear, and leave you in sunshine and open day.

There comes suspicion to the best of men, and fears about the holiest efforts, and we stand like one chained. Who has not felt it? *Work;* therein is freedom. By night, by day, in season and out of season, work, and liberty will be yours. Put in requisition mind and body, war with inertness, snap the chain-link of selfishness, stand up as a defender of the right, be yourself, and this suspicion, and these fears will be lulled, and like the ocean storm, you will be purified by the contest, and able to bear and breast any burden of human ill.

Gladden life with its sunniest features, and gloss over with its richest hues, and it becomes a poor and painted thing, if there be in it no toil, no hearty, hard work. The laborer sighs for repose. Where is it? What is it? Friend, whoever thou art, know it is to be found alone in work. No good, no greatness, no progress is gained without it. Work, then, and faint not; for therein is the well-spring of human hope and human happiness.

THE POETRY OF AGRICULTURE.

The principles of agriculture are exceedingly simple. That they might be made so, God himself was the first great Planter. He wrote its laws, visibly, in the brightest, loveliest, and most intelligible characters, every where upon the broad bosom of the liberal earth; in greenest leaves, in delicate fruit flowers! But he does not content himself with this alone. He bestows the heritage along with the example. He prepares the garden and the home, before he creates the being who is to possess them. He fills them with all those objects of sense and sentiment which are to supply his moral and physical necessities. Birds sing in the boughs above him, odors blossom in the air, and fruits and flowers cover the earth with a glory to which that of Solomon, in all his magnificence, was vain and valueless. To his hand we owe these fair groves, these tall ranks of majestic trees, these deep forests, these broad plains, covered with verdure, and these mighty arteries of flood and river, which wind them along, beautifying them with the loveliest inequalities, and irrigating them with seasonable fertilization. Thus did the almighty Planter dedicate the great plantation to the uses of that various and wondrous family which was to follow. His home prepared, supplied with all resources, adorned with every variety of

fruit and flower, and checkered with abundance, man is conducted within its limits, and ordained its cultivator, under the very eye and sanction of Heaven. The angels of heaven descend upon its hills; God himself appears within its valleys at noonday; its groves are instinct with life and purity, and the blessed stars rise at night above the celestial mountains, to keep watch over its consecrated interests. Its gorgeous forests, its broad savannas, its levels of flood and prairie, are surrendered into the hands of the wondrously favored, and newly-created heir of heaven! The bird and the beast are made his tributaries, and taught to obey him. The lark summons him at morning to his labors, and the evening chant of the night bird invites him to repose. The ox submits his neck to the yoke; the horse moves at his bidding in the plough; and the toils of all are rendered sacred and successful by the gentle showers and the genial sunshine, which descend from heaven, to ripen the grain in its season, and to make earth pleasant with its fruits.

BEST TIME TO CUT TIMBER.

A pamphlet has been published under the supervision of A. S. Roberts, Esq., corresponding secretary of the Philadelphia Society for promoting Agriculture, in reference to the best time for cutting timber for fencing and other agricultural purposes. It embraces the substance of letters received from various persons, who had been requested to communicate the results of their observation on this subject. The writers do not profess to found their opinions on experiments conducted in such a manner as to fully settle the question; on the contrary, so far as conclusions are given, they are drawn from such facts as have fallen in the way of the respective individuals. For this reason, it is not, perhaps, strange that they should present great diversity — some being in favor of the winter as the best time, others the spring, others midsummer, and others autumn. Several, perhaps a majority, of the writers are in favor of June, or that part of the season when the bark will most easily peel off. Such has been the conclusion to which our own observation has tended. It may be here suggested as probable, that the general durability of timber cut at this season of the year, is attributable to its being divested of its bark as soon as cut, and exposed at once to the drying influence of the atmosphere, which soon evaporates the moisture, causing so great a shrinkage as effectually to close the pores, rendering it thereafter almost impervious to the agents of decomposition.

ECONOMICAL FOOD FOR HORSES.

Some of the English farmers, who use horses in their work much more than we do, have experimented carefully on the different modes of keeping them economically, at the same time keeping up their flesh and strength.

Stevens, in his Book of the Farm, has considerable to say upon this important branch of rural economy.

Our farmers, where they have an abundance of fodder, pay but little attention to these matters. The boy is told to go and feed the old horse, and he tumbles down hay before him, more than he can eat in a day. He is told to give him his provender, and he puts before him a lot of oats, it may be six quarts, or eight quarts, or half a bushel, just as it happens. But where there is less profusion of feed, and more economy required, the first thing obtained is a good straw-cutter, and the horses are kept on cut feed.

Stevens says there should be a regular feed prepared for farm horses, and administered every day, and he gives the following formula to prepare this feed, as follows: —

In the morning, 3½ lbs. of oat and bean meal, and 11 lbs. of chopped straw, ...	14½ lbs.
At midday, 3 lbs. of oat and bean meal, and 12 lbs. of chopped straw, ...	15 lbs.
At night, 1½ lb. of oat and bean meal, 11 lbs. of steamed potatoes, and 2 lbs. of chopped straw, ...	14½ lbs.
	44 lbs.

This quantity, he says, will be sufficient for the strongest farm horse, and less will be consumed by ordinary ones; but that can be regulated according to circumstances, by withdrawing a little meal and straw. The bean meal which he mentions is the meal of the English horse bean, which is made great use of in that country. We can raise it well enough here, but it is not equal to Indian corn, which we can raise much easier. By substituting corn meal for bean meal in the above mixture, you have a better compound.

Stevens says the usual allowance of oats in that country, for a horse, is eleven and one half pounds per day, when the grain is of the finest quality; but as horses do not always get the finest quality, the allowance may be taken at ten pounds: and when hay is given them in spring, they eat at least one and one half stone, which is twenty-one pounds, and this, with the oats, will make thirty-three pounds every day.

It will be seen that the above mixture is made up of straw, instead of hay, for the fibrous part.

The meal and the chopped straw are mixed together in a tub, and a little salt mixed with them, the steamed potatoes, or twenty-three pounds of ruta baga turnips poured in with them, and the whole mashed up and let stand to acquire a uniform temperature.

This part of the process, namely, the boiled or steamed roots, will not be convenient for our farmers to attend to every day; but their place can be substituted by a little more meal and cold water, in the warmer parts of the season, or warm water in the winter, and it will make an excellent and economical feed for horses that work on the farm. — *Maine Farmer.*

STEAMING POTATOES.

The secret of "steaming" potatoes is very little understood, and rarely carried into full effect, although it is indispensable to the nutritious development of the vegetable. The whole mystery consists in suffering the steam to escape, and at the same time keeping the potatoes hot. When the cook throws off the water, under the jurisdiction of the cookery book, what is she to do next? The steam rushes out, and she places the vessel opposite the fire; but fearful that the potatoes may cool in the mean while, she puts on the cover. Thus she undoes one process by the other; for the steam no sooner escapes from the potatoes, than, being confined by the lid, it condenses rapidly, and falls back in water upon the vegetables. And thus, through the ignorance and obstinacy of our cooks, we are perpetually served with what are familiarly called wet potatoes — a sort of vague excuse, which helps to throw the fault against the season, or the gardener, or any thing, or any body, rather than the real culprit. The Irish peasant woman, wholly ignorant of science, but with instinctive sagacity, gets rid of the difficulty by the simplest process imaginable. Placing the vessel, without the cover, in a slanting direction, opposite the fire, so as to hasten the process of steaming by the

external heat, she throws a napkin over the potatoes, which receives and retains so much of the steam as does not make its escape, while it performs the equally essential office of preserving the heat of the vegetables below. When potatoes are boiled, — the usual mode of dressing in Ireland, — it should be recollected that they are deprived of their nutritious qualities by over-boiling. The peasantry are well aware of this, and say that they are "strongest" when the "bone" is left in them, that is, hard boiled. In this condition, they require the powerful digestion of the laborer. Philip says, that "fresh vegetables, on account of their tendency to ferment, are, on the whole, injurious in digestion. Some vegetables, cabbage, and waxy potatoes he has found the worst. Mealy potatoes, turnips, and broccoli, are among the best. Raw vegetables of all kinds are heavy; lettuce appears to be the least so. The tough, thready, and fibrous parts of vegetables are of most difficult digestion." In Dr. Kitchener's Cook's Oracle, you will find no less than sixteen ways for dressing potatoes. He approves strongly of the plan already mentioned, and says, that "if you let the potatoes remain in the water a moment after they are done enough, they will become waxy and watery. After pouring off the water, he recommends — what is commonly practised in Ireland — that the saucepan containing the potatoes shall be uncovered, and set at such a distance from the fire as will secure it from burning; their superfluous moisture will evaporate, and the potatoes will be perfectly dry and mealy. You may afterwards place a napkin, folded up to the saucepan's diameter, over the potatoes, to keep them hot and mealy till wanted.

IMPORTANCE OF EDUCATING THE FARMER.

It is calculated that the divisions of the occupations of men in the United States are nearly in the following proportions: —

No. engaged in	internal navigation,	33,076
" "	ocean navigation,	56,021
" "	the learned professions,	65,255
" "	commerce,	119,607
" "	manufactures,	791,749
" "	agriculture,	3,719,951

Thus it will be seen that those who are engaged in agriculture are three and a half times greater in number than those in all the other divisions. The agriculturists consequently have the physical and numerical power, and can at any time control every government in the United States, and give tone to public opinion. But do they? No, indeed; for however powerful they may be in number, they are weak in influence; and this arises from want of proper education. The sixty-five thousand two hundred and fifty-five engaged in the learned professions are intellectually stronger than the three millions seven hundred and nineteen thousand nine hundred and fifty-one engaged in agriculture, and therefore *rule* them. If it were not so, seven eighths of the offices in the country would not be held by lawyers and doctors; nor would all the colleges and high schools be endowed principally for the benefit of the learned professions.

Farmers, when will you arouse yourselves to the dignity and importance of your calling, and educate yourselves to the height of intelligence which will make you the *rulers* instead of the *ruled* of other professions? There is surely nothing to prevent this if you will only be true to yourselves. — *American Agriculturist.*

For the New England Farmer.

HARVESTING CORN.

Mr. Editor: Your remarks in the last number of the Farmer, on harvesting corn, I liked very much, as they coincided exactly with my views. It has been my practice, for several years past, to cut up and stook my corn in the field as soon as it becomes thoroughly glazed. The first year that I commenced cutting up my corn, I only cut up part of my field; the remainder, I topped the stalks after the old-fashioned way. I tried this new method merely for an experiment, as I had very little faith in it; and on harvesting, I found that the corn cut up at the roots was not only fit for harvesting earlier, but the corn was equally as sound, and the smaller ears were sounder. I did not find near so much "hog corn." This is generally the case in cutting up corn at the roots; small ears but just in the milk will mature better than those left standing after the top stalks are cut. If stalks are taken from the ears before the corn is tolerably glazed, sound corn need not be expected; whereas corn cut up at the bottom, in the same condition, will generally become hard. It is a very hard matter for farmers to adopt any other method in securing their corn and fodder than the old-fashioned way — the way pursued by their fathers and grandfathers before them. But there is one thing about it: after a farmer has once got in the way of cutting up his corn, he seldom changes back. There is a proper time for cutting up corn to have it become dry and hard, in order to prevent its shrinking on the cob.

If there is no appearance of frost, corn should remain until it has become thoroughly glazed; but it is far better to cut it up, even while it is quite soft, than to have it struck with the frost; for by this means the fodder is saved, and perhaps a fair crop of corn. As to the manner of stooking, I usually select the largest hills, around which I stand four or five more, and twist a band around the same; then cut up some twelve or fifteen hills more, and place around as *even* as possible; then tie another band around the top of the whole. I consider this way preferable to binding in bundles. Corn is very liable to mould when cut and bound up green, but when set up loose, there is no danger of corn taking hurt. Some contend that it is not so quick a way of harvesting corn, to cut it up at the bottom. This is a mistake. It may be a little heavier labor, when the corn is removed to the barn for husking; but having tried both ways of harvesting, I shall give in in favor of cutting up at the bottom, when length of time is considered. When the weather is fine, I usually husk my corn in the field, thus getting rid of the heaviest part of the labor

ALBERT TODD.

Smithfield, R. I.

CATTLE SHOWS AND EXHIBITIONS.

[Continued from p. 282.]

Worcester, at Worcester, Sept. 19.

Norfolk, at Dedham, Sept. 25.

Farmers' Club of North Stockbridge, at the Greenwood Farm of Allen M. Smith, Esq., Oct. 17.

Kennebec, Me., at Readfield Corner, Oct. 9 and 10.

Cumberland, Me., at Portland, Oct. 16 and 17.

York, Me., at South Berwick, Oct. 2 and 3.

Plymouth, at Bridgewater, Sept. 25.

Berkshire, at Pittsfield, Oct. 2 and 3.

Hampshire, at Northampton, Oct. 9 and 10.

ACKNOWLEDGMENTS.

We are under particular obligations to Mr. Andrew Lackey, Jr., Marblehead, for specimens of a great variety of plums, and several varieties of apples and pears. Among the plums, the Italian Damask holds an important rank as an early plum. It is of good size, a great bearer, and excellent quality. The Jefferson shows by the compact bunch, that it is a great bearer, and the quality is excellent. Lucomb's Nonsuch is a large, handsome fruit, but very little inferior to the Jefferson, and it is a good grower and bearer. As it is among the largest plums that bear well, we think it is a good variety for the market. See p. 74 of this volume. Smith's Orleans is another of the best varieties, in growth, bearing, size, and quality, and among the surest to produce a good crop. The Bingham is a large, handsome plum, but in quality it is inferior to the last three that we have named. Black Imperial, Breevoort's Purple, and Pond's Seedling, are not of excellent quality. — M'Laughlin was picked before quite ripe, therefore we will not give any decided opinion of its quality, as we expect specimens soon that may be in prime condition. It appears to be almost as good as the Green Gage. We have several other varieties from Mr. L., but generally not in their best condition.

From the same source, Summer Rose apples, very fine. This is one of the most beautiful apples, of pleasant flavor, and well adapted to the garden. Benoni is handsome and excellent, and well suited to the garden. Rousellette de Hatif pear is very pleasant and early, but quite small. Manning's Elizabeth is small, but early, beautiful, and of most excellent flavor.

Mr. Lackey has done important service to the public, by testing numerous varieties of plums, and giving to others the result of his experience. He has gone more thoroughly into this branch of pomology than any other cultivator in the circle of our acquaintance.

We have received specimens of handsome pears of Dr. Rufus Kittredge, of Portsmouth, N. H. They ripen before the Bartlett. It is cultivated a very little in this region, but its name is not known. The texture is coarse, and the quality rather poor.

From William O. H. Gwynneth, Portland, Me., some very fine specimens of the Early Harvest apple. This fruit is very liable to blast and crack. When fair, it is an excellent cooking apple, but too acid for the dessert. Its earliness is its great excellence.

We have other fruits, not sufficiently ripe, which will be noticed in our next number.

POTATO ROT.

This dreadful malady is prevailing, in this region, to an extent and severity far beyond its ravages in any former season, and we hear and read of the same calamity in other sections. The crop is mostly rotten already, (Sept. 10,) and we have recently had powerful rains, that saturated even the dry soils with water, and now the weather is warm, so that we expect the speedy destruction of nearly all that remain sound, for they never rotted faster, and never was the weather more conducive to their destruction.

From the examination of a great number of varieties on our own grounds, and accounts from other cultivators, we think that not one tenth of the crop of potatoes will remain sound, and probably less than the seed planted will escape the ravages of this fell destroyer. In no previous year has the rot destroyed more than one fourth of the crop in this region.

OLD FRIENDS TOGETHER.

O, time is sweet when roses meet,
With spring's sweet breath around them;
And sweet the cost, when hearts are lost,
If those we love have found them;
And sweet the mind that still can find
A star in darkest weather;
But nought can be so sweet to see
As old friends met together.

Those days of old, when youth was bold,
And time stole wings to speed it,
And you ne'er knew how fast time flew,
Or, knowing, did not heed it;
Though gray each brow that meets us now, —
For age brings wintry weather, —
Yet nought can be so sweet to see
As those old friends together.

The few long known whom years have shown
With hearts that friendship blesses;
A hand to cheer, perchance a tear,
To soothe a friend's distresses;
Who helped and tried, still side by side,
A friend to face hard weather;
O, this may we yet joy to see,
And meet old friends together.

Look not mournfully into the past, — it cannot return; wisely improve the present, — it is thine; go forth to meet the shadowy future without fear, and with a manly heart.

How pleasant it is for a father to sit at his child's board! It is like the aged man reclining under the shadow of the oak which he has planted.

When acts of courtesy come gratuitously, they are as acceptable as the clear brook to the thirsty traveller.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, SEPTEMBER 28, 1850. NO. 20.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

MASS. HORTICULTURAL SOCIETY'S EXHIBITION.

THE annual show of this association took place last week. The show of flowers and plants was very good, but there was no arrangement to go into this branch extensively, and of course but little attention was paid to it; the floral designs, however, were fine, and formed an important feature in the exhibition.

There was a noble display of fruits, particularly of apples and pears; of the latter there was a much better show than we expected, considering the unfavorable season for this fruit, which caused it to blast and crack more than usual; and where these evils have not happened, the fruit is frequently of inferior appearance. Notwithstanding these disadvantages, there was not only an extensive, but a very good show of pears, the natural result of the persevering efforts of many cultivators in trying numerous varieties, and having them in various soils and locations.

Some varieties of pears have nearly failed of a crop this season, and others, though rather productive, are very small and inferior in quality, owing to an unfavorable season for this rather uncertain fruit. We have had blasting storms while the trees were in blossom, and while the fruit was tender; and the season has generally been cool, and unfavorable to pears, many of which require a warm season to bring them to perfection. There were several new varieties, of very promising appearance.

The exhibition of apples was rather extensive, and the fruit remarkably large and fair. Among them were several plates of new varieties, of fine appearance, but of whose real merit we have not had an opportunity for definite information. We now have so large a list of excellent apples, adapted to all seasons of the year, that new kinds should be introduced for general culture with caution. Such only as have advantages over those now in use, of the same season, should be encouraged.

The show of peaches was not large, but there were several lots of very fine appearance.

The quantity of plums was rather small, but there were some new and valuable kinds.

There were very few grapes of out-door production, but those raised under glass were very fine.

The show of vegetables was excellent, but not very extensive. There was a deficiency in potatoes, owing to the rot. We planted over one hundred varieties, and they were nearly all destroyed, so that we could not get sound ones enough to make a respectable show.

The exhibition was attended by a large number of visitors, who seemed highly delighted with it. This society is in a very prosperous condition; and though awarding numerous liberal premiums, medals, and gratuities, it is still accumulating funds.

MECHANICS' FAIR.

The sixth exhibition of the Massachusetts Mechanic Charitable Association opened on the 11th inst. It is held in Faneuil and Quincy Halls, which are connected by a neat bridge of novel construction, built by Henry Lanergan, of Boston. These spacious halls are well-filled with the very best productions of mechanical skill of almost every description. This show is not distinguished for a large number of new inventions, but a prominent feature is the superior design and skilful execution of a vast number of productions, which gives it a peculiar richness and splendor, never before excelled, and probably never equalled in any former exhibitions of this association, or any other in the country.

This fair is noted for a great variety of articles of decided necessity, convenience, and comfort, as well as of taste, luxury, style, and fancy. The agricultural implements hold a prominent and respectable place. In design, workmanship, neatness, and fine finish, they vie with the best articles in the exhibition.

The whole show is a grand specimen of the ingenuity, skill, enterprise, intelligence, and industry of our New England people, and marks this emphatically as the age of improvement, and this as the peculiarly favored land of industry, skill, and enterprise.

MIDDLESEX CATTLE-SHOW.

This festival came off at Concord, on Wednesday of last week. The day was fine, but rather forbidding in its appearance in the morning, which doubtless kept some persons at home. The number in attendance was tolerably large. The finest part of the show was the ploughing match, which was well contested, on a piece of low land with a heavy soil, uneven surface, and tough sward, which required great strength and good discipline in the team, and skill in the ploughman, to do good work; yet the ploughing was done remarkably well, which, under such unfavorable circumstances, was highly creditable.

Hon. George Boutwell, of Groton, delivered an able address. The subject was the character and influence of agriculture and the mechanic arts.

The show of fruits was very good indeed, but not extensive. There were a few fine specimens of vegetables. There were also but a few articles of domestic manufactures, and they were generally very good. The large fairs take up many of the best productions in this branch.

The show of stock was pretty fair, but not large. There were not so many cattle on the grounds as were exhibited last year. Some of them were fine. The native cattle in this county are mostly of moderate or small size, and generally marked as good milkers.

Only a few swine were shown, but the most of them were fine models for form and symmetry. For some years past, this society has shown some of the finest pigs that we have seen. Only one lot of fowls. No horses.

As we did not attend the dinner, we cannot report the witty speeches and toasts that are usually heard at the festive board on such occasions at old Concord.

The Independent Horse-rake was exhibited by Charles Gill, Esq., of Exeter, N. H., and put in practical operation. It attracted much attention, particularly from the committee on implements, who gave it a complimentary notice, and awarded to Mr. Gill a gratuity of $5.

CATTLE-SHOW AT WORCESTER.

This farmers' holiday took place last week, on Thursday. The day was fine, and the concourse of people that attended was immense, probably not less than ten or twelve thousand people. The large exhibition at Worcester attracted great attention; and its central situation, with railroads diverging in every direction, afford great facilities for travelling to that point.

The ploughing match did not excite much interest; and although this county has a larger number of working oxen than any other in the state, and probably as fine or finer ones, there were on the field only twelve single teams; and the land was so very light and easy to plough, that one horse, or a yoke of steers, with a boy, was sufficient team to do good work. With fine teams, skilful ploughmen, and good implements, the work was, of course, very well done.

The show of cattle was very large, and of almost every description known in this country, and of almost every class. There were calves, heifers, steers, bulls, cows, working oxen, and fat cattle. Of breeds, there were the native, the Durham, Ayrshire, Devon, Creampot, and some others, though they might not be named; and these were mixed and compounded in almost every way, forming all kinds of crosses, so that we should deem it almost impossible to describe some of the varieties, a few generations hence, on a common card. Generally the cattle are large, and well adapted to labor and beef; and some animals were fine models for milkers. But the cattle of this county, generally, do not indicate that milk is the leading object, and perhaps it is not well that it should be. It is a very desirable object, but unattainable, to combine, in the same race, good working, milking, and beef properties. Animals well made for milk will not generally fatten readily; and the animal that is well made for strength, and abounds in muscle, is not well made to secrete milk, and change food into the liquid element.

The show of swine was rather small; less in extent, and not so fine in appearance, as at former shows. Yet some specimens were very good. Only a few sheep. No horses. Why not? There was a good show of fowls, much better than we usually see at cattle-shows.

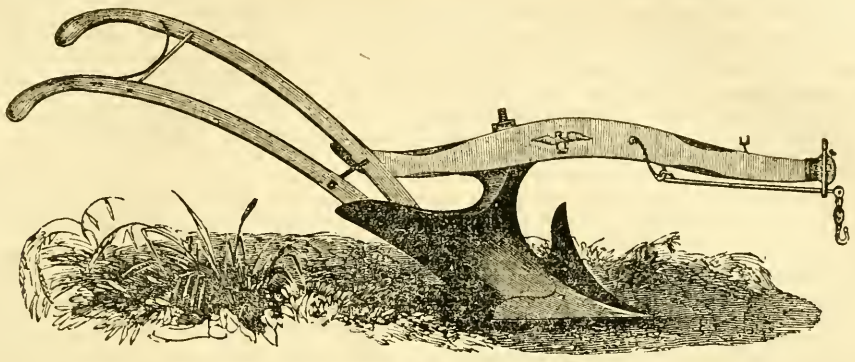
The butter and cheese were of fine appearance; but, for so large an agricultural county, the quantity was rather small.

On the whole, the show was very good, and satisfactory and instructive to the large number of spectators; and it gave ample testimony that the *heart* of the commonwealth is gradually improving in agriculture and its kindred arts.

Rev. Mr. Tracy, of Sutton, delivered the address at the dinner table, which we did not attend, as we wished to spend a few hours in the horticultural rooms. The address was commended as brief, sensible, and instructive. Ex-Governor Lincoln, the president of the society, presided at the table in his usual style of courtesy, pleasantry, and wit.

MAKING STONE FENCE.

With us the motto would be, whenever stones were removed from the field, Put them into a wall. If ten rods cannot be made, make five, and the next time the field is ploughed, and more loose stones appear, make five rods more, but do not throw them into the corners of the fence, nor into the street. As to the kind of wall, we should like to see posts with two wires connected with a wall. If boards are put upon the posts, the wind frequently moves the posts and injures the wall. We feel confident that a wall with wired posts may be made one half a foot thinner than when boards are used, and yet be more durable. The posts might be smaller, and the cost, on the whole, much less. — *Culturist and Gazette.*

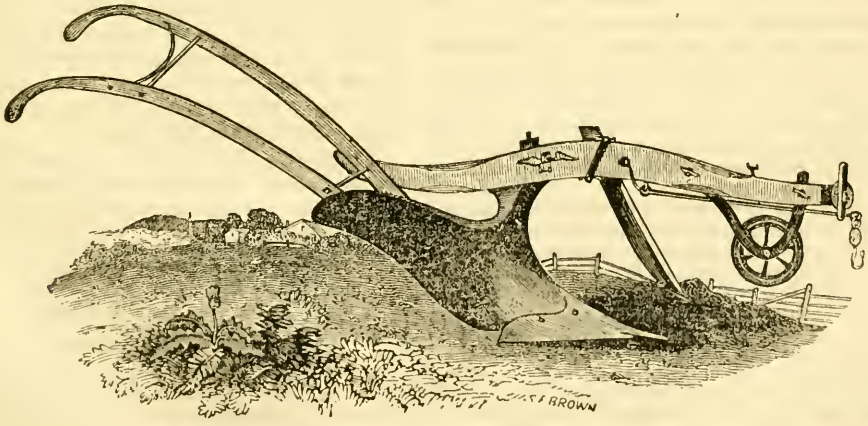


RUGGLES, NOURSE, MASON, & CO.'S NEW STUBBLE PLOUGH.

OF PLOUGHS AND PLOUGHING.

EDITORS OF THE CULTIVATOR: In the Cultivator for March last, there are some ideas of mine upon "Ploughs and Ploughing." I there mentioned that, with such ploughs as I had used, I had not been able to turn stubble land in a manner that seemed to me to be the most desirable, nor to plough so deep a furrow in greensward land as I wished; that I had stated my difficulties to Messrs. Ruggles, Nourse, Mason, & Co., and that they were getting up some new patterns of ploughs with the intention of obviating my difficulties. These gentlemen have now completed three sizes of a new plough for greensward, and two sizes for stubble land. One of the largest of each size I have tested thoroughly, and I am now happy to be able to say that they meet my wants entirely.

The mould-board of the stubble plough is of a considerably shorter construction, and is wider at the heel, in proportion to its length, than that of any good sod plough; and this gives it great turning power, enabling it to take up its loose furrow-slice, throw it *all* over to the desired place, completely inverting as well as pulverizing it, and leaving a clean channel behind for the reception of the next furrow. The castings, both of the mould-board and land side, are considerably higher than is usual in ploughs, which prevents stones and clods of earth from falling over and down between them, and thus aiding to fill up the furrow channel. The beam, immediately forward of the standard-bolt of the castings, is high and arching, giving a clear space of eighteen inches between the beam and the sole of the castings. — When the plough is at work in the furrow, the extra space left between the surface of the ground and the plough-beam, in consequence of the increased height of the latter, effectually prevents the wadding up of stubble, coarse manure, or other impediments, immediately forward of the standard; and thus are avoided those vexations so frequently experienced when ploughs of the common construction are used. In June last, for the express purpose of testing this plough in regard to its ability to keep itself clear from clogging, I spread a dressing of the coarsest kind of long manure over an acre of corn-stubble land, and set the plough at work in furrows eight inches deep. The acre was ploughed, and the manure all covered, without once stopping the plough to clear it, and without any effort on my part to prevent its clogging. With this implement, the ploughman may choose any furrow he pleases, from five to twelve inches deep. The small size of the stubble plough is intended to meet the wants of those farmers who work their stubble lands with light teams. The largest size is easily drawn, in sandy or gravelly loams, by a pair of stout horses or oxen, if the furrow is not more than eight inches deep.



RUGGLES, NOURSE, MASON, & CO.'S NEW SWARD PLOUGH.

The greensward plough is of quite different construction from that of the stubble plough. Its point is long, rising very gradually towards the standard, with a share gradually widening to its full breadth and cut. The plough enters the ground in the form, so to speak, of a long, tapering wedge, lifting the

furrow-slice in a gentle and easy manner, laying it smoothly over into its proper place, with an easy draught by the team, and with little assistance from the ploughman. It has also a space of eighteen inches between the beam and the sole of the castings, which prevents all clogging. The roller is attached to the side of the beam, instead of being placed under it, and consequently it can be made ten to twelve inches in diameter, thus avoiding that constant groaning and laboring upon the axis which are liable to occur where small rollers are used. The dial-clevis and draught-rod, by which the team is attached to the plough, is an improvement, I think, upon the common clevis. Besides being a stronger and more durable attachment, it enables one to set his plough with entire accuracy in any desired furrow, from the shallowest and narrowest to the deepest and widest, that it is capable of taking.

The largest size of the greensward plough is intended for the draught of four cattle. I have used it, and it works well in furrows all the way from six to twelve inches deep, but it delights especially in deep furrows. When set for ploughing a foot deep, the most proper width for it to take is sixteen to seventeen inches; and the width of course lessens with the lessening of the depth. The next size is a three cattle plough, to be used in furrows not exceeding nine or ten inches in depth. The smallest size is a two cattle plough, designed for furrows not exceeding seven or eight inches in depth. The height of beam is the same in all the sizes, and the general form and principles of working are the same; the variations being in the amount of work done, and the force of team necessary to do it.

The accompanying cuts show the general form of these ploughs.

F. HOLBROOK.

Brattleboro', Vt., *Aug.* 12, 1850.

— *Albany Cultivator.*

For the New England Farmer.

PEACH-LEAF CURL.

Mr. Cole: I perceive, in the last number of the N. E. Farmer, that Dr. Brown attributes the curl of the peach leaf to the "cold northerly and easterly winds in the month of May." These views, you say, coincide with your own.

Now, gentlemen, with all due courtesy, I would beg leave to differ from you as to the cause. This peach-leaf curl is no new disease; it has existed for several years, and has shown itself about the same time, (from the middle of May to the middle of June,) and we always have more or less cold north and east winds in the spring of the year; and, for aught we know, these may be an inciting cause; but how does it happen, if they are the immediate or sole cause, that the trees are not more universally affected? For so far as our observation extends, not more than one tree in twenty has shown symptoms of the blight, and those rarely contiguous, but scattered about in all parts of the orchard; and then there appears to be little or no difference in the prevalence of the disease in any location. If your theory were correct, we might expect to find trees more affected in elevated positions, or near the sea-shore, exposed to the most chilling blasts; and yet we find those trees no more affected with the curl than trees more remote, and in a sheltered position, or even trees trained to a high board fence, with a southern exposure.

We should think the curled leaf described by Dr. Brown was more virulent than we are accustomed to in this region, and somewhat analogous to the "yellows," for he says, "The leaves have been gradually dropping from the trees to this time, (Aug. 1,) and those now on the trees are from new shoots," &c. The curled leaf has not thus affected trees that have come under our observation; and we challenge any one *now*, having no knowledge of the fact, to designate a tree in our orchards (and we have more than three hundred trees) that has been affected with the blight. We know of no instance in which the disease has proved fatal; it undoubtedly retards the growth of the tree in a measure, but it is of short duration, and the trees put forth new foliage, and the second growth is vigorous.

The "yellows," if we understand it, (for we have no experience in the matter,) causes the fruit to ripen prematurely, sends out new shoots, causes a general decay, and speedy death ensues.

There seems to be but little analogy between the yellows and curled leaf; but as to the cause and remedy, we are as much in the dark as we are of the present locality of "the lost tribe of Israel." C.

Pembroke, *Sept.* 7, 1850.

Remarks. — The "yellows" in peaches is a permanent, and generally a fatal disease, which may be propagated by contagion. The "curled leaf" is a temporary disease, that affects the foliage. It is of a transient nature, and it only affects the tree as would the destruction of the foliage from any other cause. This season our most healthy trees were severely affected with this leaf disorder, and it came upon them suddenly, like a blast. We think it comes too suddenly, and operates in too cool and stormy weather to be the effect of insects; hence we infer that it is a blast from unfavorable weather.

On our grounds, which are near the sea, almost every tree was affected with the curled leaf, and among them many healthy young seedlings, that are very hardy against cold weather. The few that escaped were evidently more hardy against the blast than others; for one kind, that was peculiar in this respect, escaped in several situations, though amidst others which were much injured. We had several early varieties, that were only one year from the bud, and yet they blossomed full; among them was Hall's Down-Easter, a very hardy kind against cold weather. The effect of the curled leaf was the destruction of the fruit on all but Crawford's Early Melocoton: this escaped the disease, though in a row beside those affected, and it bore fruit. The fruit on older trees was not so much affected, though the curl was equally destructive to the foliage.

The views of correspondents on this subject are very acceptable. We may learn important facts by investigation and the expression of various opinions. — Ed.

For the New England Farmer.

SPENT TAN BARK.

Mr. Editor: Will you, or some of your correspondents, inform a young farmer whether tan bark can be made valuable as a manure; and if so, what is the best mode of applying it? I should think to pile it up into a heap, and mix swamp muck, ashes, and put on all the sink-water and soap-suds; every farmer has a large quantity of this material. One of my neighbors is a tanner, and has a large quantity

of this spent bark, and wishes me to try some of it. Now, if any one of our good farmers will inform me, I shall be much obliged.

Will some of our mechanics have the goodness to give a plan of a sweep horse-power? I wish to build one in my wood-house to saw my wood with.

Very respectfully yours,
B. F. CONANT.

Lyme, N. H.

Remarks. — Mix spent tan bark in layers with liberal quantities of lime, ashes, potash, or other alkalies, and let it remain until it becomes old and mellow, losing its *tannic acid*, or astringent principle. This may require a year or two. The preparation of a compost, as mentioned by our correspondent, will be a good mode, but it must remain some time, that the tan may become partially decomposed, and lose its astringency.

If tan be thrown into a heap not so deep as to protect the centre from the modifying influences of heat, air, and rain, it will become partially decomposed in a few years, and make a good manure, particularly for trees and shrubs; but it will be the better by mixing lime or ashes with it, and forming a compost with mud, peat, or loam, and a little animal manure. Soap-suds, sink-water, and urine will make valuable additions to any compost heap. — Ed.

For the New England Farmer.

ON RAISING PLUMS.

Friend Cole: In No. 17 of your paper, I noticed an article under the caption "To protect Plums," in which the writer informs us he once owned a farm two years, and had had some experience in the culture of the plum. The first year he had no ripe fruit. The second year he hired a man to trim his orchard, who inquired if he should trim the plum-trees: he replied, no; he had concluded to cut them down, as they bore no fruit; but being told they would bear well if trimmed while in full bloom, he consented to let them stand, and had them trimmed accordingly. To his astonishment he had a great supply of fruit of the best quality for two years, when he disposed of his farm; and he goes on to say, he had no doubt, by pruning as above described, they would continue to bear as long as they lived, and that the pruning added to their longevity: that, instead of its being the insects which cause the plums to fall, it was owing to the top of the tree being too large.

I should suppose, by the above, that its author was not acquainted with that species of insect which destroys so much fruit of different kinds, especially the plum; if he had been, he would not have advanced such crude notions as the above.

In the same paper, Mr. J. Day, of Boxford, states that he saved his plums by applying salt to the earth around the trees as far as the branches extend; in one case, he put a peck of salt to one tree. I think if he applies the same quantity another year, he will find neither plum nor tree alive. I judge by what I have seen in this place, of the application of salt for three years, without saving a plum, but to the injury of the trees.

In this town there is an unusual quantity of plums this year, although their quality is somewhat injured by cracking; some kinds rot bad also. Is not our good crop owing to an open winter, such as the last, which destroys many insects? and to the late and wet spring? Some have syringed their trees with salt brine, and others with sulphur water, and all have an abundance of plums.

Being in the employ of Allen Rowe, he desired me to take care of his plum-trees. I consented, and commenced syringing them, soon after the fruit began to set, with sulphur water and whale-oil soap; but the practice which was most successful, and best adapted, in my opinion, to stop the ravages of the *curculio*, was *shaking the trees*, while a cloth the size of a sheet is held under the branches completely around the trees. I went through the operation for weeks, of shaking, sometimes once and sometimes thrice a day. The last time I found any curculio was the 18th of July, up to which time I destroyed more than one hundred and fifty of them. This is the first year that plums have been perfect on the trees. Smith's Orleans cracks some, and the Washington rots on the trees, owing, perhaps, to the season being unusually wet. The Beurre Diel pear cracks bad on the quince and on the pear stocks.

From plums put in a vial August 1st, that contained the larva, there are now perfect curculios.

Potatoes are rotting very much.

Yours respectfully,
BENJAMIN BOYNTON, Jr.

Remarks. — Pruning plum-trees will cause them to produce finer crops; but the pruning should be done in the same way as that of the peach, by *heading in*. All stone fruit should be pruned in this way, excepting a few limbs may be cut at the trunk while the tree is young, to give it proper height and form. — Ed.

For the New England Farmer.

PLOUGHS.

Mr. Editor: As I was passing through the city of Poughkeepsie, on the east bank of the Hudson, I noticed a plough with a mould-board about eighteen inches long, (or half the usual length,) and with but one handle, with a pin about twelve inches long through the upper part. I inquired of the proprietor of the store before which it was placed, the purpose for which it was there. He answered, "*To be sold.*" I asked if such ploughs were salable in that region; he said, "Yes, there was no demand for any other." They had sometimes attempted to sell the ploughs made in Massachusetts, with two handles, and long mould-boards, but the farmers there did not like them. On looking at the land in and about the city, I could not see that it varied essentially from the land in the counties of Norfolk and Worcester; where, I am confident, ploughs of this description would be thrown one side, as of no value. How does it happen that cultivators of the soil are so dilatory in adopting improvements? If I do not mistake, these cast-iron, short mould-boards were first introduced by Wood, of Western New York, for which a patent was obtained about thirty years since, a renewal and further extension of which has been sought the past season. But that they can be as valuable, and as conveniently managed with one handle as with two, is to me highly improbable. I confess I was struck with astonishment, that there should be a region within one hundred miles of New York or Boston, where modern improvements had so imperfectly penetrated. I had supposed the *Eagle* of Ruggles & Co., and the *Centre Draught* of Prouty, had taken possession, more or less, of every corner of our land.

Sept. 10, 1850.

For the New England Farmer.

THE LATE WILLIAM STICKNEY.

To the Editor of the N. E. Farmer: The grave has closed over another of the farmer's friends. In the bosom of his mother earth sleeps peacefully, now, one who, a short month ago, walked in the height of health and strength, among his growing crops, and had his hopes, and his fears, his calculations, and his disappointments. Now, still in his narrow bed, all hopes and fears, all forethought and all regret, are merged in a changeless, and, we humbly trust, a happy certainty.

William Stickney was a farmer to his heart's core. Amid all the excitement of a city life, and the fascinations of business enterprise, his thoughts ever turned, with unvarying constancy, in their search for comfort, to the hill-side where roamed his noble Devons; to the vale where pastured the gentle South-Down; where grew the tasselled corn and the waving wheat.

Thither, as a bird to her nest, he sped to lay down care at the gate, and to call up all the cheerfulness of other days. The care-worn man became a hopeful, free-hearted youth, when his foot pressed the greensward of his mountain home. And the echoes of the hills welcomed, and returned the gleeful laugh of the man that yesterday was the thoughtful, word-sparing merchant of State Street.

It was as a breeder that Mr. Stickney had especial claims upon the grateful remembrance of the farmer. His Devons, which he has imported and bred in their purity, will challenge comparison with any other herd of this breed in the country; while his judicious crosses upon the celebrated "Creampots" of Col. Jaques, have furnished grade-animals, that will compare at the pail with the milky Short-horns. The older cows of this herd yield from twenty-three to thirty quarts of milk per day, at the height of their flow.

The South-Downs of his importation and purchase also rank with any flock that has come under my notice.

In his stock of swine, however, there is no one in the country, so far as I am informed, that pretends to a rivalry.

The beautiful Suffolk, the favorite breed of the late king of England, and also of the present farmer-prince; the solid and substantial Middlesex; the clean-limbed, kind-feeding Essex, may all be seen in his pens at Westminster, Vt., and will weary the nicest judgment with their strong and conflicting claims to superiority. Tired at last with the task that is ever beginning anew, the doubtful purchaser or judge assures himself to a certainty, by selecting all the three.

It was of a Suffolk sow, of Mr. Stickney's importation, that our friend, of world-wide celebrity as a breeder, (and an old-fashioned gentleman, let me add,) Col. Jaques, of the Ten Hills Farm, advised Mr. Webster as follows: "Mr. Stickney has now imported a sow, from which we may form a breed that will defy the world." In this opinion, Mr. Webster, upon a careful inspection, coincided.

Col. Jaques is at work with the models now, but the moulds are at Mr. Stickney's farm.

How much comfort have not these humble but useful animals afforded to the enterprising and enthusiastic farmer who has gone from us, as they grew under his watchful eye, models of form! and how cheering to the good heart, now still, that to beauty was added utility!

If we rear a column to him who has devastated a province, and scorched the teeming earth from horizon to horizon into the sterility of a desert, consistency claims that we should not thus mark our appreciation of the just and the good, who feed the hungry and clothe the naked, by bringing within their reach the best and most economical means of supply. To these men is erected a column of blessings from grateful hearts, that overtops the pyramids, for it reaches heaven, and will outlive them, for it endures as long as want and gratitude exist.

To the inventor of the cotton gin, which so materially reduced the expense of cotton-cleaning, and consequently of the cloth, how grand a pile of gratitude has been built by thankful hearts, that never knew his name! Hastening home with the speed of the wind, to share some new-found joy or sudden sorrow of those dear to us, we invoke a blessing on him who harnessed the resistless power of steam, to be our fleet, yet docile coursers. Unconsciously to ourselves, we pay this silent tribute to a benefactor.

And hereafter, sir, when these improved animals shall have driven out of reach the hungry, unthriving beasts that, without adequate return, eat up the substance of the poor, and shall furnish to him comfortable subsistence for himself and his family at light expense, let then the "blessing of him that was ready to perish" be the monument of William Stickney. W. S. K.

For the New England Farmer.

EARLY MATURITY OF FOWLS.

Mr. Cole: The subjoined paragraph has been going the rounds of the papers, as giving a fact of unusual occurrence: —

"In Newark, N. J., a gentleman has two chickens which began to lay when four months old, two months sooner than usual."

I have met with it so frequently, that it has induced me to offer the result of my own stock's valuable qualities. About the first of last March, I gave half a dozen eggs, a cross between the Shanghae and the Black Poland, to Mr. William Hillman, of Prince Street, Boston. They all hatched out on the 25th of the same month, and one of the pullets — the only pullet from the eggs, I believe — laid on the 9th of August, and laid an egg daily *for the next fourteen days*, without intermission. It will be noticed that she was only four months and fourteen days old when she laid her first egg. In my own yard I have pullets of the same cross, hatched from the 5th to the 11th of April last, that have laid for some days; while I have full-blood Shanghaes of both the Forbes and Marsh fowls, White Dorkings, Bolton Grays, and Black Polands, of the same age, that do not yet bear fruit. The inferential fact deduced from these statements seems to be, that this particular cross show *earlier maturity* than the full-blood fowls exhibit. What is the experience of others? I. F. S.

Somerville, *Sept.* 12, 1850.

For the New England Farmer.

WINTER WHEAT IN MAINE.

Mr. Cole: That Maine has become satisfied it is too expensive to *go to New York to mill*, is becoming quite evident, from the effort making to raise her own bread. Several hundred bushels of winter wheat were sown last fall in this state, and scarcely has a failure been known, under good management, of realizing a good, and in many instances a very large crop, ranging from fifteen to fifty bushels to an acre. Much has been sown the present fall; in some sections nearly every farmer has tried a little, from

one to ten bushels; and even I have heard of some who have sown from fifteen to twenty-five bushels. Seed has now become very scarce, and many will not be able to obtain it, unless they make use of wheat obtained from the west for grinding, which will not be likely to succeed so well as the Kloss or Bluestem variety, which is mostly raised, and believed to be the best adapted to the climate of Maine. Should the next season prove as favorable as the last for winter wheat, a large amount will be raised, furnishing seed in abundance, and much to manufacture into flour, superior to that generally obtained from abroad. A MAINE FARMER.

A MACHINE WANTED.

Among the innumerable inventions which have rendered the present age celebrated, we have not found or heard of one that is just what we need for hulling barley. There have been several invented, which promised, for a time, to work well; but either they were not durable, or did not work in all respects so perfectly as was wished, or they were too expensive. Now, hulled barley is an article that would come into extensive use and demand, could it be provided cheaply. We do not by this mean what is sold at the apothecaries' shops under the name of "*pearl barley*," but the barley deprived merely of its hull. It is then a wholesome, nutritious article for soups and puddings, and it would supply the place of rice very extensively, provided it could be prepared at a cheap rate. Several years ago, the Kennebec County Agricultural Society offered a pretty generous premium for a machine that would hull barley or oats in an expeditious and perfect manner.

Two or three machines were brought forward, but none of them exactly came up to what was desired. The best one that was offered was the invention of a couple of young men east of this, whose names we do not recollect. It was made, if we mistake not, in this manner: A wheel, say a foot and a half in diameter, and three inches thick, was filled with board nails, (cut nails,) with their points projecting outwards. This was hung on an axis, with a case or shell, which shell was also full of similar nails, with their points projecting inwards. The wheel was made to revolve with great speed, and the barley, which was fed in by means of a hopper, was thus subjected to a terrible scratching among the nails.

This would hull admirably for a short time; but the nails soon grew dull, and needed to be replaced very often, and hence it was not used long. We used barley that was hulled in it, and found it to be excellent.

Cannot some Yankee invent a machine for this business that will be cheap, efficient, and durable? If so, let him speak. — *Maine Farmer.*

GRAPES.

It seems now to be pretty well settled that large portions of our country are eminently calculated for the culture of the grape. Already, in the vicinity of Cincinnati and St. Louis, large vineyards are established, and large quantities of wine annually manufactured. The great inquiry of interest connected with this enterprise is for native grapes of good qualities. The foreign varieties fail in this country, and growers have as yet but two varieties, the Isabella and Catawba.

Mr. Longworth, of Cincinnati, has repeatedly advertised for cuttings of native grapes. He has received from various sources over three hundred specimens, which he has tried, and has found among them all only four or five that he thinks will prove to be good wine or table grapes. A little attention to our wild grapes may discover some new varieties that would prove to be valuable. We have spoken of this subject as an introduction to our acknowledgments to W. Choate, Esq., of Derry, for some very large, nice, and early grapes. We should doubt whether the variety would ever be of the first value as a table grape, but it seems to us to possess qualities that would render it valuable as a wine grape. The specimens sent us, however, were by no means bad to take. We append the statement of Mr. C. with regard to the grape and the effect a change to a richer soil has had upon it. We would recommend that Mr. Choate should manufacture some wine from it, if he has not already, and test its quality.

"The sample which I send you is from a native vine, which was transplanted from the woods to my garden six years since. It has produced abundantly with cultivation, and has become about thirty days earlier than the original stock, and fifteen days earlier than any other in this place, and very much larger. Some have measured three inches in circumference. Of the quality, you will judge."— *Granite Farmer.*

CELLARS.

Probably one of the chief causes why vegetables of certain kinds, particularly carrots, beets, and turnips, rot so soon after being deposited in the winter bins, is the want of proper care in ventilating the cellars in which they are deposited. The Germans, who are famed for their exemplary domestic economy, are rigidly circumspect in this particular. In all or most of their houses there is a communication maintained between the cellar and the principal chimney, in order to facilitate the escape of the noxious and stagnant gases engendered by the vegetable and other contents. It is a well-known fact that the air in cellars, from its rapid deterioration and impregnation by nauseous miasma, soon becomes highly deleterious to health; and to this fact, doubtless, is attributable, in a great measure, the almost uninterrupted ill health of many families among us, both in town and country. — *Berkshire Culturist.*

New Hampshire Wine. — We had not supposed that there was a drop of grape wine manufactured in the state; but were agreeably disappointed, the other day, by receiving from Mr. Conant, of Milford, a half dozen bottles of delicious wine, manufactured by himself. It is a perfectly pure article, no alcohol having been put into it, in any shape, during its manufacture. Many friends have tasted it with us, and all unite in pronouncing it A No. 1. — *Granite Farmer.*

HINTS ABOUT MANURES.

One of the most important things that should claim the attention of the farmer, is the management of his stables and yard; and yet how much are these neglected! Did farmers but know their interest, they would devote more time to these. Two very valuable portions of manures, and which are great promoters of the growth and fructility of vegetation, are uric acid, and the ammonia which is generated. These, being volatile, speedily evaporate, unless preventive means are adopted. Frequently have I noticed large yards of manure exposed to the scorching sun and drenching rains. Little thought the

owners that the most valuable portion was being evaporated and washed away. One half the quantum in bulk, to which the proper and necessary attention had been paid, would have been more valuable. My mode and management of the yard, &c., being different, and, as I think, entirely superior to any I have observed, I give it for the benefit of your readers. The whole yard containing the manure should be under cover. It should be large enough to contain, besides the manure, lime, charcoal dust, braize, sawdust, or spent tan — the charcoal, if practicable, and road scrapings, loam or dirt dug from fence rows, of each a heap, large or small, in proportion to the quantity of manure likely to be made. The bottom of the yard should be hollowed out, in a partially concave manner, in order to prevent the escape of all liquids; this should be covered with a slight coating of charcoal dust, and then each time you remove the manure from your stables, which should be at least once a week, you should spread it evenly over the yard, cover it with another thin coating of charcoal, one of lime, and finally with dirt. The heap should be occasionally sprinkled with common salt, pickle or fish brine, and well moistened with all the soap-suds, &c., you can save and collect. The lime assists the decomposition, the earth becomes permeated and impregnated with the generated ammonia, and hence becomes manure. The charcoal retains the uric acid, and whatever other volatile portions that would otherwise escape. The salt so acts upon the seeds of weeds, &c., that are in the manures, as to prevent their germinating when hauled out into the field, and the soap-suds, &c., besides aiding the "manure making" process, prevents the heap from "*fire fanging.*" E. S. A. P.

— Dollar Newspaper.

ALL ABOUT APPLES.

Picking Winter Apples. — The usual time of picking winter apples is the last of September, or the fore part of October; many leave them until the middle of October, which improves the flavor, though they do not keep so well. In order to pick them, some take a small basket in the tree, fill it, and then let it down by means of a rope, which will upset the basket. As a better mode, some recommend placing bags or piles of hay under the tree to throw the apples on; the hay to be so formed that the apples will roll off as soon as it strikes; but I would recommend to fruit-gatherers the machine called a "fruit-gatherer," an article by which a man is enabled to pick the fruit while standing on the ground, and also much faster than in any other way. The apple should be pulled so as to retain the small stem only; and to do this it is necessary that the apple should be pulled in a right line with the stem. If the apple is twisted a little, it will come off easy without the leaf.

Preserving Winter Apples. — After picking in the fall, the apples should be kept in some cool shed until the weather becomes so cold as to render their removal to the cellar necessary, in order to keep them from freezing; for it is heat and moisture that hastens their decay. Apples that are to be kept long must be kept cool and dry. A cellar which has ice in one part of it is desirable. We have always found them to keep best by having hanging shelves for their reception.

Another Mode. — To keep Apples for Spring Use. — The following, judging from experience, I believe to be a very efficient mode of keeping apples: They are to be kept in chaff. First put a layer of chaff sprinkled with quicklime over the bottom; then a layer of apples, followed by another stratum of chaff and lime, and so on until the cask is filled. In regard to this method, the editor of the *Genesee Farmer* says, —

"It is well known to all those who have been in the practice of burying apples in heaps, that the fruit comes out in the spring much fresher, and oftener flavored than it does when kept in open bins in the cellar — a part of the flavor, in the latter case, doubtless evaporating. This method has all the advantage of burying, with another which we will explain. When one apple among many in a bin rots, the adjoining ones are contaminated; and not unfrequently a mass of rottenness occurs, surrounded by much sound fruit. Now the use of the lime is to absorb the gases generated by the putrefaction, and prevent such *leaven* from spreading."

It does not require much lime; less than a quart for a barrel is sufficient.

Apples for Stock. — As there are always at this time of the year apples lying under the trees rotting, perhaps a few remarks in regard to feeding them to stock, will not come amiss to some of your readers.

They may be turned to profit by feeding them to hogs, cows, horses, and sheep, as they are admirably adapted to promote the thrift of stock generally. Some have imbibed a very strong prejudice against feeding them to cows; but the idea that cows fed on them will shrink their milk, is altogether absurd; that is, when fed in a judicious manner, with ripe, well-matured apples. I have no doubt that if fed too freely, when the food taken is of a succulent and fermentable nature, it will be likely to produce fever; but overfeeding with potatoes, &c., will be just as likely to prove injurious. As to the quantity which should be given a common-sized cow, I would not recommend more than a peck to half a bushel, according to the appetite of the animal. This amount will answer the purpose of a liberal feeding with hay and grain. LEONADE.

— Dollar Newspaper.

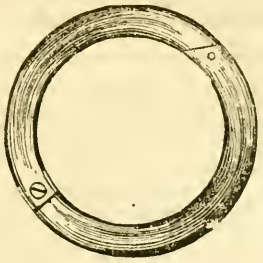
HARVESTING ROOTS.

It is a great error to suppose that roots, such as beets, turnips, carrots, &c., when intended for stock-feeding, should be housed early. It is, on the contrary, much better to let them remain out till the weather becomes quite severe. A heavy frost does not injure the turnip, if it is in the soil. I have known the ground to *freeze* quite hard before their removal, and no injurious consequences resulted from the circumstance. And beside, the growth of the turnip, after the weather becomes cold, is much more rapid than during the milder season. Cabbages, like turnips, are also very essentially benefited by remaining out, even till snow falls. Some, indeed, allow them to remain out all winter; but this is a pernicious practice, for although they are liable to become diseased, and rot, if they are too early removed to the cellar, yet it is always well to have them under cover, in order that they may be "available" when wanted for use. H.

— Germantown Telegraph.

Men who know the same things are not long the best company for each other. But bring to each an intelligent person of another experience, and it is as if you let off water from a lake, by cutting a lower basin. It seems a mechanical advantage, and great benefit it is to each speaker, as he can now paint out his thought to himself. We pass very fast, in our personal moods, from dignity to dependence. And if any appear never to assume the chair, but always to stand and serve, it is because we do not see the company in a sufficiently long period for the whole rotation of parts to come about. — *Emerson.*

CATTLE TIE.



BULL RING.

The cattle tie is a very convenient chain for confining cattle in the stables. The large ring moves up and down the stanchion or post. When not in use, it is hung upon a pin in the stanchion, above the animal's neck. On confining the animal, the chain is dropped astride his neck, and the T end is run through one of the small rings, according to the size of the animal's neck, where it remains fast.

This fastening is cheap, neat, durable, convenient, and secure; it is also the most comfortable way of confining an animal to a post, as the chain easily plays up or down, according to the motion of the animal, in eating, lying down, and rising. The old mode of fastening animals with bows is discarded by those farmers who know the superiority of the tie chain.

The bull ring is made very neatly. It opens on a hinge, and is fastened with a screw, all smooth and even with the ring, as may be seen in the cut. This ring is easily inserted into the nose of the bull, by punching the cartilage between the nostrils. The most savage and refractory bull becomes tame and submissive on having this neat and simple attachment, as the attendant has complete control over him, and he may be led by the nose as readily as the most servile politician.

WORCESTER HORTICULTURAL EXHIBITION.

We had the pleasure of visiting this show last week, and we found that this young association, in some departments, outrivalled some of her older sisters. The show of fruit was extensive and excellent. There were not so many pears as we find at the show in this city, or in Essex county; but this branch was respectable in extent, and in quality equal to any thing to be found in any section. Some pears are fairer in that section than in this, being less exposed to cold storms and sea breezes. The Bartlett pears are much finer in that region; the Seekel is generally inferior, the same as it is here.

The display of apples was large, and very fine in appearance. Among them were many nameless varieties, very fair and beautiful; but their real merits are but little known to the public. We hope that the committee will examine into the qualities of all valuable varieties, and introduce them to the public under an appropriate name, and with a definite description. In a new association, the officers have a great deal of labor on their hands, if they discharge their duty so as to promote the good of the community.

The show of peaches was very fine and large, and among the largest and handsomest were many new seedlings. Worcester possesses one of the finest locations in the world for fruits; her soil is congenial to their production, and these natural advantages are seconded by numerous enterprising and intelligent cultivators. A combination of these favorable circumstances will produce wonders, and cause the hills and dales to blossom with beauty, and smile with plenty.

AN AGENT TO DECOMPOSE OLD TAN.

Messrs. Editors: Observing in your paper an inquiry for an agent to decompose old tan in three months, permit me to submit the following mode: —

Make an admixture of lime and salt in the following manner: Common salt is composed of chlorine and sodium; and if three bushels of shell lime, *hot from the kiln*, be mixed with one bushel of salt, it will combine with the chlorine, and form chloride lime, thus setting free the soda, which combines with the carbonic acid from the atmosphere, and forms carbonate of soda. Both chloride of lime and carbonate of soda are capable of decomposing woody fibre or other organic matter better than lime; and in doing so, unlike lime, they do not drive out the ammonia, and are therefore preferable to lime. Shell lime is much better than stone lime.

The mixture should be turned every other day for ten days, and then mixed with the tan, at the rate of four bushels per cord, and in four months it will be fully decomposed.

This mode, for cheapness, quickness, and thorough decomposition, in my opinion, cannot be excelled. All that is asked for it is a fair trial. I respectfully submit this, hoping that it will be favorably received.

Yours, &c.,
JOHN W. GULICK.

— *Exchange.*

Joy and Grief. — It is notorious to philosophers, that joy and grief can hasten and delay time. Locke is of opinion, that a man in great misery may so far lose his measure as to think a minute an hour; or in joy, an hour a minute.

Domestic Department.

Domestic Training. — Permit us to say to those mothers who interest themselves in the education of their children, Be assiduous early to plant domestic taste in the minds of your daughters. Let your little girl sit by your side with her needle. Do not put her from you when you discharge those employments which are for the comfort of the family. Let her take part in them as far as her feeble hand is capable. Teach her that this will be her province when she becomes a woman. Inspire her with a desire to make all around her comfortable and happy. Instruct her in the rudiments of that science whose results are so beautiful. Teach her that no selfish gratification, but the good of a household, the improvement of even the humblest dependant, is the business of her sex. When she questions you, repay her curiosity with clear and loving explanations. When you walk out to call on your friends, sometimes take her with you; especially if you visit the aged, or go on errands of mercy to the sick and poor, let her be your companion. Allow her to sit by the side of the sufferer, and learn those nursing services which afford relief to him. Associate her with you. Make her your friend. Purify and perfect your own example for her sake. And while you mingle with domestic training, and with the germ of benevolence, a knowledge of the world, of books, to which it will be a sweet privilege to introduce her, should you be able to add not a single fashionable accomplishment, still be continually thankful in shielding her from the contagion of evil example.

Rice Balls. — Pour upon half a pound of rice three pints of boiling milk, and boil it with a little cinnamon, sugar, and lemon peel, until it is quite tender; allow it to remain until it is cold, and then make it into balls. Beat up two eggs, roll the balls in it, and afterwards in grated bread crumbs; fry them in lard, drain them on a piece of paper, and serve them up covered with sifted sugar.

Rice Fritters. — Slice the rind of a lemon, and boil it in milk, with sugar enough to sweeten it, and a cup of rice. When the rice is quite soft, take it out; beat up the rice with a glass of brandy, shape it into fritters, brush them with yolks of eggs, cover them with bread crumbs, fry them in butter, and serve them up with lemon juice squeezed over them.

Youth's Department.

Economy is due our Employers. — "Waste not, want not," is a good old proverb. "He that is faithful in little, is faithful also in much." A person who takes no care of the materials committed to his hands by his employer, will never duly husband his own property. Economy and wastefulness are habits that will influence us in all things, both when we are engaged about our own substance, or that of another. To waste another's goods is the same as to rob him. The loss in both cases is equal, and the principles whence they spring very much alike. The man who takes care of his employer's goods is sure to look after his own, and thus is on the road to prosperity. It would be difficult to calculate the immense loss of property that every year occurs from carelessness and want of economy. Some persons are worth nearly half their wages more than others, because they never injure or waste any thing. The employer being wealthy, or the stock abundant, is no excuse for carelessness. A loss is a loss, and a robbery is a robbery, whether taken from the heap of the miser, or the smaller store of the indigent. "Gather up the fragments, that nothing may be lost," is a divine command. Heaven allows nothing to be destroyed. There has not been a single drop of water wasted from the creation until now. The decomposed elements of last autumn are the aliment of our present spring. Economy, rigid economy, is one of the laws of nature; and we shall not realize "the good time coming" until we have a careful and economical world. Let this spirit prevail, and not only will the master be saved from loss, but, in many instances, the servant will rescue himself from the union.

Health Department.

Deafness. — James Yearsley, an English surgeon, has discovered, according to the Medical Examiner, a curious and efficient mode of relief for deafness resulting from scarlet fever, &c., in cases where the drum of the ear has been broken. It is simply to moisten a small pellet of raw cotton, and gently push it down the passage of the ear till it reaches the drum at the bottom; adjusting it till it produces the best hearing. This adjusting is necessary, else it may make the deafness at first only greater. Moisture is indispensable. The cotton should be changed every morning. Many other cases are cited in proof.

Cure for Hydrophobia. — At Udina, in Friule, a poor man, lying under the frightful torture of hydrophobia, was cured with some draughts of pure vinegar, given him by mistake, instead of another potion. A physician of Padua got intelligence of this event at Udina, and tried the same remedy upon a patient at the hospital, administering to him a pound of vinegar in the morning, another at noon, and the third at sunset, and the man was speedily and perfectly cured.

Mechanics' Department, Arts, &c.

Healthful Buildings. — The following remarks are from an article by T. S. Bell, M. D., contained in the July number of the Western Medical and Surgical Journal. It is founded on an address by A. H. Stevens, M. D. After remarks upon the immense amount of sickness and death caused by a culpable neglect of the plain laws of health, enforced by a startling array of facts concerning the prevalence of disease in particular dwellings and localities, to which the "plague district" in Louisville adds a fearful chapter, Dr. Bell proceeds with the following suggestions: —

We cannot quit the important subject without calling attention to the important facts contained in the appendix of Dr. Stevens's address. These facts are connected with the sanitary construction of country dwellings, ventilation, drainage, &c., and bear on subjects on which medical men are often questioned,

and on which they should be prepared to give correct information. We present a synopsis of the valuable views given in this appendix; they are in accordance with the time-honored observations of the fathers of medicine and their successors, and many of these facts were well known to the classical writers of Greece and Rome.

1. The site of a country dwelling should be chosen in reference to its height above the adjacent grounds, its exposure, its drainage, and the quality of its water. Springy grounds should be avoided. If there is a marsh, or any other source of malaria, the house should be to the westward of it, because westerly winds are most prevalent. In all countries the winds are purifiers of the air. If there is a belt of wood between the house and the swamp, it should be left as a protection against malaria. If there is none, a screen of pine or other dense growing trees should be planted; such trees as will attain a height of at least twenty feet. (In the absence of evergreens, we consider the *pawlonia imperialis* the best tree for this purpose. It will grow from twelve to fifteen feet in a season, if it has a good soil; its limbs are compact, the leaves very large, and it is one of the most beautiful of all flowering trees. — *Ed. Jour.*) If there is any reason why water should gather around the foundation of the house, a drain should be cut so as to prevent it. Dry foundations prove the dryness of the contiguous grounds. A well near a house affords a good drainage; the deeper it is the better. Trees should not be left too near the house, nor should rank herbage be permitted to grow and decay in the immediate vicinity.

2. When there are no sufficient reasons for another preference, a south-easterly aspect is the most healthy for a residence. Trees on high land on the north-west are a protection in the winter. Whatever the aspect of the house, the south side should have its full share of windows. Southerly windows are the most pleasant in winter, and are unobjectionable at all other seasons.

3. The cellar should be dry, clean, well ventilated, and well lighted. No wood nor decaying vegetable matter should be placed about the cellar. It should communicate with the air above the house by a flue in the chimney stack. In default of this, it should be ventilated by lateral apertures. If any part of the cellar is floored, the air should be drawn from beneath the floor into a chimney flue. Chimney flues should be round, for bituminous coal. Tredgold says, the diameter of the flues in inches should be equal to the square root of the height in feet; thus, fifty feet high would require ($7 \times 7 = 49$) seven inches.

4. Every bed-room, especially if small and without a chimney flue, should have a ventilating aperture not less than four inches square, communicating with the attic above, and led through the roof by a proper conductor, except in cases where the door of another room can be left open; in this case the ventilation is sufficient. No bed-room should be on the ground floor. But rooms on the second floor are healthful, those in the attic still more so. (Universal observation proves the truth of these views. — *Ed. Jour.*)

5. Piazzas, used as sitting places in summer and autumnal evenings, except those on the southerly or westerly sides of houses built of stone or brick, are unhealthful. Stone or brick walls retain the heat of the afternoon sun until a late hour at night. A veranda with windows is not liable to the same objection. It is essential that a house shall be well lighted by the sun.

6. The windows and chimney of a room represent a siphon, with one branch perpendicular, and the other horizontal. The air should enter the doors and windows, and rise in the flue. Dr. Arnott, of England, has invented a self-acting valve, which prevents a back current.

7. A fire in damp weather during the autumnal evenings, and even in the cool evenings of summer, is exceedingly healthful. If there is absolute necessity for a lower bed-room, a fire in the early part of the evening should always be made during the sickly season. It ventilates the room, brings in fresh air, and dries the air thus introduced. *Dry air is not a vehicle for malarious emanations.*

8. A sitting-room should be well lighted by the sun's rays.

9. A tallow candle deteriorates the air rapidly, and when not snuffed, the deterioration is still greater. Gas is less vitiating. The burning of a tallow candle raises, in one hour, the temperature of twenty-seven meters of air from the freezing to the boiling point of water. A carcel lamp, in one hour, raises from the freezing to the boiling point fifty cubic meters of air. These facts will enable any one to judge of these sources of heat and vitiation in crowded and well-lighted apartments.

10. Collections of persons in a room vitiate the air by emanations from the bodies, and from respiration. Ten cubic feet per minute is the amount necessary for the healthful respiration of one person. This should be doubled in bed-rooms, and fourfold for sick-rooms. Irregular draughts of air may be prevented by making the air enter the room through wire, cotton, or silk gauze.

11. Upper apartments are safest against malarious diseases, but most dangerous for diseases arising from emanations from the bodies of the sick.

12. The dangers of low, undrained lands, and of fogs from such localities, are well known. Drainage removes these dangers. It has been found that drainage in England has elevated the temperature on some occasions six degrees, and evening chills are no longer experienced in well-drained localities. In New York, the temperature is said to have been raised fifteen degrees by drainage. Thus comparative immunity is afforded, not against marsh fevers only, but cholera, rheumatism, and acute inflammatory diseases. "In the statistical account of Scotland are found, among many others, the following notices of the great advantages derived from draining: In Fourdown, 'so much drainage that now no sickness; formerly, agues common, now quite unknown;' in Carmylie, 'health improved from drainage; Kennon agues very prevalent sixty years ago, now never met with;' and a long chapter is filled with similar statements from all the rural districts of England and Scotland. But why look abroad? In Onondaga valley, New York, health is much improved by its drainage, and the experience of every one will supply facts in illustration.

"It is not sufficient to dry only the surface of the ground by drainage, in order to prevent effectually the formation of miasmata; it is essential that the drainage should be deep and thorough, for the poison may emanate from moist decaying vegetable matter below."

13. The modern art of engineering employs new and cheaper means than were formerly used for draining. I allude to the substitution of small pipes for large drains, from the discovery of the fact that they are less liable to become obstructed, provided they have a descent of not less than one per cent. of their length.

"Now, it is proved that whilst house drains of such sizes and construction as have been enforced by the commissioners of sewers, accumulate deposit, drains of a much smaller size keep perfectly clear. Thus, whilst a twelve inch drain, which is required by the Kent and Surrey, and the tower hamlets and the city commissioners, accumulates deposits, and generates noxious gases, a tubular earthen-ware

drain, of nine times less capacity, or of four inches in diameter, or proportional to the house, of from three to six inches, keeps perfectly clear. Even three inch drains convey away the refuse from middle-sized houses, and keep perfectly clear, whilst the larger permeable brick drains, which are usually charged three times the price, are choked up."

"Mr. Roe, the surveyor of the Holborn and Finsbury district of sewers, who led the way in systematic improvements in the form and construction of main lines of sewers in the metropolis, recently, at our suggestion, made experiments on the rate of flow of water through the common brick drains for houses, as compared with the rate of discharge through earthen-ware drains of the same capacity, and with the same run of water. The general results which he gives are, that, through the earthen-ware tubes, the rates of discharge are increased to an important extent: in the smaller and more frequent forms to the extent of more than a third. In other words, an economy of one third the quantity, to obtain the same result, is effected by them, and the general efficiency of the drainage in ordinary runs proportionately augmented, as will appear, at a greatly reduced price.

"The following are examples: —

"*Table of Comparative Run of Water through Brick Drains and Glazed Pipes.*

Inclination.	Depth of water.	Time through glazed pipes.	Time through brick drains.
Level	5 inch.	38	50
2 inch. in 50 ft.	4½ "	16½	25
1¾ " "	5½ "	19	27
2¼ " "	3 "	18	26
1½ " "	3½ "	25	36
3¼ " "	4 "	15	22
2¾ " "	6 "	13½	21½

—*First Rep. Met. San. Com'rs.*"

Mr. Caldwick, of London, has received, from Switzerland, a pipe which has served for drainage five hundred years without injury or obstruction, under the pressure of a great head of water.

These are facts of great value, and should be well and strongly impressed upon the public mind. We have been intending to prepare a set of rules on these subjects; but Dr. Stevens's suit our views so well, that we prefer using his. There is but one defect in them, and that is the absence of all reference to filth and uncleanness. Families that have dirtier habits than a free hog (and there are many such) may attend to all the thirteen rules given above, and still be sickly. If there is any one vice for which society should extend no pardoning gifts, it is the wickedness of uncleanness. Those guilty of it should have no vernal bloom nor autumnal fruits to bless their cheerless filth. — *Family Visitor.*

OVER-CROPPING.

This is the leading vice of agriculture in this portion of the Southern States. The small and neat farm — that is, the farm small enough in all its arrangements for the management of the force which cultivates it — is the "angel's visit" of Southern husbandry. One meets with but few such farms, and meets with them far apart. Instead of farms where every thing appears in complete order and arrangement, one often meets with those widely-spread tumble-downs, where disorder and derangement are tumbled together in every variety of condition; and this arises principally from over-cropping. The maxim of agriculture, that the productions of the earth must ever be in proportion to the tillage, seems generally to be neglected, or not known in this part of the state; for, to frame a maxim from the system mostly pursued, the productions of the earth are in proportion to the quantity of surface to which the appearance of tillage can be given. In every department of agriculture, our whole section of state is in a condition of comparative infancy. Can it be said that the production of any article is carried up to the capability of the soil and climate? The farmer who throws into the shape of cultivation a wide surface, which he merely ploughs and hoes, while his mind is as free as vacancy from any thought about the nature of the soil, which he takes as nature gives it, and of the different circumstances of climate that may weary his labors and shorten his crops through the existence of some radical deficiency in the soil, or in the system of culture, may say he raises what he consumes, and sometimes what he sells; but he owes to God more thanks for a good season than he owes to himself for the exercise of skill and judgment. To obtain as much as possible from the number of acres one man can cultivate, and to cultivate no more than may be made to yield the most profitable quantity it is capable of yielding, should be strictly regarded by every farmer as the worthiest object of his study and his labor; for the best course of preparation, the best adaptation of soil which the manœuvres of cultivation can oppose to the vicissitudes of climate, and the perfect quantity and best quality of that quantity per acre, must remain unknown and unenjoyed until we become content to cultivate less space, and to exert in the premises more practical science and experimental knowledge. A heavy crop from a high state of fertility and cultivation, is always the only advantageous one. It shows the skill and industry, properly applied, of the farmer who produces. It shows the practicable extent of agricultural development. In short, it is an example creditable and profitable to him who exhibits it — worthy of imitation and rivalry, and highly beneficial to the agriculture of the state. No farmer complains of this kind of a heavy crop; it is a real benefit, and a source of much pleasure. But a crop which is a heavy crop because it occupies a greater number of acres than the cultivator can manage, under a system of culture thoroughly adapted, is commonly no better than the wilful cultivator of such deserves to have. — *Mobile Herald and Tribune.*

ACCLIMATIZING EXOTIC PLANTS.

Let no one imagine he will successfully acclimatize an exotic plant without paying strict regard to the circumstances of the plant in its native habitat; such, in part, as situation, aspect, elevation of site, temperature, humidity, time of flowering, seasonal changes, &c.

These circumstances must be all more or less studied by whomsoever would successfully acclimatize exotic plants. A plant may be a native of a country warmer than our own in some degree, yet if its native situation be a moist height, or shady mountain side, we should undoubtedly do wrong in placing it in a dry, hot, sheltered situation in this country.

On the other hand, a plant may be a native of a colder country than our own, yet if its native situation be a sunny, sheltered, and dry one, and its season of flowering late, it would surely be wrong and profitless cultivation, in this country, to place it in a dull, damp situation; which, were we to look to the only one circumstance of its coming from a colder country, we would naturally do. Again, a plant may be, or may seem to be, from such a cool or native habitat, as to feel our summer sun too strong and

scorching for it, and accordingly require shading from its too powerful beams; while we must not, on the strength of that circumstance, conclude that the plant will stand our winter's rigor without protection. We must first learn whether it be a native of the northern or southern hemisphere; if of the latter, that will account for its inability to withstand our summer's sun at a season when, though it be summer with us, it would be winter with the plant in its native habitat; and, its nature not being changed with its situation, it is only harassed by our summer's sun, at a season when it should have and strive to enjoy its winter's rest; therefore it cannot withstand our winter's rigor at the season appropriated to it by nature for its summer of excitement. Were it not for this circumstance, there is no doubt that the half-hardy *Sollya Heterophylla*, *Billarderia Longiflora*, &c., would be among our hardiest wall plants.

These are circumstances the acclimatizer must well attend to, ere he plant out a single exotic; and next, and of equal importance, the soil in which the exotic is placed, be its richness or its poorness what it may, must be of an open, free, unretentive texture, and well drained. Such exotics, in general, as are natives of boggy or marshy places, can only be kept well over winter in felt-covered pits or frames, or at the bottom of ponds fed by springs. The plant must be started into a fine and rapid growth in spring and early summer, so as to have its growth completed and properly ripened before winter, when a covering of as dry and impervious a nature as possible must be laid over its roots, and around its base, or *life knot*, so as to exclude alike the frosts and the moisture of our changeable winters. If the bole or branches of such plants receive any protection, it ought to be of a nature more to exclude moisture than air, which is often useful in the severest winters. By observing these simple and easy rules, I have never found much difficulty in having stout and abundant flowering specimens of such, generally considered greenhouse, as *Wistaria Sinensis*, *Maurandya*, *Barclayana*, *Jasmines* of all kinds, &c. On various aspected walls, in many and cold parts of Scotland, they do well for years; where others of a much more hardy nature, but differently treated, died during the winter, these plants survived. — *Annals of Horticulture.*

PEAT AS MANURE.

In the report of the New York County (New Brunswick) Agricultural Society, we find some useful observations on the value of peat as manure, by Prof. Robb, of Fredericton, a gentleman of high standing as a geologist and chemist. He gives three modes by which this substance may be advantageously used for the improvement of soil, as follows: —

1. It may be carted to the barn-yard and spread all around, so as to absorb all the liquid manure, which it will do like a sponge; not only will it soak up and fix liquid and gaseous matters, which would otherwise be lost, but it will thereby take on a state of fermentation itself, which will result in its becoming soluble and proper for the food of crops. When one layer is soaked and fermented more or less, it must be renewed or replaced by fresh stuff from the bog, which will thus become a permanent benefit to the farm.

2. The peaty substance may be advantageously composted and brought to a soluble form thereby. If three loads of half-dried peat earth be mixed with one of stable manure, (green,) there will be formed four loads of manure equal to cow dung itself, for the ordinary root and grain crops. A layer of dry peat should form the base of the compost heap, then a layer of green manure, then alternate layers of peat and manure, ending with a *thick* layer of peat. If ashes be added, or if the heap be occasionally watered with urine, decomposition will be more rapid, and the compost be more fertilizing. In six weeks, more or less, according to the season, the heap may be shovelled over, and then carried on to the field, where its effects are equal, if not superior, to the same quantity of common dung. It may be applied to any soil deficient in vegetable matter, and in any way, exactly as if it were well rotted yard manure. By ashes alone, the peaty earth may be likewise converted into the food of plants; but I believe it is best to use them as above directed.

3. The peat may be burnt in the fields, for its ashes, which are applied with very good effect as a top-dressing to meadows, at the rate of forty or fifty bushels to the acre. — *Albany Cultivator.*

THE RESULT OF SKILL AND INDUSTRY.

I have traversed the great Erie Canal, from one end to the other; floated on the waters of the Ohio Canal, and returned to the sea-shore by the Pittsburg and Pennsylvania canals and railroads. What a magnificent excursion! What mighty triumphs of art and labor are here! What a moving of the affections! What an expanding of the imagination! How many beautiful and splendid visions have floated before the mind, which were surpassed by the great realities! Here were deep basins excavated, and noble and long-stretching embankments, which rivalled the neighboring hills. Here were rivers, hundreds of miles in length, flowing at man's pleasure, and in channels formed by his hands. Here were streams crossing streams, on beautifully arched aqueducts. Here were mountains of granite pierced through and through, and a passage opened through the heart of adamantine barriers, for vehicles freighted with human life. Here were deep inland oceans, mingling their waters with the mighty sea that sweeps from pole to pole, bearing upon their quiet tides ten thousand floating and deeply-laden arks, myriads of human beings, active in the pursuit of business or pleasure; accumulations of wealth from the deep and tangled recesses of the forest, now first springing into life under the touch of civilization, from the glittering fields of polar ice, and from the shores of the Western Ocean; accumulations whose growing extent defies all calculation. All this, too, is the work of a little animal of the ordinary height of sixty inches, with only two feet and two hands, and of an average duration of less than twenty years — his mighty implements, a hoe, a pickaxe, and a spade! Such are the results of intelligent, concentrated, persevering labor. — *Henry Colman.*

CROPS IN SOMERSET COUNTY.

We make the following extract from a private letter, dated at Cornville. We are glad to hear that the crops are coming on so finely, and take this opportunity of once more recommending to our brother farmers the cultivation of winter wheat. We are receiving every day the most favorable accounts of this crop, from every part of the state, and there is every reason to believe that, should the seasons prove favorable, it will soon be the most profitable crop that a farmer can raise. After a few words concerning other matters, our correspondent says, —

"Some subjects touched upon in your paper, especially 'winter wheat,' hit our case, at present, to a

nicety. We sowed a bushel last year; a part of it on old corn ground, and the rest on burnt land. The burnt land yielded the most, but it was smutty. One of our neighbors raised this year the greatest crop ever known in this town. He sowed only two bushels on as many acres of land, and from what he has threshed, he judges he shall obtain from seventy-five to eighty bushels. It was the 'Banner wheat.' I just write this to let you know that we can raise wheat in Somerset, as well as they can in Kennebec or Aroostook. Somerset is '*right side up*' in *these* matters, if in no others; all we have got to do is to sow the seed, and we are up with you; and this is just what farmers are doing now. Every one has sown a little, and some have sown from four to six bushels apiece"

The above speaks well for the crops of next season, and we think that if the seed be well sown, there need be no doubt of a good yield the coming year.— *Maine Farmer.*

LIVE POSTS—WIRE FENCES, &c.

Under the caption of "Wire Fences," in the June number of the Agriculturist, I see a statement that a wire fence has been built for $200 per mile, sufficient to turn cattle, horses, &c. Cheap as this may appear, I think I can offer a plan of constructing a fence sufficient to turn cattle, at a far less cost, say $10 or $12 per mile, which, if it prove practicable, would be some saving.

The plan I propose is, to procure about eight quarts of long-leaved pine seed, and sow them on a breadth of land where the fence is wanted, not exceeding two feet in width. There is no danger of getting them too thick; the thicker the better; say as thick as you would sow buckwheat, I should think might answer. They will require the cattle and other stock to be kept from them for about four years, but will need neither cultivation nor attention of any kind, except to destroy the worms, which will be likely to attack some of them, in the month of June, in the second, third, and fourth years, after which, they will be out of danger of worms and stock; and, by the sixth or seventh years, cattle could not force their way through them, and if they come thick enough, there will be but little danger to be apprehended from animals of the smaller kind.

I have a pine thicket now growing, not sown, however, with design of fence, in many places of which a sucking pig of a few weeks old could not pass between them, and I infer, if the pines will grow so close without arrangement, they would do the same with. The above is a theory based upon observation. You can take it for what it is worth; but I intend to put it into practice the coming winter, to some extent. Should it prove practicable to make a fence of this description, large farms could be enclosed with it without much loss, especially when land is cheap, and a great deal of waste land, or commons, might be enclosed.

In regard to live posts for wire fence, it occurs to me that pines would be better adapted than any other kind of wood, as they would grow large enough in a few years; and I think the turpentine would prevent corrosion of the wire. Should this prove correct, I think there could be nothing more suitable; for they are rather more a fertilizer than exhauster of poor land, at least, and I think they would add to the beauty of the farm. Fancy to yourself a farm handsomely laid off with rows of evergreens at intervals of forty or fifty feet in a row. Do you not think it would be an improvement on the zigzag fence of the present day? As for the ground occupied, wheat, I think, would grow up to the very roots of the tree. I have just harvested wheat five feet high, within the distance of a common cart track from a row of pines, in places thick enough for fence themselves. Corn is growing on the opposite side, and looks quite healthy within a few feet of the trees. This row is about one eighth of a mile in length, sowed with the design of seeding an old field, which the introduction of guano has saved the trouble. I now intend to thin it out on the plan above proposed, and insert wires with a handsaw, and hope to make a formidable fence.

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— *American Agriculturist.*

Remarks. — At an agricultural meeting, a few years since, at the State House, Mr. Sheldon, of Wilmington, recommended the preceding plan of pine hedges for fences, and stated facts in regard to the rapid growth of pines under his own observation that favored this plan for fences. One advantage is the growth of pines for timber or fuel, if wanted for these purposes, after the trees become large. — Ed.

RECOGNITION OF VOICE BETWEEN THE EWE AND THE LAMB.

The acuteness of the sheep's ear surpasses all things in nature that I know of. A ewe will distinguish her own lamb's bleat among a thousand, all braying at the same time. Besides, the distinguishment of voice is perfectly reciprocal between the ewe and the lamb, who, amid the deafening sound, run to meet one another. There are few things that have ever amused me more than a sheep-shearing; and then the sport continues the whole day. We put the flock into a fold, set out all the lambs to the hill, and then set out the ewes to them as they are shorn. The moment that a lamb hears its dam's voice, it rushes from the crowd to meet her; but, instead of finding the rough, well-clad, comfortable mamma, which it left an hour or a few hours ago, it meets a poor, naked, shrivelling — a most deplorable-looking creature. It wheels about, and uttering a loud, tremulous bleat of perfect despair, flies from the frightful vision. The mother's voice arrests its flight — it returns — flies, and returns again, generally for ten or a dozen times before the reconcilement is fairly made up. — *Lay Sermons, by the Ettrick Shepherd.*

RUTA BAGA TURNIPS.

Mr. Editor: I wish to offer a few remarks relative to the most profitable method of feeding the ruta baga to stock. It has generally been the custom with farmers, and I presume still is so, to *cut* the roots, and feed them to the various animals raw. A machine, however, has recently been invented, by which these roots are reduced to a finer and much more eligible condition for feeding, and in less time than it requires to cut them. The machine by which this is effected is called a "rasping machine," and is so constructed that roots of all sizes are at once reduced to a soft, pultaceous mass, very nearly resembling pumpkin when prepared by the "gude vrow" for pies. In this condition it requires no mastication by the animals of consequence, and may be mixed with facility with chopped or "chaffed" straw, cornstalks, or coarse hay, all of which are eagerly partaken of when mixed with it, by almost every kind of animal except the hog, on the farm. Horses will "rasp" their own food; all that is necessary being to place the large roots in their mangers, with no further previous preparation than merely to see that they are carefully cleansed and freed from dirt. If one has

much rough fodder to dispose of, he cannot, provided he has root crops of any kind, do better than to purchase one of these machines. It will pay for itself in one year, beside adding greatly to his own convenience and the comfort of his stock.

A LOWER-MERION FARMER.

— *Germantown Telegraph.*

POTATO ROT AGAIN.

We have accounts from all parts of New England, from some parts of New York, and from several of the British provinces, stating that the potato rot prevails in the greatest degree of virulence that has ever been known. Probably in no country has it ever been so severe at any period.

It is said that in the neighborhood of Portsmouth, N. H., where potatoes were sold last year to the amount of $100,000, there will not be enough for home consumption. We are informed that in Northampton, in that state, where the sales of potatoes amounted to $14,000 last year, it is estimated that there will not be half enough for home use.

It is stated that in one section a ten-acre lot of potatoes was offered for $10. In another case a three-acre lot was offered for seventy-five cents. A farmer, who had a lot of several acres, offered a dollar to any one who would find a sound potato in the lot. A man took his hoe, and searched for a while, and gave up the pursuit.

In short, we should judge, from what we have seen and heard, that in many sections, and probably in New England generally, there are not now so many sound potatoes as were planted. Many farmers say that they have not so many as they planted. In some cases, potatoes that were planted early, attained a good growth, and were dug before the rot commenced, have kept well; in other cases of the kind, they have nearly all decayed.

This disease is a very serious calamity to the country, for the potato is by far the most valuable of vegetables, and perhaps of more importance as an article of necessity or luxury, or as a staple in commercial transactions, than all other vegetables. Those farmers who have gone extensively into the culture of this root, depending on its sales to pay their expenses for labor, will be much affected by their heavy losses.

ACKNOWLEDGMENTS.

From Dr. Holmes, editor of the Maine Farmer, *Thompson's Favorite* apple. It is large and beautiful, resembling the Gravenstein in appearance, but in the same climate it would ripen a month earlier. It appears to be of excellent quality, but it was rather too ripe for us to form a correct opinion. Dr. H. thinks that it is equal, if not superior, to the Williams apple, and it ripens about the same time. Raised from seed by a Mr. Thompson, of Mercer, Me.

Of Samuel Walker, Roxbury, president of the Mass. Horticultural Society, a variety of specimens of fine pears. Mr. Walker cultivates a very extensive assortment of this fruit, and is testing almost every variety, foreign and domestic.

Of Andrew Lackey, Marblehead, a great variety of plums, specimens of pears, &c. Among the plums is the beautiful Jefferson. The St. Catharine is a small plum, but a great bearer, and excellent fruit.

Of John Washburn, some fine specimens of early quince, of the apple form, probably his excellent seedling from the apple quince.

From J. S. Sayward, editor of the Courier, Bangor, Me., M'Laughlin plum, in prime condition. We are pleased that this variety more than sustains the high reputation that has been given to it. We tried this fruit, with some friends who are among the best judges, and we all considered it fully equal to the Green Gage, which, as to quality, seems, in the opinion of many, to be unrivalled. It is much larger than the Green Gage, and a better grower; and as we had this fruit from a region so much further north, fully ripe, before the Green Gage was gone here, we think that it will ripen enough earlier than the Green Gage, to form a succession with it. Mr. Sayward says that it ripens about the time of the Imperial Ottoman, which is an early plum, specimens of which we have also had of our friend. They are beautiful, of excellent flavor, and well adapted to a northern climate. Also, Penobscot plums, which are of good size, and fine appearance; but the quality is only medial, like a large number now in cultivation.

From John M'Wales, Milford, fruit and scions of Wales's Velvetine peach, a new seedling raised by him, of the highest character. Although this fruit was picked before quite ripe, in order to send with the scions, yet it ripened well, and was among the very finest that we have tasted this season. One specimen was kept six days, and yet was excellent. The size of those we received was medial, but Mr. W. says that they are generally large; the form roundish, with a deep suture on one side; the ground color a golden yellow, mostly covered with a deep, rich red, of a beautiful velvety appearance; the flesh a deep yellow, with a tinge of red next the stone, very tender, juicy, sirupy, and luscious. The stone is small, but as the specimens we had were picked before fully ripe, we could not determine whether it was a freestone. It usually ripens about the 20th of September.

From Col. E. Hale, Rock Bottom, Hale's Melocoton peach — the same that is described in the American Fruit-Book. This peach is uniformly good, very rich, and among the finest raised in the country. It produces the same from the seed. We have many young trees in our nursery, all perfectly uniform.

From D. Merrill, 2d, Methuen, large, fine-looking grapes, raised without culture; but the flavor is too much of the wild or foxy taste to be valuable, as better kinds are getting into use.

From O. V. Hills, Leominster, apples without a name. They are large and fair, and an excellent cooking apple; but as they come in early in September, when fine peaches, pears, and plums are plenty, they are not fine enough for a dessert fruit. We do not know the name.

From John Copp, Wakefield, N. H., a variety of fruit — not all correctly named. The sweet apple, as supposed, is the Sweet Bough; very large, fine specimens. This is the best very early sweet apple cultivated. It succeeds well in different climates and locations. The specimen marked Jewett's Red, is the Gravenstein, and one of the finest and most beautiful apples cultivated. It is of a large size. Williams apple is correctly named, but very small. It needs a strong, rich soil, and high culture, to give it large size and fairness. It is hard to raise, but when perfect, very handsome and salable. One cultivator in this vicinity has put a cart-load of manure around a tree yearly, and he has sometimes sold the fruit for five or six dollars a barrel. One year he sold the fruit from one tree for forty dollars. It is not worth raising under common culture. The plums are the Washington, as marked, a pretty good, luscious plum, but not of the highest character, and it is rather apt to rot, and only a moderate bearer. The pears marked Beurre d'Aremberg are not correct, as it is a winter pear, and these were over ripe, so that they could not be recognized. The other pears were decaying.

From friend J. Oliver, Lynn, Mexico apple, which is of a good size, very handsome, and of excellent flavor, but we are sorry to say that on large trees, and in the nursery, it is a very poor grower. It originated in Canterbury, Ct. It is good for the private garden, but will not be profitable for market.

From J. L. Lovering, Hartford, Vt., specimens of two varieties of pears. One is very large, fair, and handsome, and we very much regretted that so noble-looking, hardy fruit should be of inferior quality. It may sell pretty well in the market, as this is the case with the old Bell or Windsor pear, which is of poor quality. But the purchaser ought to have good fruit, and the cultivator will eventually find it the most profitable. The time is coming, and it has already arrived in regard to some kinds, when fruit will be so plenty, none but the good will sell. Also Udall's Seedling pear. This fruit is remarkably fair, and of a very hardy appearance. It is but little inferior to the Bartlett, and some persons have preferred it to that popular variety. As it was ripe in Vermont early in September, it would ripen here in August, and precede the Bartlett. We think that for general culture, particularly in the north, it will prove a valuable variety, more especially as many kinds that flourish here, fail in colder regions. Both of these pears were raised from seed, by Col. Lionel Udall, of Pomfret, Vt.

From John Cummings, Woburn, several very large, handsome, and excellent varieties of peaches, among them George the Fourth, a very popular variety.

From Leonard Cheney, Southbridge, scions of a new and unusually early peach. Friend Earle, of the Worcester Spy, speaks very highly of this variety, both as to its quality, and extra earliness. Also the Cheney peach. This fruit has attracted particular attention at Worcester horticultural show, and the committee have commended it very highly. We find it one of the finest fruits both in appearance and quality. It is large, (a dozen sent to Mr. Earle last year averaged over ten inches in circumference,) roundish; whitish-yellow, with a beautiful red cheek in the sun; flesh greenish-white, extremely tender and melting, juicy, rich, and delicious. The quality is first-rate. The stone is small and free. It is remarkable that the original tree, now standing where it came up, on cold, wet land, within fifteen feet of a cold brook, has produced over two bushels of excellent fruit this season. It usually ripens about the middle of September.

We have several other lots of fruits, which we have not room to notice in this number.

POULTRY EXHIBITION.

We would call the attention of our readers to the advertisement of the poultry show, on our cover. The splendid hall selected for this purpose affords peculiar advantages, more especially if the weather should be unfavorable. We like that feature in the exhibition, by which a part of the proceeds of the show shall be distributed in premiums and gratuities, giving due encouragement to exhibiters.

THE OLD FARMER'S ELEGY.

On a green mossy knoll, by the banks of the brook
That so long and so often had watered his flock,
The old farmer rests in his long and last sleep,
While the waters a low, lisping lullaby keep:
He has ploughed his last furrow, has reaped his last grain;
No morn shall awake him to labor again.

The bluebird sings sweet on the gay maple bough;
Its warbling oft cheered him while holding the plough;
And the robins above him hop light on the mould,
For he fed them with crumbs when the season was cold.

Yon tree that with fragrance is filling the air,
So rich with its blossoms, so thrifty and fair,
By his own hand was planted; and well did he say,
It would live when its planter had mouldered away.

There's the well that he dug, with its water so cold,
With its wet dripping bucket, so mossy and old;
No more from its depths by the patriarch drawn,
For the "pitcher is broken" — the old man is gone!

And the seat where he sat by his own cottage door,
In the still summer eves, when his labors were o'er,
With his eye on the moon, and his pipe in his hand,
And dispensing his truths like a sage of the land.

'Twas a gloom-giving day when the old farmer died;
The stout-hearted mourned, the affectionate cried,
And the prayers of the just for his rest did ascend,
For they all lost a brother, a man, and a friend.

For upright and honest the old farmer was;
His God he revered, he respected the laws;
Though fameless he lived, he has gone where his worth
Will outshine, like pure gold, all the dross of this earth.

— *Knickerbocker.*

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own. — JOHNSON.

VOL. II. SATURDAY, OCTOBER 12, 1850. NO. 21

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

NORFOLK CATTLE-SHOW.

THIS festival took place at Dedham, on Wednesday, the 25th ult. The day was fine, and an immense number attended. The first performance was the ploughing match. There was a large number of teams on the field, and the work was generally done remarkably well. In some places the land was uneven, and the furrow-slice was turned up hill; yet the work was well done. After ploughing, as usual, a specimen of subsoil ploughing was given, which showed how readily the soil can be loosened to a great depth; and every intelligent cultivator can judge of the great utility of this process, as the soil to a good depth is rendered permeable to the roots of plants, and a circulation of moisture is kept up in time of drought.

The drawing match was well performed. The display of fruits, flowers, vegetables, articles of domestic manufacture, and mechanical productions, was under one half of the spacious tent of Mr. Wright, which is two hundred and fifty feet by one hundred and fifty. Notwithstanding there was much room for this department, the place was crowded, and it was difficult to see some articles. The show of fruits was extensive and fine, comparing favorably with the very best and largest exhibitions of the season. There were some very fine and rich articles of domestic manufacture, evincing good taste, excellent skill, and patient industry. The bread was among the most conspicuous articles in this department, the result of liberal premiums for the best. This feature was highly commendable, for what is of more importance than the staff of life?

The show of cattle was large, and generally very good. There were many handsome animals — some excellent models for labor, others for milk; and a few made a very conspicuous figure as fine, fat animals. The exhibition of swine was very good, and some of the specimens were excellent. The show of fowls was far larger than we had ever seen before at a cattle-show. There were about one hundred and twenty coops, of almost every breed known in the country, and many new varieties and crosses.

At the meeting-house, the president of the society, Hon. Marshall P. Wilder, made a few appropriate remarks on the formation and progress of the society. Hon. C. F. Adams delivered an interesting address on the peculiar condition of agriculture in that county. He exhibited statistics showing that the increase of agricultural products did not keep pace with the increase of population. He remarked that only about one fifteenth of the county was under cultivation, and he urged more attention to the subject of agriculture, particularly to the keeping of milch cows. The address was able and instructive, and was listened to with pleasure by a large audience.

A hymn composed for the occasion, by Mrs. Sigourney, was sung; also an original ode, by Mr. Keys, secretary of the society.

At the dinner table, under one half of the capacious tent, about twelve hundred persons were seated. Hon. Mr. Wilder presided, in his usual pleasant and courteous manner. He made some interesting remarks, and occasionally gave sentiments to call up distinguished gentlemen to address the assembly, or respond in a sentiment. Mr. James, the novelist, made a brief and interesting speech; and Dr. Putnam's able remarks were well spiced with wit and humor, and were received with great applause.

The officers of this society form an intelligent and effective corps, and every thing seemed to be well arranged and executed. They were particularly attentive to invited guests, who were received at the residence of Hon. John Gardner, he having kindly opened the doors of his mansion for their reception.

Although this is but the second exhibition of this society, as to its judicious arrangements, and its exhibition, it is not a whit behind other associations that have had long experience, and in some departments it seems to excel.

ESSEX CATTLE-SHOW.

This show took place on Thursday, the 26th ult. The day was very unfavorable, as it stormed most of the time; yet the show was excellent, and a large

number of persons attended, but not so many as usually attend in fair weather.

There was a large number of teams on the ploughing field, and the match was nobly contested, regardless of the pelting storm. Generally the work was done remarkably well. The show of cattle was larger than usual, and there were many fine animals. There was a good number of horses, mostly young ones — a larger show of this class of animals than is usually seen at our exhibitions.

The display of fowls was very fine, and larger than we have ever seen at similar shows, excepting that at Dedham, and it nearly equalled that in extent and variety.

The exhibition of fruits was among the finest of the season. The pears, in extent and fine appearance, surpassed this branch in any show that we have witnessed this season. Several noted varieties, that have generally been inferior this season, were very large and fair at this show.

At the dinner there was a very large number. Mr. Proctor, the president of the society, presided at the table in a courteous manner. Short speeches were made, and sentiments given by several gentlemen.

We came away before the address was delivered, which was by Hon. Caleb Cushing. The worthy officers of this society politely attended to invited guests.

CUSHING AND HANNERS PEARS.

Some years ago, several good judges of fruit, after several close investigations of the subject, stated that these two pears were the same; and regarding their opinions as good authority, we stated in the American Fruit-Book that they were probably the same. We expressed a doubt on the subject, as there were opinions to the contrary. Mr. Hovey, in his Magazine, remarked that these two pears were not identical, as he had both growing on his grounds, and the wood and the leaf were different. At this time Mr. Hovey's Cushing tree had not borne; and when it did bear, it proved to be the Dearborn's Seedling. As he had it from what he considered a reliable source, he depended on its correctness, and drew his inferences accordingly.

After Mr. Hovey had yielded his opposition to the identity of these two pears, it seemed to be a settled question among pomologists generally, that Cushing and Hanners were identical. But from some late facts brought forward on this subject, it seems that the question was settled wrong. Mr. Edward Marsh, of Quincy, a fruit-grower, and a nice observer, recently informed us that he cut scions from the original Cushing tree in Hingham, and from the original Hanners tree in Boston, and he set them into different trees in his garden. In due time both bore fruit, and the growth of the trees, the form of the leaf, and the size and appearance of the fruit, are different.

A few days since, Mr. Marsh kindly favored us with specimens of these two fruits, and they were evidently different. The Hanners was larger than we ever saw the Cushing. They differ considerably in form; the Hanners being broader at the stem, or shouldered, while the Cushing tapers nearly to a point at the stem, having a small cavity, and of course only slightly shouldered. Sometimes the Cushing is considerably shouldered, but generally it is not, while the Hanners almost invariably is.

The Cushing is usually a very smooth pear, of a yellow color, while the Hanners is not very smooth, but has slight inequalities, and has considerable russet sprinkled over the yellow. We could not judge of the Hanners pear from its quality, as it was past its prime; but Mr. Marsh thinks that its quality is a little superior to the Cushing, and it is generally considerably larger. He says that it is a greater grower than the Cushing, and the leaf is shorter, and approaches nearer to a round form.

These facts from Mr. Marsh's experiments are stubborn things, and as he has gone so thorough into the investigation of the subject, we think that they are entitled to respect. It is supposed that the Hanners pear was imported from Europe, and it was named for the gentleman who owned it.

ROT IN TURNIPS.

Mr. Editor: I have noticed, recently, several articles in the agricultural journals, complaining of the prevalence of this disease. It is no new thing, but has been more or less fatal to the turnip crop for several years. As long ago as the year 1839, I had a yard of ruta bagas nearly ruined by it; and in a yard containing not less than six distinct varieties, the same season, scarcely one was unaffected. This fact proves conclusively that the disease is not confined, as many have supposed, to the ruta baga, but that it attacks, indiscriminately, every variety of the turnip tribe. What the cause of this disease may be, is a question I am not prepared to decide. It may originate in excessive manuring with green, unfermented manure; or from too great a supply of humidity in the soil, accompanied with a high temperature; or it may be the consequence of a physical deterioration, the same as in the case of the potato. Lime used in large quantities is said to have preserved some crops; but this, I think, is a gratuitous assumption, as no systematic experiments have as yet been made, to demonstrate its preservative or remedial powers. It is to be hoped that efforts will be made by our farmers to ascertain both the cause of the disease and the remedy to be applied.

RUTA.

— *Germantown Telegraph.*

PRESERVATION OF THE PUMPKIN.

Preservation of pumpkins through the greater part of the winter, if sound and well ripened, is easily attained, by stowing them in a mow of dry hay or straw, or placing on a barn floor and covering with any light forage. A dry cellar will frequently keep them sound, but these are usually too moist for this purpose. They ought occasionally to be looked after, and any showing evidence of incipient decay, should be immediately used. All the partially ripe, small, and imperfect, should be fed soon after taking from the field.

AGRICULTURAL FURNACE.

This furnace is adapted to boiling vegetables, and cooking food generally for stock. It may be used to advantage for many mechanical purposes, and it is convenient for various uses in household management.

There is a boiler neatly enclosed with an iron case, and so arranged that the fire passes around the boiler, imparting to it a large amount of heat in proportion to the fuel consumed. The whole is set on a small box stove, so that it may be used safely in any situation. It is portable, and may be moved with great convenience from place to place, as desirable.

These furnaces save all the trouble and expense of setting boilers in brick or other materials, and they require but very little room.

The growing scarcity of fuel in many parts of the country should lead to the most economical means of saving it. In some cases, the expense of cooking food for stock, owing to the high price of fuel, is so great that it is neglected. This evil may often be remedied by judicious management. Economy is wealth.

These boilers are of various sizes, from fifteen to one hundred and twenty gallons.

MUCK.

Mr. Editor: There are few farms belonging to the readers of the Telegraph, on which this article, so valuable and adjuvant in enriching the soil, cannot be obtained in abundance. When handy to the premises, time cannot be better employed than in carting it out, and preparing it for manure. This latter process is accomplished in several ways. Sometimes it is taken from the muck-bed in autumn, carted to some convenient place, and there left exposed during winter to the action of the frost. This process greatly ameliorates it, renders it fine, and deprives it of its peculiar acid, the action of which, when unneutralized, is prejudicial to vegetation. Sometimes it is mixed with quicklime, which more speedily deprives it of its acidity, and renders it almost instantaneously fit for use. Another mode of preparation is to cart it into the cattle and hog yards, where it is permitted to remain until spring, absorbing and drinking up the urinary matter, and thus as it were, imbibing new principles of fertility, while it loses its original baneful properties. I have known muck thus managed to produce excellent effects on vegetation, especially on Indian corn, a crop ordinarily considered as rather dainty. The most judicious method, however, I think, is to allow it to remain in the yards during the winter, and then stack it, adding one cask of quicklime and a bushel of gypsum to every cord of muck. The year after, you will have an article of great value to lay on your lands, and one that, under ordinary circumstances, if your soil is not calcareous, will be better than the best stable dung you can obtain. As a top-dressing for grass lands, muck, in almost any possible state of preparation, is unsuitable. It dries too quick, and is thus in a great measure lost, when so applied. If you have grass lands to top-dress, it will be found more judicious to make use of your animal excrement for this purpose, and apply your muck compost to your cultivated crops. On very low, moist lands, this objection of course is overcome by circumstances; but on high, arid lands, exposed in the spring to the direct rays of the sun, its application is absurd, and can never be productive of good results.

A COUNTY FARMER.

— *Germantown Telegraph.*

Remarks. — We should dissent from the remark that animal manure should be used as a top-dressing, and muck in compost applied to cultivated land. In no case should animal manure be applied as a top-dressing, alone, but it should be composted with earth, and better for being composted with soil different from that to which it is to be applied; with gravel, sand, or sandy loam, or common loam, for moist, heavy lands, or lands of clay, mud, muck, peat, &c.; and with mud, muck, peat, clay, or clayey loam, for gravelly or sandy soils, or any high lands that are rather dry.

If animal manure is applied alone, as a top-dressing, much of it will be wasted by evaporation; but if applied to tilled lands, it may be saved by ploughing in immediately, and by harrowing, it will form a compost with the soil. — Ed. N. E. Farmer.

NEW YORK STATE FAIR AT ALBANY.

We have delayed publishing any thing concerning this great exhibition, with a view of presenting to our readers a particular account from some correct observer. We copy from the Albany Cultivator.

The Tenth Annual Show and Fair of the New York State Agricultural Society was held near this city, according to appointment, during the 3d, 4th, 5th, and 6th days of last month. It was another grand gathering of the leading farmers, or, perhaps we might with more propriety say, the leading *citizens* of the Empire State, with multitudes of our brethren from other states, and the adjoining British provinces. The number of visitors was greater than at any previous exhibition. This is sufficiently proved by the receipts for admission, which reached $10,465 61. The greatest amount received in any previous year was $8,144 55, taken at Syracuse in 1849. A heavy rain occurred on the day and night preceding the opening of the exhibition, and another on Thursday night following, which doubtless prevented the attendance of some who would otherwise have been present. The rains completely saturated the ground with water, which occasioned some inconvenience; but as an offset to this, they prevented the rising of dust, which, if continued dry weather had prevailed, would have been a great annoyance.

Much credit is due the various railroad companies in this state for the facilities they afforded the public in attending the fair. They all gave half-price tickets during the week, and carried stock and articles intended for competition gratis. This is a liberal plan, which we believe gave entire satisfaction, and it has, also, well rewarded the owners of the roads. We are sorry to say that the directors of the road between this city and Boston but partially adopted this plan. Had they pursued the same course as the New York roads, the number of visitors from the east would have been greatly increased, and the road would have made, in the aggregate, a much greater amount of money. We presume this latter fact will not in future be overlooked by men who have the general reputation of shrewdness.

Considered in reference to itself, and as a whole, this exhibition may be said to have fully equalled any former one. If, in some of the departments, a deficiency existed, it was amply made up by the fulness and richness of others. The whole number of entries was greater than on any former occasion. The number for horses was two hundred and eighty-six, cattle four hundred and seventy-five, sheep five hundred and sixty-seven. The horses and most of the cattle were stationed in sheds provided for them. This shelter was necessary to protect them from the hot sun, to which they must have been otherwise exposed. But in regard to the appearance of the show, it had an unfavorable effect, as it completely withdrew from observation most of the animals which usually constitute so prominent and attractive a feature in displays of this kind.

The occasion has been, generally, one of high gratification; it has afforded the means of obtaining much valuable information, not attainable in any other way, in regard to the various objects brought together; and the vast assemblage collected and dispersed without the occurrence of any accident to lessen their enjoyment.

The people are beginning to look upon these exhibitions in their proper light. On the part of competitors, the principal benefit is not the taking of prizes; it is the opportunity of bringing their animals or articles prominently to the notice of thousands of persons to whom they would otherwise never be known. The objects are not only seen, but they are *compared*, and by comparison, their relative defects or excellences are made apparent. It is in this way, only, that correct knowledge can be obtained. A farmer, who breeds any kind of live stock, can form no safe opinion of its actual value, without comparing it with other stock of the same breed. So, too, of the mechanic, in reference to his various productions; and in every branch of industry, improvement can only be estimated by comparison.

Nor is the advantage of comparison of less consequence to purchasers than producers. In procuring a horse, a cow, a yoke of oxen, or a plough, or other implement or article, it is, of course, desired that it should possess the properties which would fit it most perfectly for the purpose to which it is to be applied; and by having side by side the various descriptions, a discriminating eye is able to select the best, with almost infallible certainty. These advantages are distinct and independent of the awards of premiums. The people, so far as they have the opportunity of seeing for themselves, generally form their own opinions, and are but little influenced by the decisions of others.

Horses. — The display of horses was hardly equal, in respect to *quality*, to the shows of the two preceding years; yet there were noble specimens in the different classes. In blood-horses there was but little competition. Among those on the ground, we noticed the celebrated "Trustee," the sire of the famous running mare "Fashion." Though bearing evident marks of age, he still shows some excellent points. His head and eye have the striking lineaments and expression so justly admired in the Arabian horse; his limbs are clean and sinewy; the fore leg, in particular, is remarkable for the length of arm, and for the width and shortness of the shank. "Leopard," an imported horse, owned by O. K. Lapham, of Keeseville, is an animal of much nerve and fire; rather tall, and somewhat light in the fore hand for hard work and endurance, but not too much so for a racer. "Consternation," now owned by Mr. Burnet, of Syracuse, has heretofore received the first premium in this class, and is a horse of well-deserved reputation. "Young Alexander," owned by Mr. Ireland, has also received the first premium as a blood-horse, and attracted here, as on former occasions, much attention.

In the class of "all work," we noticed the well-known "Morse's Gray." Several of his progeny were also on the ground, which did credit to the sire. The young horses by the celebrated Vermont "Black-Hawk," shown by Messrs. Felton, of Ticonderoga, Breed, of Crown Point, and Bigelow, of Bridport, Vt., were animals of fine appearance and good action.

Among "draught horses" was a stallion owned by Joel Young, of New Scotland, got by the imported horse "Sampson," and another owned by William A. Keese, of Keeseville, by the same sire, both of which were good specimens of this class of horses, as was also a five-year-old mare of the same stock, weighing fourteen hundred pounds, exhibited by E. Corning, Jr., of Albany.

There were several pairs of handsome matched horses. Those of Mr. Plumb, of this city, and Mr. Faxton, of Utica, were much admired.

Among the young horse stock deserving particular notice, was a pair of yearling geldings, owned by William B. Seymour, of Clinton, Oneida county.

Cattle. — There was a greater number of cattle exhibited, than for several previous years. The fat cattle were not as numerous as at Syracuse, and the Devons were not out in so great numbers. There was more competition in Short-horns, and they were in general of better quality than they have been for several previous years. The most extensive exhibitors of Short-horns were Messrs. Vail, of Troy, Sherwood, of Auburn, Rotch, of Butternuts, Hill-

house, of Watervliet, and Chapman, of Clockville. There were other competitors, who showed in less numbers. Col. Sherwood's "Third Duke of Cambridge," and several other animals shown by him, imported during the past and present season, are very superior specimens of Short-horns. The bulls of Mr. Thorpe, of Albany, Mr. Vail, of Troy, Mr. Chapman, of Clockville, Mr. Lathrop, of Massachusetts, Mr. Miller, of Canada, were animals of much merit, each of which had their respective advocates. Two young bulls, lately imported, shown by Lorillard Spencer, Esq., of Westchester county, were among the best animals in this class. They were of good size and form, and evidently of thrifty habit. There were many excellent cows. Among several, it must have been difficult for the committee to apportion the awards. The red cow of Mr. F. M. Rotch, two of Mr. Hillhouse's cows, Mr. Vail's "Esterville 2d," Col. Campbell's, and one or two of Col. Sherwood's, were all fine cows.

The display of Herefords was smaller than last year—there being but fifteen of this breed on the ground. There were among them some first-rate animals. The four-year-old bull, shown by W. A. Keese, of Peru, was in all points a beautiful and good animal. Mr. E. Corning, Jr., of Albany, also exhibited a good bull and several cows, and some young stock. His cow "Victoria" will compare favorably with almost any cow we have ever seen; and without intending any invidiousness, we think she was not excelled by any on the ground in respect to a combination of useful qualities. Mr. Keese's "Matilda" is also a very valuable cow. In this class we missed the usual display by Mr. Sotham, of Black Rock.

The Devons were not equal in numbers to the show of last year, but as to quality, were not inferior to any former show. Among the bulls we noticed "Major," purchased at the Syracuse Fair of Mr. Gapper, of Canada, by R. H. Van Rensselaer, of Butternuts. This animal still maintains the appearance and qualities for which he has heretofore received much merited commendation. "Bloomfield," shown by Mr. Hurlbut, Winchester, Connecticut, is a beautiful and valuable bull; and the bulls shown by Mr. Sanford, of Orwell, Vermont, and Mr. Cowles, of Farmington, Connecticut, were fine. Very fine cows and young stock were shown by E. P. Beck, of Sheldon, Wyoming county, H. N. Washburn, Butternuts, L. C. Collins, of Dutchess county, Mr. Hurlbut and Mr. Cowles, of Connecticut. Mr. Beck's display was less in extent than usual, from his having lately sold a lot of fine animals to the governor of Wisconsin.

The Ayrshires shown were chiefly from Mr. Prentice, of Albany, and Mr. R. L. Colt, of Paterson, N. J. Among them were excellent stock for the dairy. A bull of a fine dairy tribe was shown by Mr. Woodford, of Avon, Connecticut.

Mr. Colt exhibited a heifer and bull lately imported from Hungary. They are of good size for their age, and their skins possess good handling quality. Their form has nothing in particular to commend, though their limbs are good, and they are said to be fast walkers. Their color is iron-gray, and their general characteristics indicate that they are a very distinct and pure breed.

Mr. Colt also exhibited an Alderney or Jersey cow, a most delicately-formed and deer-like animal—just such a cow as, with constant care as to shelter and feeding, would afford a large amount of cream and butter.

The number of cattle shown as "grades" was much greater than we have seen at any former exhibition. They were chiefly cows and heifers, and among them were many of excellent quality. Deserving special notice was a cow, four years old, the produce of a Connecticut cow by the imported Short-horn bull "Marius." She was owned by Mr. Thomas Bell, of Morrisania, Westchester county. She appeared to combine with the most faultless symmetry nearly every point indicative of perfection in a dairy cow. Several fine heifers of the same stock were shown by Mr. Bell. The cows and heifers of John Townsend, of Albany, and those shown by Isaac Sheldon, of Auburn, were evidently valuable stock.

The fat cattle comprised several fine animals. The four-year-olds shown by Mr. Wadsworth were decidedly the best of their age that we have ever seen. Indeed, we heard it remarked by experienced judges, that they exceeded in symmetry and lightness of offal any cattle which had ever come to their notice. A four-year-old shown by Mr. Sheldon, of Sennett, was of fine form, and, with the advantage of another year, will be well developed. A fat Durham cow, owned by Ambrose Stevens, of New York, was remarkable for lightness of offal and weight in the most valuable parts.

The working oxen made a good appearance. We saw none of them tried at a load, and cannot say whether or not they were subjected to a trial of this kind. Five yoke of fine cattle were shown by J. S. Wadsworth, and a team of ten yoke, several of which were fine, from Kinderhook, by J. P. Beekman. There were many fine steers, of one, two, and three years old. We noticed, as very superior, both the two-year-olds and yearlings, shown by S. A. Gilbert, of East Hamilton, and admirably broken and trained by S. A. Gilbert, 2d, a lad fifteen years old. The yearlings were calved the 5th of April, 1849, and weighed, at the time of the show, twenty-two hundred pounds. They are of almost unexceptionable form.* They were a cross of the Short-horn and Devon,—the color being that of the latter. A very fine pair of two-year-old steers, a cross of Short-horn and Devon, were shown by B. Benedict, of Alexander, Genesee county. They were broken and trained, in the most perfect manner, by Jervis P. Benedict, fourteen years old.

Sheep.—The show of sheep may be said to have been quite superior. The large Merinos, commonly known as the "Taintor stock," were shown by Messrs. Bingham, of Vermont, F. M. Rotch, of Butternuts, and L. C. Collins, of Dutchess county. Other Merinos were shown by Col. Sherwood, H. M. Dart, Harpersfield, R. E. Keese, Ausable, J. Hinds, J. S. Pettibone, John Campbell, and George Campbell, all of Vermont.

Of Saxons, very superior specimens were shown by C. B. Smith, Woolcottville, Connecticut, of the stock imported by Smith & Catlin, from Germany. We have, on a former occasion, expressed a favorable opinion of these sheep. This opinion is fully supported, so far, and we think will continue to be, by the success of the stock in this country. S. H. Church, of Vernon, showed Saxons from his well-known flock.

Of Long-Woolled Sheep, the number of really well-bred ones was not large. Mr. Rathbun, of Otsego county, showed some good sheep. But the Leicesters, shown by Messrs. George and William Miller, of Markham, C. W., were the principal attractions in this department. Some of the ewes, shown by William Miller, were, in form, almost perfect models of what a mutton sheep should be; and it is to be hoped, that our breeders of this class of sheep have derived some useful hints from the fine specimens which have been thus brought before them.

* These and the two-year-olds shown by Mr. Gilbert, and the three-year-olds of Mr. Muir, which received the first premium, were sold to Hon. B. V. French, Braintree, Mass.

The South Downs made a very good show. They were chiefly from the flocks of Messrs. Sherwood, Rotch, McIntyre and Wakeman. There were good animals in each of these lots. The fat wethers of Col. Sherwood, and several cross-bred South Down and Cotswold wethers, shown by Mr. McIntyre, were capital specimens, and did not fail to attract the attention of those who know good mutton.

Swine. — This department was not well filled. In numbers, it was less extensive than at any former show for several years, and we saw no animals of remarkable appearance. Some good pigs were shown by William Hurst, of this city, and by Winant Younghans and William Webb, of Darien.

Poultry. — There was a much better display of poultry than at Syracuse, though it was hardly equal to the show at Buffalo. Much of the good appearance of this department was due to R. L. Colt, Esq., of Paterson, N. J., who exhibited specimens of four kinds of geese, and several varieties of fowls. E. E. Platt, of this city, showed a collection of fowls, embracing several valuable breeds. Mr. P. had also a fine specimen of the curassow. Fine specimens of the Dorkings were shown by F. M. Rotch, of Butternuts, and very handsome specimens of the Spangled Hamburg or Bolton Gray fowl, by John Chadwick, of New Hartford.

Some beautiful rabbits, very large, with pendent ears, were shown by R. H. Van Rensselaer and F. M. Rotch.

Dairy Products. — There was a respectable show of these; but we were unable to take particular notes in this department, on account of the derangement occasioned by the tent, in which the articles were placed, having been blown down.

The show of *Farm Implements* was large and attractive; but we think there was less competition, and for this reason less variety, than at Syracuse. Emery & Co., of Albany, filled a building of their own, one hundred by forty feet, besides occupying a much larger area in the open field. In front of their building was a fountain, which constantly sported its beautiful jets of water, and added much to the ornament and interest of the general exhibition. There were other extensive exhibiters of implements, as Messrs. Starbuck & Co., and Bosworth, Rich, & Co., Troy, Wheeler & Co., Albany, and Eddy & Co., Union Village. But we must reserve our notices of particular articles in this department till our next number.

The "*Mechanics' Hall*" contained a great number of useful articles, under the head of machinery, of various kinds, stoves, and other contrivances for house-warming and culinary purposes. Considerable of the machinery was kept in operation, the power being derived from a steam engine put up for the purpose, by Messrs. Low & Co., of Albany. A power printing press was worked during the exhibition, which explained the art of printing to thousands, by whom it was before a mystery. The process of printing on stone (lithography) was also here exemplified.

The "*Manufacturers' and Domestic Hall*" presented a display, which, in variety, richness, and beauty, exceeded any thing of the kind we have before seen; but for want of room, we must defer particular notices till a future occasion.

The *Fruit and Floral Department* was well filled. In regard to fruits, we believe the display was, with the exception of peaches, equal to that of any previous year. It was the general expression that this department was better filled than at any exhibition since that at Poughkeepsie, in 1844. Among the principal exhibiters were Henry Vail, Troy; Elwanger & Barry, Rochester; R. L. Colt, Paterson, N. J.; Jonathan Battey, Keeseville; E. P. Prentice, Dr. H. Wendell, Isaac Denniston, Elisha Dorr, James Wilson, Dr. March, of Albany; L. Menand, Watervliet; Norman Briggs, Schaghticoke. Among the most attractive objects was a basket of fruits from Mr. Vail, tastefully ornamented and placed in a conspicuous position, containing thirty-four varieties of apples, thirty-one of pears, ten of plums, eight of peaches, nine of grapes, and one Christiana melon. Mr. V. had also a box, containing a grapevine, on which were eight well-ripened and handsome bunches of grapes. The splendid bunches of black Hamburg and other foreign grapes, from Mr. Colt, received much praise. The show of plums, from Mr. Denniston and others, was very fine.

Of *Vegetables*, there was about the usual display. C. F. Crossman, Rochester, made a large contribution to this department. Specimens of blood-beets, shown by him, were unusually fine.

The *Address*, by Prof. Amos Dean, was received with well-deserved approbation. His main subject was "*Agricultural Education*, the training up of the young mind with special reference to the pursuits of Agriculture." This subject was ably and thoroughly discussed, and was shown to lie at the very foundation of improvement in this branch of industry. In our next, we shall endeavor to give a more comprehensive view of Prof. D.'s highly valuable remarks.

Several distinguished gentlemen visited the showgrounds, among which were Ex-President Van Buren, Gov. Fish, Gen. Wool, Com. Thomas Ap C. Jones, Hon. Mr. Ferguson, of Canada, G. P. R. James, Esq., (the celebrated English literary writer,) and a grandson of Gen. La Fayette, from France. Delegates were in attendance from the Massachusetts Horticultural Society, the Agricultural Societies of Ohio, New Hampshire, Pennsylvania, and various county societies in other states.

COMPOST YARDS.

Mr. Freas: In a modern work, published not long since, in Scotland, entitled the Book of Farming, there is a drawing delineating the "compost yard." It is represented as an appendage, distinct from, yet appertaining to, the barn-yard, and contains a "*tank*," or, as I should denominate it, a cistern, for the reception of the urine, or liquid matter generated in the sties, cotes, cattle, horse, and sheep yards, and so positioned or located as to receive it through a system of pipes. Into this capacious and convenient reservoir is thrown, from time to time, muck, virgin earth, or bank soil, and on this is poured, occasionally, the urine of the cattle, soapsuds, and the rich wash from the manure heaps. In this way a large amount of these absorbent substances are enriched, and rendered subservient to, and highly efficient in, the fertilization of the soil. If our farmers would but adopt this system — so economical in its details, and apparently so beneficial in its results, we should probably, in a short time, hear far less of scanty crops and impoverished fields. It is time for the American farmer to arouse, and by a vigorous effort shake off the lethargy which has so long bound him down to indigence and profitless toil on fields emasculated and unproductive. Light and intelligence are diffusing their rays over the rest of the world, while *we* are indolently reposing like the sluggard spoken of in Scripture. Let this not be. We have already too long neglected our best interests; let us now arouse from our stupor, and no longer slumber.

The Scotch are a singularly industrious and economical people; they turn every thing to the most profitable use, and the influence which Scotch enterprise has operated in elevating the agricultural character of England, and the rest of the civilized world,

is to her a source of greater honor than all the victories and conquests of the latter, since the days of her feudal regime. The establishment of the Highland Society wrought wonders; and since then she has progressed rapidly, her course being ever onward, till her system is now the most perfect of any, and the efforts of her farmers, in every department of Geoponics, more successful, circumstances considered, than those of any people on the face of the globe.

Here, in this free country, where millions on millions of virgin soil are to be had for a mere nominal equivalent; where the market is always open to the products of industry, and where, from our rapidly increasing population, every article produced from the soil by farm labor is certain to bring a remunerating price; and where from these, and other cognate and collateral causes, the young agriculturist is supplied with the most cheering inducements to persevere in the bright pathway of improvement, — agriculture, both as a science and as an art, makes but a dilatory advance. It languishes from lack of public spirit — that *esprit du corps* which is so operative in the mind of the Scotch farmer, and which leads him to dread nothing more than the disgrace of being beaten or excelled. When shall *we* arise? when shall we assume that rank among the nations we so eminently deserve? AN OLD FARMER.

— *Germantown Telegraph.*

REASONS FOR KEEPING THE BEST BREEDS OF STOCK.

Many reasons might be urged why farmers should keep only the best breeds of stock. While it is true that an abundance of food will apparently improve any breed, or at least hide their deformities, it is also true that the same food, fed to the same varieties of animals, though of different breeds, will contribute both to the beauty of the animal and interest of the owner.

Early maturity, and a disposition to take on fat, are intimately connected with the shape of the animal. But few persons have the perseverance and discrimination to make a Bakewell; yet scarcely a man can be found, who, if called upon to decide between two animals of different organization, but will instinctively decide in favor of the round-barrelled, small-boned, deep-chested, in preference to the slab-sided, coarse-haired, rough-boned, narrow-chested animals; and yet, with our certain knowledge of these facts, how few are there amongst us who make a reasonable application of the knowledge they possess! And if any one is found possessing a spirit of improvement, how often is it the case that he is beset with obstacles, and his efforts counteracted on every side! At all times, through the summer, may be seen herds of cattle, hogs, &c., rambling in every direction, turned out by their owners to curse community, in their daily task of highway robbery and usurpation.

Suppose one of our citizens, at great cost, introduces a superior Durham bull. If he is permitted to pasture in fields adjoining the highway, to prevent evil associations is impossible; fences will be broken down; he is led off by these marauders, and however docile by constitution he may be, these evil associations will soon make him ungovernable. The owner is soon compelled to fit him for the shambles. In the Empire State, the case supposed may not apply, but in Ohio, this is no fancy sketch; and notwithstanding the public may be benefited by the introduction of the bull, in stamping his character or good points in his offspring, in the stock of the neighborhood, the owner's chagrin, disappointment, and loss of money have been the result. But how can this be remedied? I answer, by disseminating the right kind of knowledge among the people. If every farmer could be induced to become a subscriber and a reader of the American Agriculturist, the American Farmer, the Plough, Loom, and Anvil, the Ohio Cultivator, or any one of these, how soon would the aspect of these things be changed! The slumbering faculties would be aroused, a spirit of emulation in husbandry in general, and an improvement in breeds of farm stock in particular, would pave the way for the passage of a law prohibiting animals from running at large. And then, how quickly would our fields be dotted over with beautiful square-formed Durham cows! How soon would our long-nosed, razor-backed, slab-sided, alligator land-pikes, which some people call "hogs," give place to the Chinese, or some other decent breed of swine!

The evils resulting to the community from bad breeds of hogs extend much further than is generally supposed. Almost every person, at one time or another, has had ocular demonstration of the hard feelings, heart tearings, open quarrels, and expensive lawsuits, engendered by the instrumentality of these trespassers, which husk our corn and dig our potatoes for nothing, and, like the prince of darkness, are always "roaming about, seeking what they may devour." But these evils, great as they may be, are not to be compared to the deleterious effects they have upon mankind. Man is a physiological being, and his physiological existence depends upon certain important principles or laws. Every one knows that man is an eating being. Did he cease to eat, he would soon cease to live. The food eaten is received into the stomach; this, in the process of digestion, is formed into chyle, and this, by the action of the oxygen of the atmosphere, inhaled by the lungs, is formed into blood; and from this blood are formed the bones, the sinews, the muscles, and tendons of the human frame. Consequently, whatever is eaten by man, and not thrown off as extraneous matter, becomes assimilated into the system, and becomes interwoven into the very texture and existence of man himself. Is it not, therefore, as clear as demonstration can make it, that if a man were fed exclusively, for a sufficient length of time, on long-nosed alligators, or land-pikes, he would eventually, as far as animal physiology is concerned, become "bone of their bone, and flesh of their flesh"? He would be all hog except the bristles. And when we consider the very intimate connection between mind and matter, is it not equally clear that this animal system, composed, in whole or in part, of swine, will have a powerful influence in the formation of the character of the man? that the animal propensities will become stimulated, and will usurp the throne? And when reason is thus subjugated, the man is transformed, from being a good member of civil society, to a complete Ishmaelite, whose hand will be against every man, and every man's hand against him. I desire no better index to the general character of a neighbor for benevolence, peace, love, and good will, or their opposites, than the breed and appearance of the hogs reared and eaten by the people who reside there. And were I seeking a location, I would select some green spot in the desert of Sahara, rather than settle down among a people whose exclusive food was alligators or land-pikes. G.

— *American Agriculturist.*

For the year ending in April last, nearly one hundred and twenty millions of pounds of beet-root sugar were manufactured in France.

MULCHING FRUIT-TREES.

We have lately seen several instances of this system, which should commend it to general adoption in all cases where there can be any hope of benefit from its use. The first was in an orchard consisting of nearly a thousand apple-trees, belonging to Mr. L. F. Allen, on Grand Island. This orchard had been planted four or five years, on a hard, clay soil, and during all the previous seasons had made little growth, nor scarcely borne an apple. Last spring, a large forkful of swamp-grass was spread around the trunk of each tree; and the consequence has been, constant dampness on the surface of the ground beneath the hay, and a more vigorous growth than has ever before taken place, while almost every tree is covered with fruit. As the owner proposes giving us a full description of his orchards, and their treatment, we omit further notice of them for the present.

Another friend practises mulching with salt hay, which is much better for this purpose than the preceding. This contains an additional ingredient for attracting moisture in the salt combined with it. Many plants require shade and moisture, and when protected by this, will thrive and yield abundantly, which, if not thus protected, would be entirely unproductive.

Another friend uses the shives (the fine, woody portions) of flax. By giving a thick covering of these to the ground around the trees, all the benefits of moisture are secured. There is a decided advantage in the use of this material, as it does not require to be raked off like hay and straw, on the approach of cold weather, to avoid harboring field mice or other vermin, which frequently commit great ravages among the trees during winter, when they have a hiding-place near. The cutting of the hay or straw in a cutting machine, would prepare it equally well for this purpose, as the shives of flax. Tan bark, or saw-dust, is also useful; but it is better to have the latter discolored, so as to approach a dark brown. This color facilitates the radiation of heat, and the consequent formation of dews, both of which circumstances largely augment production. — *Am. Agriculturist.*

Remarks. — By mulching trees, they are placed in a condition similar to trees in the forest. They are protected from the scorching sun and parching drought; and they are kept nearer a state of equilibrium of temperature during the various changes from heat to cold, and the reverse; of course there will be a more uniform growth, and less liability to disease in trees, and imperfection in fruit.

Tan should remain a few years after taken from the vat, until it is partially decomposed; or lime, ashes, or other alkaline substances should be mixed with the tan, to destroy the *tannic acid*, else it may injure the trees which it is intended to protect. See articles in the last number, on the preparation of tan. — Ed. N. E. Farmer.

ANIMALS IMITATING DEATH TO SAVE THEIR LIVES.

During a visit to Cumberland, we found several hedgehogs in Inglewood Forest. One of these, in order to destroy it, we put in the pond. It swam about in a circular direction for some time, and reached the shore. After putting it into the water a second time, it remained motionless, and apparently dead, and we left it on the grass. During the night, however, it walked away. The spider will imitate death to save itself; and canaries have been taught by some showmen to look as if they were dead. The most curious case, however, is that of a fox, in the north. A farmer had discovered that they came along a beam in the night, to seize his poultry. He accordingly sawed the end of the beam nearly through, and, in the night, the fox fell into a place whence he could not escape. On going to him in the morning, the farmer found him stiff, and, as he thought, lifeless. Taking him out of the building, he threw him on the dunghill; but in a short time Renard opened his eyes, and seeing that all was safe and clear, galloped away to the mountains, showing more cunning than the man who had entrapped him. — *Pres. Johnson.*

FALL MANAGEMENT OF BEES.

The months of October and November are the season when the state of the apiary will require particular attention. The hives should be examined, and those not containing honey enough for its occupants to sustain them during the winter must be fed. An ordinary swarm of family bees will consume from fifteen to twenty pounds of honey, from October to May. If the winter be very mild, more than this quantity will be required; but not in an ordinary season. The apiarian should be able, from practice, to know at once, on raising his hives, whether the above quantity exists in them, or not. Hives that have been occupied several years, will be as heavy without honey, as others that have been used but one season, with from five to ten pounds; therefore an allowance must be made for the weight of old combs and bee-bread. — *Miner.*

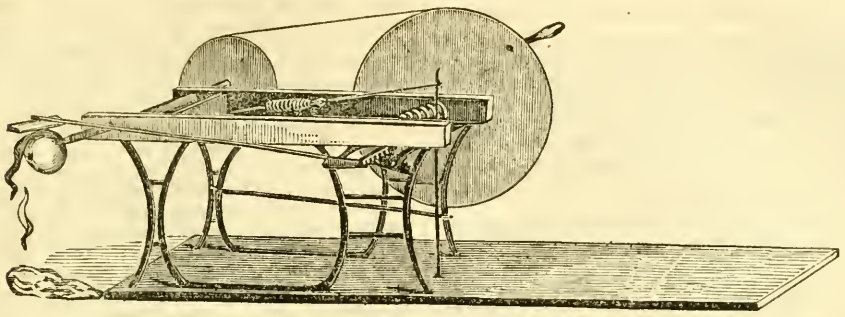
WOOL-GROWING AT THE SOUTH.

We have before us some very fine samples of wool, received from Mr. Davison, of Culpeper county, Virginia. It is surprising that so little attention is paid to this subject, throughout the whole length and breadth of the Southern States. It does seem to us that there is no region under the sun where wool can be raised so cheaply as there. They have the climate and a vast amount of pasturage that is now lying idle. There is no stock a farmer can breed that will compare with sheep for profit. The fleece comes annually, and the carcass is always valuable. For a warm climate, mutton is the most healthful meat, as well as the cheapest. Why don't the planters go more into the business? We have often asked the question, but get, as yet, no answer.

On a great many plantations, it does seem to us that there would be no difficulty in inducing the negroes to give up their dogs, and keep a sheep or two in their place: a small premium for the fleece or the lambs would soon make the sheep a part of the household. It has been urged that the blacks will not make good shepherds. We do not believe any such thing. We think they would make the very best, with a little instruction; and the older people, who could not work hard in the field, would do well with the sheep in their summer rambles.—*The Wool-Grower.*

ENORMOUS WHEAT CROP.

A correspondent of the Detroit Daily Tribune, writing from Romeo, Michigan, states that Ira Phillips, of Bruce, Macomb county, last week harvested and threshed, from two acres of ground, one hundred and twenty-four bushels of wheat. The wheat crop of Macomb county, and indeed of all Michigan, will be unprecedently large.



APPLE-PARING MACHINE.

Those who have used these machines are aware that they make a great saving of labor. The one represented above has peculiar advantages, and those who have used it say that it will pare three or four bushels in an hour — a great saving on the slow process of paring with a common knife.

This machine is geared so as to expedite the operation by rapid revolutions of the fruit, and the work is done with great despatch. The knife is moved round the fruit by machinery, and when it is peeled, it is thrown off instantly by a spring in the machine, and the knife returns to its former place, ready to begin upon another apple. These ingenious contrivances require less labor and skill in the operator, and enable him to work with greater expedition. These machines have forks of thin, elastic prongs, adapted to paring peaches. The price is moderate.

THE POULTRY SHOW,

Held last week in the hall over the Fitchburg Railroad depot, was a grand exhibition, both in extent and variety; and as to the general appearance of the fowls and birds, it was all that could be expected at this season of the year, when the old fowls are moulting, and many of the young ones are not fully grown, or well fledged.

This was by far the largest show of the feathered race ever made in this country; and in variety it has never been excelled, for there were not only almost every breed, but a large number of varieties, crosses, mixtures, mongrels, &c. The weather was generally fine during the show, and a very large number of visitors had the gratification of seeing it. We may give some particulars in another number.

FALL MANAGEMENT OF ASPARAGUS.

A subscriber requests a few hints on this subject, and inquires whether the stalks should be cut away in the fall. When the plants are dead, the stalks should be cut and removed, and they may be used as litter for hogs, or otherwise converted into manure. It is better to cut off the stalks a little above the surface; then the remains of the stalk may be removed more conveniently in the spring, than when it is cut just below the surface, as the but is then out of sight. These old buts of the stalks should be removed early in spring, that they may not obstruct the tender shoot.

If the roots of the asparagus have been set low, in a trench, shallow ploughing, in the fall, will be a good mode of culture, for the purpose of destroying the weeds, pulverizing the soil, &c. If the roots have not been set sufficiently low to admit of ploughing, the harrow may be used to advantage. If there is a lack of richness in the soil, apply manure before ploughing or harrowing.

HATCHING CHICKENS.

An American, named Williams, near Champigny, France, has an establishment for the artificial incubation of eggs. He has been very successful, following, as near as possible, the means adopted by the mother hen, in the application of the artificial heat. As in her case, he applies the heat from above, and following her instinct as his guide, he frequently removes the heat, leaving the eggs free to imbibe the necessary amount of oxygen. So far, his success has been complete. He finds ready sale for all his broods, which are sent to market when twenty days old. His furnaces are kept constantly at work to furnish *poulets* for the Paris markets. — *Paris paper.*

The Granite Farmer, speaking of the potato rot, says, "In one field, of which a friend spoke, the rot of the tubers was so entire that the stench arising from the ground almost forbade any one's crossing the field."

In Norway, it is estimated that the number of persons who are preparing to emigrate to America amounts to twenty thousand; being two per cent. of the entire population of the kingdom. From the commune of Loelag alone, which contains five thousand one hundred and ninety-five inhabitants, six hundred and sixty-three individuals are about to embark for New York.

Domestic Department.

The Fate of Nations dependent on Mothers. — The destiny of a nation is shaped by its character; and that character, the aggregate character of all its individual citizens, will ever be found to be moulded chiefly by maternal hands. Each mother may seem to do very little towards such a result; but the millions of mothers in a whole country must, with inevitable certainty, leave their own impress upon its general character and destiny.

I remember hearing, more than ten years ago, an anecdote quite in point, which strongly impressed this truth on my mind. We all know too well the comparatively ill success of the republics at the south of us. From one of these republics in the northern part of South America, a gentleman of high social and political standing there, a sagacious statesman, and a thoughtful, anxious patriot, who mourned over the bad results of the experiment made by his own country in the work of self-government, came to ours, for the purpose of leisurely examining our institutions, and of ascertaining, if possible, the true secret of their success, and of our great national prosperity.

My informant reported to me the result of this gentleman's observations in two cases. He attended one of our military musters, and on witnessing the general spirit of the scene as indicative of a popular passion for arms, and especially the eager, enthusiastic interest of the young in the passing pageantry, he turned to his companion, and very emphatically said, "That, sir, will ruin you. It is the passion of the people for war, and their reliance on the sword to carry their points, which has been our bane and ruin in South America; and, unless you check it in season, it will prove your ruin too." He knew not the counteracting influences silently at work through the land; but he soon had an opportunity to catch a passing glimpse of them.

This accomplished stranger, a Roman Catholic, visited New Haven, Ct., and was present at an evening party, where were gathered the *élite*, gentlemen and ladies, of that well-known centre of learning and social refinement. There was nothing in the appearance of the men to excite surprise, or special attention, for he had seen others of similar accomplishments; but the character of the women, the position they held in society, and the influence they were so obviously qualified and permitted to exert, struck him with such admiration and delight, that on retiring from the scene, he exclaimed, "I've found it now. I have ascertained the secret of your success in self-government, prosperity, and greatness as a republic. You owe it to your women. I never saw the like before. *Such mothers* must, and no others can, make a nation like yours. Give us, in South America, such women for mothers, and we should, ere long, follow hard after you in the race of national prosperity and happiness."

Well did Napoleon say to Madame de Staël, "France wants mothers." Yes, every land, the whole world, "wants mothers;" mothers of the right character and influence. Liberty, religion, almost every thing for time and eternity, depend, under God, very much on what they are, and what they do. Our world can be neither redeemed, nor reformed, nor saved from ruin, without mothers, good mothers; and every improvement in their character is one of the surest possible guarantees for the general improvement and welfare of our race, through all coming time. — *Rev. George C. Beckwith.*

Sweet is the memory of departed worth.

Husk Beds. — Now (the husking season) is the time to secure the best and most durable of under-beds. All the inner husks of the corn should be saved for this purpose. True, it takes a great many to make a bed; but when once the sack is filled, it is a bed for life, and is the lightest and softest thing of the kind that one could desire. The husks curl up as they dry, and never mat down afterward. Moreover, no insects ever lodge in them, as vermin do in straw. They are perfectly clean, and, being of a strong and tough texture, they will not wear out for years. We regard a good husk bed as cheap at five dollars. A young married couple, to the end of life, live they ever so long, will have no occasion to fill a new under-bed if they once have their sacks filled with good, soft, well-dried corn husks. We had all of ours filled fifteen years ago, and they are this day "as good as new." — *Gospel Banner.*

Youth's Department.

Maxims to guide a Young Man. —

Keep good company or none.

Never be idle. If your hands cannot be usefully employed, attend to the cultivation of your mind.

Always speak the truth.

Make few promises.

Live up to all your engagements.

Have no very intimate friends.

Keep your own secrets, if you have any.

When you speak to a person, look him in the face.

Good company and good conversation are the very sinews of virtue.

Good character is above all things else.

Never listen to loose and infidel conversation.

You had better be poisoned in your blood than in your principles.

Your character cannot be essentially injured except by your own acts.

If any one speaks evil of you, let your life be so virtuous that none will believe him.

Always speak and act as in the presence of God.

Drink no kind of intoxicating liquor.

Ever live, misfortune excepted, within your income.

When you retire to bed, think over what you have been doing during the day.

Never speak lightly of religion.

Make not haste to be rich if you would prosper.

Small and steady gains give competency with tranquillity of mind.

Never play at any kind of game.

Avoid temptation, through fear that you may not withstand it.

Earn your money before you spend it.

Never run into debt, unless you see a way to get out again.

Never borrow if you can possibly avoid it.

Do not marry till you are able to support a wife.

Never speak evil of any one.

Be just before you are generous.

Keep yourself innocent, if you would be happy.

Save when you are young, to spend when you are old.

Never think that which you do for religion is time or money misspent.

Always go to meeting when you can.

Read some portion of the Bible every day.

Often think of death, and your accountability to God.

Read over the above maxims at least once a week, (Saturday night.) P. S.

— *Gazette and Courier.*

Health Department.

Exercise, Fresh Air, &c. — Downing's Horticulturist expatiates on the advantage to our women of often seeking the air, and using abundant exercise, as the true means of preserving health, and imparting to beauty a more captivating freshness. An excellent article thereon finishes thus : —

"A word or two more, and on what ought to be the most important argument to all. Exercise, fresh air, health — are they not almost synonymous ? The exquisite bloom on the cheeks of American girls fades in the matron much sooner here than in England — not because of the softness of the English climate, as many suppose. It is because exercise, so necessary to the maintenance of health, is so little a matter of habit and education here, and so largely insisted upon in England ; and it is because exercise, when taken here at all, is too often as a matter of duty, and has no soul in it ; while the English woman who takes a lively interest in her rural employment, inhales new life in every day's occupation, and plants perpetual roses on her cheeks, by the mere act of planting them in her garden."

For Sore Throat. — A stocking, warm from the foot, bound on the neck at night, is good for sore throat. For a severe case, put warm roasted potatoes into the stocking ; and after so warm an application and perspiration, as a consequence, avoid too much exposure of the neck the next day.

Mechanics' Department, Arts, &c.

The Uses of Iron in Buildings. — The uses of iron are only beginning to be appreciated. We perceive, by a late London paper, that it is quite a common thing to receive orders from Australia for sets of iron houses. These are prepared and despatched with as much readiness as any other description of manufacture. In New York and Philadelphia, iron fronts are also beginning to appear. The experiments that have thus far been tried, in this new movement, have been quite successful. A correspondent of the New York Mirror thus speaks of the advantages of iron over brick, wood, or stone. The hints are worthy the attention of builders.

First, as regards form and shape. Forms which stone could never be made to assume, varying from the lightest fairy structure to the most elaborate designs of the Grecian or Doric.

Saving of space in foundation, discarding the cumbrous pile of stone, and substituting a firmer and more compact base.

The capability of being speedily and easily erected, or of being taken down and removed without a loss of time or material.

Protection against lightning — a philosophical certainty.

Security against fire. In addition to the iron presenting no "food for fire" naturally, in the formation of the parts of an iron building, it can be shown, that it can never be injured by contraction in the event of internal conflagration, or cracked by the sudden application of water, even were it brought to a white heat.

Ventilation — the nature of the material affording the best method of securing the most perfect system of ventilation.

Facilities for the transmission of sound — a desideratum in all churches or public buildings adapted for large audiences.

Absence of vermin — avoidance of mildew, and absorption of dampness.

For the application of paint — the best known material, affording a beauty of external finish, with a protection from the weather.

Durability, strength, and firmness ; in particular for factories employing steam and heavy machinery.

Strengthening properties of iron for the constitution, as a principle of health.

External and internal ornamental finish, by the means of castings.

Economy — the slight effects of time or wear, the slight repairs necessary, and the ease and small expense with which additions may be made.

The repetition of form, through the medium of casting. A single design may be multiplied a thousand times, at the simple expense of the iron, saving time and manual labor.

The peculiar adaptation of iron to the formation of circulinear and graceful lines, in contradistinction to the rectangular and perpendicular. The severe rules which govern the Gothic or Grecian structures, in the laying of the stones, can be departed from in every essential particular.

In connection with this last-mentioned advantage, much might be said in regard to the adaptation of antique forms to the wants of our commercial community, and whether shapes more in keeping with the purposes intended would not be preferable to the Grecian temple or the other structures of the ancients, however beautiful they may appear at Rome or Athens.

The foregoing are a few of the many advantages which iron affords over every other material in use for the construction of our dwellings, factories, warehouses, or churches. The subject ought to be examined into and treated by men of science ; and the public, in these days of burning down and building up, should give their careful attention to a material which carries with it the three great essentials of house-building, — a *saving of time, labor, and expense*.

FAILURE OF THE PEACH CROP.

If the disease which has attacked the peach in this region is to prevail, it will effect a great revolution in our prospects relative to that delicious fruit. It has shown itself more or less for four or five years past, but never to the extent it has this season.

It has been assigned to various causes ; but, from close and constant observation, we are satisfied that atmospheric influence is the sole cause, and probably from a sudden decrease of temperature, in some way connected with its electrical state.

By a failure of the vessels in the petiole, or stem of the leaf, to return the sap sent up, an increased growth is produced of the fleshy, pulpy covering of the leaf — it increases, thickens, bends, and curls — becomes mildewed, and falls off, leaving the tree no lungs to breathe and carry on elimination ; and when there are no dormant buds ready to reproduce leaves, the limbs gum and die, the fruit almost entirely fails with the fall of the leaf, and the crop is lost.

There is quite a difference in the degree in which different varieties are affected. Crawford's Early Yellow stands the disease better than any other variety cultivated in this region — the Early Purple, an early and mildewing kind, next — and some of the late clings, and those uncultivated, resisted the disease, while many other highly-esteemed varieties were left entirely naked.

If this affliction is to prevail, the Early Crawford,

a large and very showy peach, though not of the most choice and tasty kind, will become a very important article to cultivate.

Others undoubtedly possess the same powers of resistance to the predisposing cause; and the observing and noticing those varieties will become extremely important in peach-growing districts.

This disease — if disease it may be called — has not extended to the Jersey and Delaware orchards; for peaches are said to be so plenty in New York and other seaboard towns, as not to bring the price of cartage from the country to the city.

Plums are almost a total failure, from the extreme east to the west, in this latitude; and we predict a great crop next year, so far as the ravages of the curculio will affect it, as they have not been able to propagate their species, from the want of the proper nidus for their eggs. — *Rural New-Yorker.*

Remarks. — The above article, referring to Western New York, shows very clearly that salt spray is not a cause of the curl on the peach; yet trees may be more liable to injury from being near the sea, or large bodies of fresh water, as from them storms may be more frequent and severe. It appears that the Early Crawford peach escaped the curl in New York, as well as in this region, which confirms our views as to its being hardy against this affection. — Ed.

FRESH AIR.

Man acts strangely. Although a current of fresh air is the very life of his lungs, he seems indefatigable in the exercise of his inventive powers to deprive himself of this heavenly blessing. Thus he carefully closes every cranny of his bed-chamber against its entrance, and he prefers that his lungs should receive the mixed effluvium from his cellar and larder, and from a patent little modern aquarius in lieu of it. Why should man be so terrified at the admission of the night air into any of his apartments? It is nature's overflowing current, and never carries the destroying angel with it. See how soundly the delicate wren and the tender little robin sleep under its full and immediate influence; and how fresh, and vigorous, and joyous they rise amid the surrounding dewdrops of the morning. Although exposed all night long to the air of heaven, their lungs are never out of order; and this we know by the daily repetition of their song. Look at the newly-born bear, without any nest to go to. It lives and thrives, and becomes strong and playful, under the unmitigated inclemency of the falling dews of the night. I have here a fine male turkey, full eight years old, and he has not passed a single night in shelter. He roosts in a cherry-tree, and is always in the primest health the year throughout. Three dunghill fowls, preferring this cherry-tree to the warm perches in the hen-house, took up their airy quarters with him early in October, and have never since gone to any other roosting-place.

The cow and the horse sleep safely on the cold, damp ground, and the roebuck lies down to rest in the heather, on the dewy mountain top. I myself can sleep all night long, bareheaded, under the full moon's watery beam, without any fear of danger, and pass the day in wet shoes, without catching cold. Coughs and colds are generally caught in the transition from an overheated room to a cold apartment; but there would be no danger in this movement if ventilation were attended to — a precaution little thought of now-a-days. — *Watterton's Essays on Natural History.*

RURAL ARCHITECTURE.

What the farmer requires in erecting a domicile which shall be the home of his future years, the homestead around whose altar his affections shall cling, and where he can retire after the busy, bustling scenes of the world shall have been succeeded by the calm, holy tranquillity of quiet eve, are, —

First. Cheapness. Many opinions are entertained by different architects as to which mode is cheapest. Some prefer frame houses, while others are equally in favor of plank buildings, which require less work to frame; others differ as to the form of building. While some prefer the winged story-and-a-half cottage style, others show their preference in building houses small on the ground, and of greater height, say two or three stories; others are equally in love with the "octagon" form of building. How much each of these forms deserves to be copied, we proceed now to consider.

The winged form of building is perhaps the most in vogue at present, and perhaps no form can be less deserving of imitation at the same time. Although to eyes which profess to be tasty in this respect the winged form may appear beautiful and convenient, yet, upon consideration, no form appears more absurd, or more at variance with the common law of nature. Winged houses indeed look better than winged apples or pumpkins probably would; yet when we consider that the form which will contain the most room, at the same time that it occupies the least outside space, is better in this respect, we must acknowledge that square houses are preferable to winged ones, and, on the same principle, that octagons are preferable to squares. Mathematics teaches us that a spherical surface encloses more than any other shape in proportion, and every-day experience likewise teaches us that this is one great end secured by nature in the rounding shapes of fruits, grains, &c.

Second. Durability is another great object to be desired. Now, the form which will best withstand the storms and tempests of winter, and best ward off the merciless peltings of our northern rains, is the most durable, as it will prevent houses from going into premature decay. Here nature again is our monitor, and teaches us that the spherical form exceeds every other for warding off the extremes of boisterous weather.

Third. Convenience. Too many of our farmers, in building, set aside their own better judgment, and listen to the advice of self-interested architects, whose main object in recommending such and such plans is to replenish their own purses at the expense of their employers. Now, in presenting this hasty sketch to the public, we do it with the desire of obtaining information on the subject of building. Should any of your correspondents or readers feel a desire to enlighten me on the subject, the information will be thankfully received. They cannot fail to perceive that I incline favorably to the octagon form; and now, who knows any thing in regard to it? Let some one speak (through the medium of the newspaper) who has tried the plan, and tell us how he likes it; its cheapness, durability, convenience, &c.

MERRITT.

— *Dollar Newspaper.*

STRENGTH OF WIRE.

As the subject of wire fences is now receiving considerable attention, and as inquiry has been made in regard to the strength of different kinds of wire, we give the following table, from an essay which lately received a prize from the Highland and Agricultural Society of Scotland. It shows the number of pounds each of the sizes of various kinds sustained before

breaking. The lengths tested were ten feet. The wire called "common" was the ordinary wire of commerce, and is said to be made mostly from the coarser sorts of iron. The "prepared" wire is made from a finer description of iron, is more carefully manufactured, and is superior in quality to the former. "Charcoal" wire is considered the best and strongest of any of the qualities made. It is drawn from iron which is worked chiefly by wood charcoal. The "annealed" wire is considered "the very worst that can be put into a fence. From its being soft, it is readily stretched by any weight or pressure that may be brought to bear against it; and, as a consequence, is thrown from one side to the other, as stock may happen to touch it." It is said also to oxidize or rust more easily than any other kinds.

Common Wire.

No. 8 broke with 590 lbs.
" 6 " " 844 " } Without perceptibly
" 4 " " 1269 " } stretching.

Annealed Wire.

No. 8 broke with 605 lbs. — stretched about 4¼ inch.
" 6 " " 832 " — " " 3 "
" 4 " " 1282 " — " " 2 "

Prepared Wire.

No. 8 broke with 955 lbs. — stretched about 1 inch.
" 6 " " 1380 " — " " ¾ "
" 4 " " 2163 " — " " ½ "

Charcoal Wire.

No. 8 broke with 1264 lbs.
" 6 " " 1762 " } Stretched about the
" 4 " " 2656 " } same as prepared wire.

— *Albany Cultivator.*

IMPORTANCE OF AGRICULTURE.

Agriculture has been aptly styled "the nursing mother of all the arts." It is the basis, the soul of our national prosperity. Commerce and manufactures conduce, in a great measure, to wealth; but the cultivation of the soil ever has been, and ever will continue to be, the fountain-head of all the streams of a country's resources.

There can be no strength in a state, and no moral health among the people, when the tillage of the land is neglected. We can date the decay of power and virtue of many nations from the decline of their agricultural industry. In Rome, for instance, when the wise policy of fostering agriculture was pursued, a healthful spirit pervaded the whole state. Then the laws were impartially administered, and justice done to all. Then labor was accounted honorable, and statesmen, and generals, and philosophers cultivated their farms with their own hands. It was then that from among the tillers of the soil arose a Regulus, a Cincinnatus, and an invincible soldiery. It was then that the "seven-hilled city" breathed defiance to her enemies, and caused nation after nation to yield to the resistless power of her legions, until the Roman eagle waved over the known world. But when largesses of corn were bestowed upon an idle populace, when agriculture was neglected, and war laid waste the fertile fields of Italy, then Roman virtue and Roman vigor fled. Soon intrigue, vice, and venality took firm hold in the state, until finally the "pale mother of empires" was abandoned to her enemies, and the palaces of the Cæsars echoed the tread of the victorious barbarian. History abounds in examples illustrative of the important fact, that the enduring greatness of a nation is mainly founded upon its agriculture, and rulers will do well to increase the prosperity of those who swing the scythe and hold the plough.

That country which does not possess within itself the means of affording subsistence to its own inhabitants, is, if we may trust the voice of experience, destined to sink to early ruin. National power based upon commerce alone, unsupported by a flourishing industry, which ministers to human wants and gratifications, must fall to the ground. Merely commercial states, dependent upon contingencies for their very life-blood, and imbued with that spirit of speculation which tends to enervate the body and corrupt the mind, contain within their own bosoms the seeds of dissolution. Phœnica, Carthage, Genoa, Venice, and Holland of the sixteenth and seventeenth centuries, all bear witness to this fact. There is much truth in these verses of Goldsmith: —

"Trade's proud empire hastes to swift decay,
As ocean sweeps the labored mole away;
While self-dependent power can time defy,
As rocks resist the billows and the sky."

To her unsurpassed agriculture England is most indebted for her support in the midst of those tremendous pressures which so often have threatened to crush her. It is the unparalleled cultivation of her soil that has enabled the British people, placed upon a rock-bound island, to excel the world in every article of fabric, to maintain an unrivalled navy, and plant their power in every quarter of the globe. Firm are the foundations of the strength of that nation, which in time of peace is nourished from the resources of its own industry, and in war can rely upon the strong arms and undaunted hearts of its yeomanry, to sustain its rights in the din of strife or in the roar of battle!

Upon agriculture, in addition to the necessaries and common comforts of life, depends the success of every other employment. It is agriculture that builds up our crowded cities, covers our fields with yellow grain, and diffuses life and vigor throughout the land. It is agriculture that supports our gigantic manufactories, ringing from their basement to their attic with the music of free labor, and causes our ten thousand ships to dance upon every rolling billow, and spread their sails to every propitious gale. Says Lord Erskine, in his political romance called Armata, "You might as well hope to see the human body in active motion when palsy had reached the heart, or a tree flourishing after its roots were decayed, as expect to see manufactures, or arts, or industry of any description, progressive, when agriculture has declined." Paralyze it, and you weaken the pulse of enterprise, stiffen the fingers of machinery, and clip the wings of commerce. Destroy it, and you bury in one common grave national power and individual prosperity. — *Martin's Address in Sinonian Society, Yale College.*

DURABILITY AND DECAY OF PLANK ROADS.

A plank road may require a removal, either because it has worn out at top by the travel upon it, or because it has been destroyed at the bottom by rot. But if the road has travel enough to make it profitable to its builders, it will wear out first, and if it does, it will have earned abundantly enough to replace it twice over, as we shall see presently. The liability to decay is therefore a secondary consideration on roads of importance. As to natural decay, no hemlock road has been in use long enough to determine how long the plank can be preserved from rot. Seven years is perhaps a fair average. Different species of hemlock vary greatly, and upland

timber is always more durable than from low and wet localities. The pine roads in Canada generally last about eight years, varying from seven to twelve. The original Toronto road was used chiefly by teams hauling steamboat wood, and at the end of six years began to break through in places, and, not being repaired, was principally gone at the end of ten years. Having been poorly built, badly drained, not sanded, and no care bestowed upon it, indicates the minimum of durability. Oak plank cross-walks are in Detroit, the plank being laid flat on those of pine. It is believed that oak plank, well laid, would last at least twelve to fifteen years. One set of sleepers will outlast two plankings. Several Canada roads have been relaid upon the old sleepers, thus much lessening the cost of renewal.

VINEYARDS ABOUT CINCINNATI.

Editors of the Cincinnati Gazette: I was yesterday at some of the vineyards on the Ohio, below the city, and, among others, at the vineyard of Mr. Duhme, who, I understand, resides in the city. The location is a good one, with a favorable soil, and is, I believe, the largest vineyard in the state. It requires his personal attention. The grapes ripen badly, and a large portion of them cannot ripen at all.

In some parts of Europe, where their summers are cool, they find it necessary to shorten the leading branches intended to produce the next year's crop, and thin out the leaves, and head in the short branches, and fully expose the fruit to the sun and air, to insure its ripening. This method, in our hot climate, is often highly injurious to the plant, and destructive to the fruit. If the heading in of the leading shoots be done early in the season, the fruit buds of the following year are thrown out. As an experiment, I one year, by successive heading, had the fruit of four successive years on the plant at the same time, and, the fall being favorable, the second crop ripened its fruit. Where the fruit branches are frequently topped, and the wood becomes ripe, the sap ceases to flow, and the fruit cannot ripen. This is the case at the vineyard of Mr. Duhme. In our hot climate, no more lateral branches should be taken from the main shoots intended for next year's fruit than to give them the necessary length. The fruit branches should be topped when in blossom, beyond the second eye from the last blossom, and after that, allowed to grow without topping. In our climate, to ripen the fruit, a portion of shade is necessary; for where there is growing young wood, there is, of course, a full flow of sap to the fruit, without which it shrivels and drops off.

This day I visited a German settlement on the Ohio, commencing about twelve miles above the city, and extending about four miles. The hill commences close to the river, and rises gradually; the usual bottom land being on the opposite side of the river. The soil is porous, and well calculated, in my opinion, for the cultivation of the grape; and nearly the whole of the four miles is occupied by vineyards, and there are also some on the top of the hill. Two of the vineyards belong to Englishmen; the owners of all the others are Germans.

Most of the vineyards in this vicinity have suffered severely from the rot; and some vine-dressers, expecting, in the early part of the season, to make from two thousand to four thousand gallons of wine, will not make one hundred. Yet their vineyards are on the sides and tops of the hills, fully exposed to the sun and air. But the subsoil is a stiff clay, retentive of moisture. These localities will, I fear, be always subject to rot, and yet the vineyards will be found more profitable than any other crop. To persons having a porous soil, I would recommend the cultivation of the Herbemont grape. It is a fine grape, both for the table and for wine, and perfectly hardy. It makes wine of superior quality, similar to the Spanish Manzanilla, or Mansinælla, as it is generally pronounced. This grape has a soft pulp, and resembles the best foreign table grapes. Lick Run, in our immediate vicinity, will make one of the most beautiful rural spots in the world. It will soon be a continuous line of vineyards. I wish some of our poets would visit it in May or June, and give it a more beautiful and appropriate name. They may rack their brains for months, and not find one worthy of the scene. It is different on Mount Adams, which is in a double sense in connection with the heavens — its height, and proximity to the great telescope of Professor Mitchel. The highest street is called Celestial Street. Commanding as the view is, the name surely equals it.

N. LONGWORTH.

P. S. I have just returned from a visit to the vineyard of Mr. Langdon, on the bottom of the Little Miami, eight miles above the city, in a sandy soil. That porous soil is not subject to the rot in grapes, is exemplified here. His misfortune is, in fact, too large a crop of fruit — an unusual complaint this season. Yet he will have a poor vintage, arising from two causes, which prevent the fruit from ripening. The first and least cause is, too much fruit, from leaving too much bearing wood. There was more than the vine could give a supply of sap for, in a favorable season. The second and great cause is the same as at the vineyard of Mr. Duhme. The fruit has no shade, few leaves, and but little young wood on the fruit branches, to carry sap to the grapes to ripen them. The wood is life, and the circulation of the sap stopped. Not one fourth of the grapes will ripen perfectly; many of them shrivel and drop, and many of them scarcely change color. A favorable fall will aid them.

I observed, in the vineyard of Mr. Langdon, that the Catawba vine is much closer jointed than in our richer land, where there is a subsoil of clay; and one of my German vine-dressers assured me this is always the case. This would indicate an increased crop, and the change probably depends on the richness of the soil. An important inquiry is, Will the grape, in a sandy soil, yield an equal amount of sugar? I wish our vine-dressers to direct their attention to this subject. In some of our vineyards they have both soils, and the question will be easily decided. The color of the Catawba grape is no certain evidence of its ripeness and richness. They are often of unusual dark color this season, yet the juice has one eighth less sugar. N. LONGWORTH.

— *Cincinnati Gazette.*

CURE FOR GLANDERS.

In answer to one of your subscribers, inquiring what will cure "Nasal Gleet," or discharge from the nose of horses, I would say, that I have cured many with the following simple compound, and two cases that were called glanders confirmed, viz.: Take one teaspoonful of common rosin, one tablespoonful of copperas, two tablespoonfuls of salt, and four spoonfuls of dry ashes; pulverize the rosin and copperas, and mix the whole, and give it in bran or shorts, or oats, dry, and in four weeks' time, by giving the same quantity twice a week, I cured the two cases of glanders. I have used the same in cases of cold or catarrh, and three or four doses have performed a cure. I have also used it for horse distemper with success. O. W.

— *Dollar Newspaper.*

ABILITY OF THE EAST TO GROW WHEAT.

The gradual failure of the Eastern States, and a part of this state, to produce wheat, is an enigma of difficult solution. The state of Vermont, even, with its Boreal climate, once was a wheat-growing region, and continued to grow more or less, previous to the advent of the weevil, or grain worm; but it was nearly abandoned in most of the New England States, and in the eastern part of this state, long before this period, as a reliable and profitable crop.

The analysis of soils of the same apparent texture and composition does not show any important difference in their constituents. The *diluvium* — drift or soil that covers this continent — was not created in the *locale* where it lies, but is the triturated masses of the rocks covering a vast extent of country, and was distributed by currents and disturbances of the "world of waters" that once covered the whole globe, before the "waters were gathered together."

Now, although the western district is underlaid by a sedimentary, calcareous substratum of rocks, yet the soil is not found, by analysis, to take any distinctive character from that peculiarity. It can hardly be climate that affects the wheat plant, as we are in the same latitude as our middle, northern and eastern counties; and yet with us it is a certain crop — the great reliance for profit by all the farmers of this region and the great west.

If lime, or potash, which are admitted to be important constituents of wheat, are lacking, and they have been used up by cultivation, or if the soil lacks any other required *pabulum* of wheat, let them be artificially applied; they are perfectly within the reach and ability of the farmer.

As the grain worm has ceased to exist at the east, simply from the want of the means to propagate itself, let the farmers commence wheat husbandry again — clover, lime, and ash their land — sow early, that the plant may have strong roots to withstand the winter — and we feel persuaded that success would follow their efforts. There is no witchcraft about raising wheat: a few well-conducted experiments would tell the story, and perhaps end in conferring incalculable benefits to the present non-wheat-growing regions. — *Rural New-Yorker.*

LEAVES AS MANURE.

Leaves, buds, and tender branches are peculiarly rich in the vegetable alkali; besides which, they contain other organic elements derived from the soil, enrich its surface, tending to prevent its exhaustion, or, when newly applied, — that is, to other ground, — to enrich it more than superficially.

Leaves — and the remark is applicable to the tender branches also — seem destined by nature for the manure of forest land, and, indeed, of ground generally wherever trees grow. The roots collect the inorganic elements essential to vegetation from the soil, penetrating deeply and widely; the leaves detain and store up a certain portion of them with other elements derived from the atmosphere, such as are required for their growth; and these, returned to the soil with the fall of the leaf, and there undergoing decomposition, are ready to be appropriated again, and re-administer to the process of vegetable growth. — *Farmer's Herald.*

The intelligent have a right over the ignorant — the right of instructing them.

NOTICES OF PUBLICATIONS.

The Farmer's Guide. — We have occasionally noticed this valuable work, by Mr. Stephens, one of the ablest and most practical agricultural writers of Great Britain. In the eighth number is the commencement of notes by Professor Norton, which are very interesting and instructive, and are intended to adapt the work to American agriculture. It is neatly printed, at a moderate price, and is illustrated by numerous engravings. New York: Leonard Scott & Co. Boston: Fetridge & Co.

The Illustrated Domestic Bible, with Notes, Reflections, Questions, &c., by Rev. Mr. Cobbin, is very neat and instructive, and admirably adapted to families; it is beautifully illustrated, and published at a low price. New York: Samuel Hueston. Boston: Hotchkiss & Co.

The (Old) Farmer's Almanac, by Robert B. Thomas. — We gladly welcome this old social friend to our table. It has made its annual visits to the farmer for more than half a century, and as the author is as young and jolly as ever, it seems as though he would live forever. Boston: Jenks, Palmer, & Co.

Catalogue of Fruit and Ornamental Trees, from William Reid, Elizabethtown, N. J.; containing a list of a large number of varieties of fruits, with short descriptions.

Letter to the Hon. J. M. Clayton, Secretary of State, on the Independent Oriental Nations, &c., &c., by Aaron H. Palmer. This pamphlet contains valuable information. Washington: Gideon & Co.

ACKNOWLEDGMENTS.

As we had many presents of fruits, we could not notice them all in our last. The greater part of these fruits were received a few weeks ago.

Of E. C. Purdy, Medford, Editor of the Boston Daily Mail, the Purdy peach, a seedling of his own raising. This peach is among the largest size, and the most beautiful, and we have not tasted of a finer fruit this fall. It ripens the last of September. If others will cultivate it so as to bring it up to the same size, it will be a valuable acquisition for the market. Mr. P. has also kindly furnished us with some of the stones, and we hope to raise the same from the seed.

From Elijah Wyman, 3d, Woburn, several very fine varieties of peach, the names of which are not familiar to us.

From Briggs Arnold, East Abington, a seedling peach called "Penniman," which resembles the Early Crawford in appearance, but it is sweeter, and of less flavor. Another seedling ("Ben Pratt") peach was picked too early for us to judge of its quality. No. 4 was excellent, but we do not know the name.

From John Day, West Boxford, some fine peaches.

From Joseph F. Tilden, Newbury, Vt., a mammoth tomato, that weighs two and one half pounds.

Of M. L. Hayes, Farmington, N. H., pears raised on an apple-tree. This pear is occasionally seen in this region, and sometimes exhibited for a name. It is of a pleasant, vinous flavor. Mr. H. has raised a good crop of pears, for several years, from scions of this pear set in a standard apple-tree, — a rare case of success in this mode of raising pears.

From James S. Draper, Wayland, Garden Royal apple. This fruit is small, fair, and handsome, and of the highest quality for a dessert apple. Also, Holland Pippin, good for cooking; Cole's Quince is true to name.

From John Copp, Wakefield, N. H., Porter and Minister apples — true and fine specimens.

From B. F. Cutter, Pelham, N. H., fifteen kinds of seedling peaches. Mr. Cutter procured some good peaches in the Boston market, and planted the stones. The trees succeed better than the budded varieties, and the fruit is generally larger, handsomer, and of better quality, and they bear better. Here are additional arguments in favor of natural peach-trees, instead of budded kinds, which we have urged for ten years. The greater part of the varieties sent to us were very fair, handsome, and of good quality.

From Elisha Bunce, Westford, Isabella grapes, pretty well ripened; the best of the kind that we have seen this season.

From Henry Fish, Hopedale, Milford, eight varieties of grapes, native wild, and seedlings. Some of them are tolerably fair, but generally they have too much of the rank, foxy, or musk taste.

Of Job C. Stone, Shrewsbury, Mother apples; very large and fair. This promises to be one of the finest late fall apples. It is of a good size, very beautiful, and of the finest quality. Also, Leland Pippin, a fine, handsome variety, ripening from the middle of September to the last of October. We have noticed that in the state of New York, and in some other sections of the country, this is called Leland Spice; but this is without proper authority, for we first introduced this apple to public notice, under the name of Leland Pippin, after consulting Dea. Daniel Leland, of Sherburne, on the subject, who has raised and disseminated this variety extensively.

Of Charles H. Pendleton, Pendleton Hill, Ct., Dennison's Redding apple; small, very beautiful, and pleasant; not sufficiently ripe for us to judge well of its quality. Mr. P. says that it usually attains medial size.

Of John Hayward, Hancock, N. H., several varieties of apples; among them are Jewett's Red, or Nodhead apple, a superior fruit, but it requires high culture to produce fair fruit. It is a very popular apple in some sections of New Hampshire and Maine. The large, conical apples are the Holden Pippin, a great grower, great bearer, and excellent for cooking, but rather acid for the dessert. Other kinds not known here.

Of Benjamin C. Pratt, Hanover, Pratt peach — a seedling which he raised some years ago, and which he continues to propagate from the seed, in its purity, as he cultivates no other. Although we name this last among our fruits, it is far from being the least in point of utility. It is large; rather oblong, and irregular in form; yellow ground, much covered with dull red. The flesh is very rich, and of fine flavor, ranking among the best. It is a peculiar excellence in producing the same from seed. Mr. Pratt remarks that it forms a large, hardy, long-lived tree, and that it is a great bearer. It is covered with a remarkably thick, furzy, or woolly substance, which is an advantage in protecting it against storms and insects, and a disadvantage as to selling it in markets where it is not known.

HOME.

'Tis home where the heart is, wherever that be,
In city, in desert, on mountain, in dell;
Not the grandeur, the number, the objects we see,
But that which we love, is the magical spell.

'Tis this gives the cottage a charm and a grace
Which the glare of a palace but rarely has known;
It is this, only this, and not station or place,
Which gives being to pleasure, which makes it our own.

Like the dove on the waters, a rest-place to find,
In vain for enjoyment o'er nations we roam;
Home only can yield real joy to the mind;
And there, where the heart is, there only is home.

THE OLIO.

A young lady, who was rebuked by her mother for kissing her intended, justified herself by quoting the passage, "Whatsoever ye would that men should do unto you, do ye even so unto them."

"Pa, isn't that man in what is called the spring-time of life?" "Why, my son?" "'Cause he looks so confounded green."

"*Genius* will work its way through," as the poet remarked, when he saw a hole in the elbow of his coat.

A beautiful Oriental proverb runs thus: "With patience, the mulberry leaf becomes satin."

Gratitude for favors shown is the distinguishing trait of a truly noble mind.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

☞ The Postage ☜

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

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Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, OCTOBER 26, 1850. NO. 22.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

KEEP NOT TOO MUCH STOCK.

It is frequently a great error in farmers to winter, or attempt to winter, too much stock. When we have large crops of hay, it does not spend so well as usual, and one is very liable to be deceived as to his means of wintering stock. There is but very little old hay in New England, and much of the large crop of the present season had but little sunshine on it before it was cut; there were several weeks mostly cloudy weather just before haying commenced; of course, it was very deficient in sweetness and nutrition. And a large part of the grass that was cut late had but little sunshine on it after it was cut, and a great deal of it was poorly made, or injured by storms.

When there is a very large crop of hay, it is not good economy to keep animals enough to consume the whole the first winter, for a scarcity of hay often follows, which, occurring when there is a great amount of stock in the country, must reduce it to very low prices. In this respect, every individual must judge and act for himself; and we throw out these hints for reflection, for we frequently hear of cattle dying of starvation in the spring, or suffering so much from short allowance that they are but very little profit the coming season.

At the present time, stock is in good demand, and any one who has a surplus of animals, can reduce them to a suitable number for wintering without sacrifice. Those who attempt to winter too much stock, depending on buying hay, often find, late in winter and spring, that many are in the same situation; and it is truly one in which misery does not love company.

AN OLD HIVE OF BEES.

Capt. John Pierce, North Chelsea, informed us that he had a hive of bees twenty-six years old. They were put into a hive of three sections. He had taken off the top section five or six times, and after taking out the contents he replaced it. Some seasons he took from the top section forty or fifty pounds of honey.

This hive has swarmed twice a year, on an average, or very nearly this number. A few years ago the bottom section was taken off; it was full of honey, and, after it was taken out, the section was replaced. The next year it was filled again.

The moths never troubled this hive. Capt. Pierce says that these insects do not trouble old hives, but they get into new hives the first season, and become troublesome the next.

We name this case of an old hive, as some persons think that a swarm cannot be kept long in the same hive, without removing the comb, that the bees may renew it. It is supposed that, as bees breed in the comb, the cells slowly fill up, so that after several years the bees will be of a reduced size. The occasional removal of the upper section did not afford much advantage in regard to breeding, as the brood comb is not usually in the upper part of the hive.

A bee-keeper informed us that he kept bees fourteen years in the same hive, without removing any of the comb. They did well, and swarmed frequently. We present these facts for the consideration of the curious; yet we would remark that young swarms are the best.

BRISTOL CATTLE-SHOW.

This festival was held at Taunton, on the 10th inst. The day was delightful, forming a beautiful contrast with the stormy days that had occurred latterly at these shows. The first part of the exhibition was the ploughing match, which we did not see, as it was about over when the Boston cars arrived.

The show of stock was very good, comprising a great variety, and rather larger than usual. The show of fowls, though not extensive, was very fair, and constituted a new feature in this exhibition.

The show of fruits was very fine, particularly of apples and peaches. There were a great number of varieties, and generally of excellent appearance. Mr. Jacob Deane, Mansfield, distinguished as a skilful fruit-grower, exhibited about eighty different varieties of apples, and fifty or sixty varieties of peaches, many of which were seedlings of his own raising.

There was a good show of vegetables; the butter and cheese looked well. The articles of domestic manufacture were highly creditable to the ladies of Bristol. They indicated much skill and industry.

The society, with invited guests, dined at the Taunton Hotel. After the body was refreshed, short and appropriate speeches were made by Dr. Gardner, of Seekonk, president of the society, Mr. Page, of New Bedford, vice-president, and by Governor Briggs. We then left for the cars. Other gentlemen doubtless followed. There was no elaborate address by an orator selected for the purpose.

The show generally was very good, and highly encouraging; and by the remarks from the president, it appears that it is in a very flourishing condition.

As to the dinner, there was one serious fault, which should be avoided in future. It was not ready until nearly an hour after the time set. On such occasions, time is precious, while many are far from home, and promptness is highly important. There was also a mistake in the bill of fare, else in preparing dinner, as some important articles in the former were not in the latter.

For the New England Farmer.

BILBERRY.

Mr. Editor: Will you be so good as to give us the correct name of the shrub known here, with some by the name of *bilberry*, with others by that of *Indian plum?* I mean the small tree which blossoms earliest of all the wild shrubs of this province, its beautiful white blossoms appearing immediately after the frost is out of the earth.

I have seen it do well transplanted, but it will not bloom so early if removed to an exposed situation.

Yours, &c.,

M.

Albert, N. B.

Remarks. — There are two varieties of the bilberry. The Blue bilberry (*Vaninicum corymbosum*) is a shrub that flowers when of a small size, but it often attains a height of six or seven feet. The young twigs are light green or purplish, with small white dots. The leaves are smooth, oblong, acute, pale green, flowers numerous, large, and white; berries large, covered with blue powder, sweet and acid. Found in swamps. Flowers in May.

Black bilberry (*Vaninicum disomorphum*) is a shrub four or five feet high, with reddish twigs. It flowers in May, before the leaves have unfolded. The leaves are oval, acuminate, hairy underneath; flowers small; berries small, black. Grows in swamps. This species generally resembles the other, but the fruit and flowers are much smaller.

We have given the common distinguishing names of the species of bilberry known in this region, also the scientific names. Our correspondent will please make the application to the kind known in his region, as his description is not sufficiently definite to tell which is which, or whether the plant he has in view is truly the bilberry, or not. — Ed

For the New England Farmer.

PINE HEDGES.

Mr. Editor: I like the suggestion contained in an article in the last Farmer, with regard to the raising of pine hedges for fence. I am entirely ignorant, however, of the culture of the pine from the seed, and should be glad to receive some instruction through the medium of your paper, with regard to the most suitable time for the collecting of the seed, and sowing it, as I feel disposed to test the utility of the plan as recommended.

Respectfully,

S. SMITH.

Hartford, Vt., *Oct.* 3, 1850.

Remarks. — The seeds of the pine should be gathered and planted in the fall. If not convenient to plant in the fall, mix the seed with fine loam, in a box or other vessel not tight at the bottom, and put it in the earth, near the surface, that it may be exposed to the action of the frost and influence of the weather, to fit the seed for germination, which sow early in spring.

We have but few directions for cultivating pines or other forest-trees. In all cases, the soil should be made light and mellow, and for a few years the tender plants should be protected against animals, and against other plants or weeds of stronger growth. — Ed.

STRAWBERRIES.

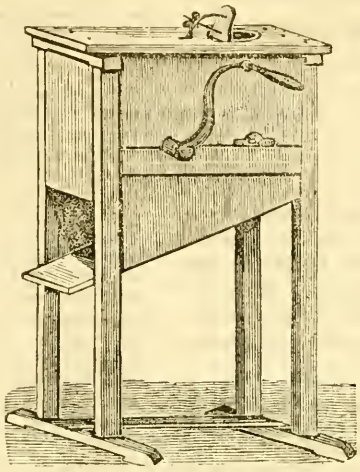
Levi C. Eaton, Esq., of North Providence, who has devoted his time, and been at great expense, to obtain the choicest kinds of fruit, exhibited his strawberries the last season to a number of gentlemen, who were hospitably entertained at his magnificent mansion.

There were thirty-seven kinds in his garden; out of seven varieties of western origin, but two were approved: from seven kinds imported from France in 1848, only one was first-rate: from seven English varieties, recently introduced, none were approved; they, like most of the French kinds, were staminate, unproductive, and too tender for our New England winters. The New York Hudson Bay, the Cincinnati Hudson Bay, and the Rhode Island Hudson Bay were distinct varieties, the last unquestionably the best in all respects.

Six kinds were appropriated, viz.: Hovey's Seedling, General Jaqueminot, Jenny's Seedling, Burr's New Pine, Rival Hudson, and Rhode Island Hudson Bay.

The General Jaqueminot is unrivalled; fruit large, firm, highly flavored; of vigorous growth, very hardy, productive; fruit-stalk high and strong; flowers perfect. This variety is well adapted to set with Hovey's seedling, as a fertilizer to that justly celebrated fruit. — *Providence Jour.*

Fine Peaches. — The peach crop this season has been very plentiful, but the quality has been inferior, being of a very acid flavor. We received some specimens, however, from S. Smith, Esq., of Raleigh, N. C., and N. T. Green, Esq., of Danville, Va., which were uncommonly fine, very large, and luscious. The latter gentleman offers to forward us some of the seed, which offer we accept, if it is a seedling. We think it fully equal, if not superior, to any peach grown in this state. — *Am. Farmer.*



YANKEE CORN-SHELLER.

This is an excellent machine, made in a substantial manner, of durable materials, so that it is not liable to get out of order, or to be injured by wear for a long time. The hopper is made of iron, and the balance wheel plays inside, where it is safe from injury. It is fitted with firm double springs, adapting it to ears of every size. A bushel of corn can be shelled in this machine in five minutes. It is neat, compact, and conveniently portable.

DESIRE OF WEALTH.

"Give us this day our *daily bread.*" This prayer regulates the amount of our wants, and the measure of our desires. We are instructed to ask only as we need; there is danger in asking more. God may *give* more, but it is not safe to ask for more, lest he should say of us as he did of his restive and grasping people of other days: "I gave them their request, but sent leanness into their souls."

It is a beautiful remark of Lord Bacon, bad as he was, "Seek not proud wealth, but such as thou mayst get justly, use soberly, distribute cheerfully, and leave contentedly." Wealth is desirable, not for its own sake, nor merely for the wants it supplies. In itself it is an abstract imaginary thing, and, where it is possessed, not unfrequently creates more wants than it gratifies. It is desirable to augment influence and extend the facilities of doing good. That accomplished statesman and jurist, the late William Wirt, a name that will long be illustrious and venerated in American history, on this topic makes the following touching observations: "Excessive wealth is neither glory nor happiness. The cold and sordid wretch who thinks only of himself; who draws his head within his shell, and never puts it out, but for the purpose of lucre and ostentation; who looks upon his fellow-creatures, not only without sympathy, but with arrogance and insolence, as if they were made to be his vassals, and he to be their lord; as if they were made for no other purpose than to pamper his avarice, or to contribute to his aggrandizement—such a man may be rich, but, trust me, he can never be happy, nor virtuous, nor great. There is a fortune in a golden mean, which is the appropriate region of virtue and intelligence. Be content with that; and if the horn of plenty overflow, let its droppings fall upon your fellow-men; let them fall like the droppings of honey in the wilderness, to cheer the faint and weary pilgrim."

It is a sad thought that wealth is essential to distinction. It is not so. The voice of conscience, the voice of reason, the voice of God, announce it not so. Wealth alone is not worth living for. Sigh not for wealth. Envy not the splendor of the affluent. The most wealthy are often most in want. "A man's life consisteth not in the abundance of the things which he possesseth." Where wealth is the most eagerly sought after, it is the least satisfying. No wise man will ever venture to pray that he might be rich. Let a man be thankful if, by exemplary diligence, he can procure a comfortable living; if with this he can be cheerful and happy, he has the earnest of more; and, what is of much greater consequence, he has the pledge that more will not be his ruin. An eminent merchant of this metropolis, distinguished not less for his liberality than his integrity and success in business, and who was a most exemplary ruling elder in one of the churches, (the late Jonathan Little,) remarked to the writer of these pages, many years ago, "Sir, God has been pleased to *give* me a large share of this world's goods; but I have never dared to *ask* for more than my daily bread." — *Dr. Spring.*

LONG ISLAND LANDS.

We would call the attention of our readers to the advertisement of Dr. Peck, on our cover. These lands are very favorably located as to climate and good markets, and it is singular that they have remained so long unsettled; but this being the case, they can be obtained cheaper than old lands, doubtless cheaper than old lands that are exhausted. Our object is to call attention to the subject, advising those who would purchase to examine and judge for themselves.

A man's nearest kin are oftentimes far other than his dearest.

THE CRANBERRY WORM.

This insect has made its appearance within a short period, and in some sections it has been very destructive, destroying the whole crop; and as it is on the increase, it is apprehended that it will be a serious pest. It is supposed that it will be most destructive on high lands, or those that are of medial elevation, or comparatively dry. Dea. Fowler handed us some cranberries which he raised on high land, containing these worms, which we sent to Dr. Harris, distinguished as an able entomologist, and he made the following communication, which friend Fowler has handed to us, and which we publish by permission of Dr. Harris.

Dea. Fowler. Dear Sir: Mr. Cole sent to me, today, some cranberries injured by insects, together with your letter, in which you referred them to me. Most of the insects had escaped; but some of them remained in the cranberries, and these I found to resemble closely the well-known "apple-worms;" indeed, they do not present any perceptible difference from the latter. The question of their identity, however, can be settled by keeping them till they undergo their transformations. It is a new thing for cranberries to be attacked by apple-worms; or, rather, no instance of the kind has ever before come to my knowledge. The unripe cranberry is not very unlike in its pulp and its flavor to unripe apples, and hence it is not surprising that this fruit, especially when cultivated in *dry* situations, should be attacked by such insects as these. It appears to me that apple-worms have very much increased of late, and we have many more windfalls, and much more wormy fruit, than I remember to have seen in my boyhood. It was the practice with some farmers, formerly, to gather their wind-fallen apples and make them into cider. Perhaps the discontinuation of this practice has contributed to the increase of the apple-worms. Perhaps cranberry meadows which are wet escape these insects, because the fruit is more or less flowed or immersed in water at the time when the moth that produces the apple-worms is about laying its eggs. Some have supposed that this moth lays its eggs in the *blossoms* of apples and pears; but this is not the fact. It does not lay its eggs till the fruit has formed, and it continues to deposit eggs in the fruit for some time afterwards; though the greater number of eggs are laid while the fruit is very small. If, therefore, it were possible to lay cranberry meadows under water, for a short time *after the vines were out of flower, and after the fruit was formed*, such a course might effectually protect the fruit from attack. Against their attacks on the fruit grown in dry meadows I cannot suggest any preventive.

Respectfully yours,

THADDEUS W. HARRIS.

Cambridge, Mass., *Sept.* 3, 1850.

DISEASES OF ANIMALS.

Friend Lovett Peters, Westborough, has communicated to us the following remarks on the diseases of animals, in reference to what he had seen on the subject in the American Veterinarian. Friend P. is in a vigorous old age, after having seen more than fourscore years. He has been a successful farmer, and paid great attention to animals; but while we would claim for him a respectful consideration of his new theory in regard to the cud of ruminating animals, we are not prepared to endorse his views.

Loss of Cud. — I doubt whether a ruminating animal ever lost its cud; probably no one will deny that every ruminating animal makes its first cud; then why not another?

It is also doubted whether a ruminating animal brings from the stomach to the mouth what has been swallowed, to remasticate it. It seems unreasonable that it should be so, for two reasons: one is, that on examining the contents of an animal's stomach, there will be found whatever the animal has eaten or drank, all mixed up together; and how can it be separated? Another reason is, that a pair of oxen well fed in the morning, and worked all the forenoon, and chewing the cud but very little, will eat just as much at noon as if they had chewed the cud the whole forenoon; and they will go through the same process in the afternoon, — no chewing of the cud, yet all they have eaten is gone.

Now, I never have believed this notion of animals bringing up from the stomach all that had been eaten, to remasticate, nor the cud, but have supposed there was a secret place of deposit for the cud; and I find such is the fact, and the place is under the tongue; and probably a new cud is made when the animal ceases eating.

Scours in Calves. — Put half a pint or three gills of cider in a bottle; open a vein in the calf's neck, and let about the same quantity of blood into the bottle as you have of cider; shake it well together, and give it to the calf. One dose generally effects a cure; if one does not, a second, with me, always has.

Tail Sickness. — There is no need of animals ever being tail-sick. My method of managing calves' tails is a complete preventive; at least it has proved so with me, in a practice of twenty years or more. It will be found, by a careful examination, that every calf has a small spot in the tail, sometimes not more than half an inch in length. By nipping with the thumb, on each side of it, and a little way from the end, it will be found considerably smaller. Cut the tail off at this small place, and if it is rightly cut, the animal will have a beautiful switch, that it can swing over its back much easier than it can those heavy slit tails which some have. There will then be no tail sickness, nor cutting of tails after.

Horn-Ail. — I believe there is a mistake about the seat of this disease. The opinion of some is, — and mine among the rest, — that the disease is on the liver, and disease appearing in the horns is the effect, not the cause; and I am confirmed in this opinion by some examinations which I have made after the animal was dead.

If the seat of the disease is on the liver, then turpentine between the horns could do no good, as I have never found it to be. With salt, pepper, and soot, equal parts, given in powder, I have cured many which I believed to have the horn-ail badly.

For the New England Farmer.

FRUIT AS FOOD. — GRAFTING.

Mr. Cole: The importance of fruit-raising, in a pecuniary point of view, is now comparatively well understood by the more intelligent portion of our agriculturists and horticulturists. Many are now devoting much time and capital to its culture — an investment far more lucrative than many other branches of industry. The importance of fruit as an article of diet, however, seems not so generally appreciated. There are a few, indeed, who regard fruits as almost indispensable to health; but the great

mass still use them as a *dessert* rather than as food; and not a few studiously avoid them, as active agents in producing most of the diseases which appear during the warmer portions of the year.

It is an unaccountable occurrence, that these delicious fruits are provided by a wise Providence, just at the time when we naturally expect bowel difficulties, and that they are so universally palatable, if not provided for a definite purpose. And who dares assert that this design is not a wise and benevolent one? Who can produce a shadow of evidence that it is not *remedial?*

It is unquestionably true that some forms of disease *seem* aggravated during the abundant supply of the more delicious fruits. This is attributable to their *abuse* rather than their *use*. That an indiscriminate use of crude, unripe, or decayed fruit is decidedly injurious, is too apparent to admit of doubt. When their use is regulated by an enlightened judgment rather than blind, voracious impulse, we may expect far different results. When fruit shall constitute a prominent article of *diet*, at certain periods of the year, instead of cumbrous additions to an already overloaded stomach, we may know something of the legitimate use of these luxuries.

To say nothing of such as, by their timely appearance, juicy character, their peculiar combination of sweetness and acidity, and their rapid decay indicate their definite design, there are still others which may be appropriately used during most of the year. I refer particularly to the apple, grape, pear, &c., in their extensive variety, all of which possess, to a greater or less extent, valuable medicinal properties, especially the first. The aperient qualities of the apple render it peculiarly valuable in this age of dyspepties, and it would not be too much to expect that its general introduction *as food* would almost, if not entirely, annihilate this destroyer of human happiness.

Aside from this, they have claims, as connected with their nutritive principles, which should not be overlooked. The recent difficulty in raising the potato suggests the propriety of a substitute. In England, in time of scarcity, the apple had been somewhat extensively used, and regarded as nearly as nutritive as bread, — more so than the potato. In France and Germany, they are extensively used by the laboring classes with favorable results. With a small quantity of bread, they, not unfrequently, constitute the entire meal. That they can be easily raised will not admit of a reasonable doubt. A trifling investment, with the requisite knowledge of the best methods of preparing and adapting soil, pruning, &c., will secure an ample return, not only in gustatory pleasure, but in a pecuniary point of view.

In what manner these may be raised in the largest quantity and of a *superior* quality — for it should be our object to get the best — is a matter of much importance to the farmer. It is not sufficient that we *have fruit*, but that we have such as may be *palatable*, and conducive to health in the highest degree. To effect this, the culture must be conducted on scientific principles. *Random* experimenting is far too expensive for the mass of producers, and unwise in any.

The more particular design of this article is to refer to certain observations and experiments, communicated to the writer by Loring Wheeler, Esq., of this village, a gentleman who is much interested in fruit culture. He has raised, during the present season, several varieties of pears from scions inserted about fifteen months previous. Some of these produced some four or five large pears, though they were only about one third of an inch in diameter, and six or eight in length. In selecting these, he was very careful to use only those of the second year's growth. He is of the opinion that fruit may be secured the *first* year, by proper care in selecting, inserting, &c. If so, fruit of any inferior quality may be changed without any loss of time, or diminution of the annual crop, by simply ingrafting most of the smaller branches in this manner.

A singular result came under his observation some few years since, which, though it may seem incredible to some, is nevertheless true. A peach-tree, which produced only an inferior fruit, was budded from one of a far different quality. The bud *seemed* to live about six months, though it did not branch. During the following season, the branch in which it was inserted produced fine peaches, while the rest of the tree remained as usual, though, aside from this, nothing special was done to the tree.

In the course of several succeeding years, as many branches became *renovated* in a similar manner, until the whole tree was radically improved, after which it died, without any visible cause.

This tree and fruit were examined by several men of integrity and judgment, though none were able to explain the process by which such a change was effected — a change by which worthless fruit became valuable and delicious. If any of your readers are familiar with any thing of the kind, or if you can throw any light upon this singular freak, it will be very acceptable to readers in this vicinity.

J. H. HANAFORD.

Newton, Upper Falls, *Sept.* 17, 1850.

For the New England Farmer.

INSECTS — THE CROPS.

Mr. Cole: I enclose the exuviæ and eggs of an insect found upon a branch of one of my apple-trees. Not an entomologist myself, I much desire more information as to this particular species of insects, and hope you will give it in the Farmer. It seems this worm wove her shroud between a twig and a leaf drawn down upon itself, and then layed and cemented over its profuse deposit of hard eggs, and died. I should have done better to have cut off the twig, and not scraped off the cocoon, but preserved over winter till the eggs hatched. What I have read of the curculio and codling moth does not at all correspond with the habits of this insect; for I understand this breeds in the ground. Nor is it the spring caterpillar. What is it? I suspect it to be the autumnal caterpillar, that weaves bags upon various trees, not only apple-trees, but wild cherries.

My peaches, despite thinning out, dwarf, wilt, and refuse to enlarge to proper size, and small branches are dying. In one twenty-four hours' time my Mercer potatoes died, or rather all turned brown, and white mould attacked the tubers, and they rot fast. Other sorts show rapid decay of tops, and soon I shall see the result. Corn will be good, if frost holds off late; otherwise it will not generally be sound. Winter and spring wheat is good; and as to apples, they will be scarce in this town, though there will not be an entire failure.

Yours, truly,

J. LEE.

Salisbury, Ct., *Aug.* 31, 1850.

Remarks. — The above has been delayed by mistake. As to the insect, we are not acquainted with its habits. We endeavor to learn all we can of these tiny tribes, which, although so small as to seem hardly worthy of notice, are known to be powerful enemies. The Mercer or Chenango potato is more liable to rot than most other varieties; and as this fact has been well known to farmers, they have made a

great mistake in not substituting more hardy kinds for it. The crop of apples is very unequal in different sections of New England. In some sections it is great, in others nearly a total failure.

SETTING KETTLES FOR BOILING FEED.

The importance of cooking food for fattening animals having been conclusively settled, and now universally admitted, the cheapest and most economical manner of performing this process, as relates to the consumption of fuel, is worth the inquiry. Some over-particular persons, in constructing a furnace for this purpose, build a spiral flue around the caldron, on the supposition that the longer they can keep the heat in contact with the kettle, the more economical. This form of construction is bad: it destroys the draft and renders the fire black and sluggish; and to form the spiral draft requires so much masonry to touch the kettle, that not more than one half the surface is in contact with the heat, and therefore is lost as a conducting agent.

It is not advisable to set a caldron capable of containing less than sixty gallons; and if ninety gallons, or three barrels, the better.

In laying out the plan for the brick work, take the diameter of the kettle at the largest point; add to this twelve inches for a six-inch space on each side, and to this twice the thickness of both walls; and, in the direction that the flue or arch is intended for receiving the wood, add two feet, so that the structure shall be two feet longer than its width.

Kettles now-a-days have a projecting flange at the top, and two horns to rest them upon the brick work. By means of chains or ropes, suspend the kettle over the exact point where it is intended to be fixed — its bottom at the right distance from the bottom of the fire pit, to allow a proper quantity of wood to pass under — then carry up the walls to the height of the mouth of the arch, which is to be in one end of the longest direction of the furnace. At this point place some iron bars over the arch and one across, near to that side of the kettle, and lay over the arch, and up to the kettle and half way round it, two courses of bricks, touching the kettle at a point where the sides commence rising — by which arrangement the fire is made to impinge against the entire bottom, and, passing past the centre, returns around the sides, and passes up the chimney over the mouth of the arch. The structure is then complete by bringing the walls to the height of the kettle — gathering in towards the top, so that the entire flange rests upon the brick work.

By this construction it will be seen that the fire strikes against the bottom, and passes up the end and back around the whole body of the boiler, not injuring the draft, and brings the blaze in contact with the entire surface, except where the two thicknesses of bricks touch it over the arch.

A seven or eight inch stove pipe, of which a cheap, second-hand article can always be procured, answers all the purposes required for a chimney, and costs less.

A smaller kettle, fitted with steam pipe and a steam chest, is probably altogether the most desirable method of cooking food for animals; but its preparation in a proper and substantial manner involves an expense of fixtures — an outlay that but few farmers are willing to encounter, for merely fattening the animals for household use. — *Rural New-Yorker.*

People seldom improve when they have no other model but themselves to copy.

PUMPING A LAKE DRY.

Dr. J. V. C. Smith, the editor of the Boston Medical and Surgical Journal, who is now on a visit to Europe, gives an interesting description, in his editorial correspondence from Holland, of the manner in which the Lake of Haarlem is drained by steam engines, and its waters sent to the sea.

"Six miles from Amsterdam is the inland Lake of Haarlem, twenty-one miles long by eleven wide, which three hundred years ago was found to be perceptibly increasing by shooting its waters farther and farther, and covering up the land, threatening the first commercial port of the realm with destruction by flowing in upon its back. Various schemes, at that remote epoch, were devised by able counsellors to stay the threatening danger. Three Dutch engineers, of acknowledged ability, proposed draining off the water, first raising it by windmills. They are entitled to remembrance, from having suggested the very plan adopted in 1849 for averting an impending calamity. Seven years since, delay no longer being safe, a canal was dug around the whole circumference of the lake, averaging two hundred feet in width by nineteen deep. Three monster steam engines are housed on the sides of the lake, some six or eight miles apart, each moving eight monstrous iron pumps. All the pistons are raised at once, at every revolution of the machinery, raising twenty-five thousand gallons of water, which is emptied into the canal, whence it is hastened on, by a fourth engine, faster than it would otherwise move to the Zuyder Zee; and it thus reaches the sea fifteen miles distant. In April, 1849, the pumps, worked by three of the mightiest steam engines perhaps ever constructed, were set in motion; and up to this date, July 25, 1850, have lowered the contents of the lake seven feet. By next April, it is anticipated that the bottom will be fairly exposed, and all the water conveyed away from its ancient basin. All this is executed at the expense of government."

LARGEST GRAPE-VINE IN THE UNITED STATES.

Under this head the Natchez Free Trader, of the 10th instant, has the following paragraph: —

Mr. William Casey, corner of Union and State Streets, in the city of Natchez, can boast of a grape-vine which is, undoubtedly, the monarch vine of the United States. It rises from the ground in a single trunk of some three inches in diameter, nearly straight and well proportioned, to the height of about nine feet, when it spreads into branches, and covers and embowers the trellis work of quite a large garden, besides climbing a tall tree. The weight of the immense clusters of grapes hanging upon it, now about half grown, is estimated at a ton. To stretch out any of the branches in a direct line, they would measure from three to four hundred feet. The variety of this grape is not natural to the country, but was brought up to Natchez in the old Spanish times. It is called the "Jack Grape," from "Spanish Jack," the nickname of the Spaniard who planted it. Some years ago, Madame Bingaman, now dead, offered Mr. Casey five hundred dollars if he would remove the vine safely to her garden in the environs of the city; but no sum of money whatever would induce the owner to part with it. It produces a wine which has the taste of hock.

Brave actions are the substance of life, and good sayings the ornament of it.

NEW HAMPSHIRE STATE FAIR.

The first annual cattle-show and fair of the New Hampshire State Agricultural Society took place at Concord, on the 2d and 3d of October. It indicated a good start with this infant association, which promises prosperity and success in the worthy cause. We take the following extracts from the report of this show, in the Granite Farmer, a new and valuable paper, published in Manchester.

The first annual exhibition of the State Society is over, and the question whether New Hampshire could have a good fair, has become a fixed fact. The occasion, to which the friends of the society have looked forward with anxiety, as settling the point of the sympathy of the *people* with the movement, and determining also the measure of the society's influence on New Hampshire agriculture, has come and gone, and proved a glorious triumph to the friends of the society. The show, in all its departments, exceeded the hopes of the most sanguine. In the stock department, how little was known of what to expect from the different parts of the state! and yet, for our small state, what a show of first-rate blooded stock!

The movement was an experiment; but how triumphant has the experiment been! With what courage will we go on for another year, confident that the interest of the show will be doubled! Too much honor cannot be given to the enterprising and laborious officers of the society, for having, in the main, accomplished this triumph to New Hampshire agriculture and art.

But we must pass hastily in review the contents of the various halls. The central ornament of the Depot Hall was the display of fruits. The show of our own state fruits, although limited in variety, was most excellent in quality. The apples were large and nice. The pears were of a few varieties, but of good quality. There were several varieties of grapes in very handsome clusters. There were but few peaches or plums.

The show of articles of domestic manufacture and needle-work was very large, and attracted much attention. Our space will not admit of a particular mention of the different articles. When all were excellent, it would be invidious to select. There were elegantly-wrought spreads of pure white, that were beautifully done, and from the lady visitors won unqualified admiration. There were beautiful floral ornaments from Hanover, Orford, and Concord, several specimens of prepared grasses, that showed much taste.

There was a good show of vegetable productions and field crops. R. Mitchell, Manchester, exhibited a basket of very fine and large sweet potatoes raised by him.

There were many specimens of corn which looked well; as large and as perfect as any that can be produced. A. P. Cate, Northfield, exhibited a small, early variety, which ripened the last of August, and an eight-rowed corn, very long ears, large kernel, and small cob, fully ripened at the top and ends.

The Dutton corn, a large twelve and fourteen rowed variety, has ripened extremely well. The specimens exhibited by Joseph Robinson, Concord, were from a crop planted May 28, on pine plain lands, and plucked Sept. 30. They are all twin ears, and are, he says, but a fair specimen of his crop. The improved Dutton, by George W. Nesmith, are splendid large ears.

John R. French, Plymouth, exhibited a new variety of oats, which are hardy, early, prolific, heavy, and not liable to blast as other varieties are. They weigh forty-eight pounds to the bushel. He says, "One single stalk of oats was found near a pond in Corinth, Vt., where wild geese congregate in vast numbers for a summer resort. It was cultivated, until he now has several hundred bushels." If not new, it is most certainly a valuable variety.

There was not a great variety, nor a great quantity of potatoes exhibited. A large, fair, kidney-shaped variety of potatoes, called here the *New Yorkers*, by J. S. Noyes, Concord, are the best samples we have seen this year. It appears to have escaped the rot better than any other varieties on Mr. Noyes's farm: but he has named the potatoes wrong. It was known in Boston a few years since as the *St. Helena* variety, and, under that name, was for a very long time popular as the best boiling potatoes then cultivated; it has however, yielded to the destroyer, and is now hardly known in Massachusetts.

Benjamin Whipple, Dunbarton, exhibited the Jackson Reds, a large size potato, which has also withstood the rot, while other varieties on the same farm, and in the same town, have been almost entirely destroyed. The Jackson Reds are represented to be good yielders, and, in the present condition of things, as safe a variety as can be planted.

In addition to those mentioned before, is a barrel of New York Whites, (we still believe them to be the old St. Helena's,) from D. Woodman, Meredith. They are the finest kidney-shaped we have seen any where in the potato seasons. We are informed that they have withstood the rot well, only a few being affected by it. Seth Eastman, Concord, showed samples of three varieties, the White Cristia, Red Cristia, and the Western, and all three have been prolific and unharmed. A barrel of Western Reds, grown by Isaac Hill, Concord, upon pine plain land, were beautiful to look at, and we are told they are superior for the table.

There were eighteen entries of butter, which looked universally fine and good. They were samples of both June and September churnings; some of it was neatly put up in half pound lumps. There was quite a number of entries for new and old cheese.

In addition to the above were mammoth pumpkins, squashes, beets, &c. Then there were several specimens of honey.

An interesting feature in the exhibition was James A. Cutting's patent changeable bechive, with bees and honey in them; they were to be seen working. James Priest exhibited the same hive unoccupied; and Hiram M. Clark, Alton, another pattern, with honey and bees in them. There was also on exhibition Stoddard's self-protecting hive, which, the inventor says, bids defiance to the miller.

Of agricultural implements and machinery, the exhibition was quite full and interesting. There were three patterns of ploughs, from the manufactories of Currier, Doe, & Co., Concord, J. L. Robinson & Co., Concord, and the Ames Sward plough.

Currier, Doe, & Co. exhibited the Yankee cornsheller, straw-cutters of the Ruggles, Nourse, & Mason pattern, ox yokes and bows, and a variety of farming and gardening implements.

The yokes of ex-Governor Steele attracted much attention and commendation. Other yokes, of a good form and finish, were exhibited by P. M. Rossiter, Milford, and by A. L. Simpson, Durham. The latter gentleman has introduced an improvement, for which he has applied for letters patent, by dispensing with the ring, and using instead a short chain, which is hooked to the draught chain. This improvement requires two rivets in the yoke, but it is so arranged that the strong ox bears his due proportion of the labor, and the weaker one is so much favored. This result, he says, cannot be attained under the old arrangement.

The cattle pens were admirably filled; and we verily believe that no persons upon the ground were more surprised at the excellence of the exhibition, than were the different exhibiters themselves. The orator, Dr. Beekman, of New York, fresh from the fields at Albany, where was exhibited the best stock in the country, said that the cattle-show was in the highest degree creditable for the first essay. He had seldom seen better stock; the show of horses was also considered excellent; while the sheep were of a superior order. This, coming from a good judge, who is not given to flattery, is praise indeed. There was a full-blood Durham, two years and nine months old, from E. C. Starkweather, of Walpole, which was esteemed by some the finest animal in the pens. He took the highest premium for two years old. He is of fine proportions, and by next spring will be excelled by no animal in the state.

We regret that our state of health forbade us to attend the ploughing match. The field was located about half a mile from the centre of the town, upon an elevated plain. The land was dry, and free from stones, but covered with a thick, tough sward.— There were upwards of two thousand spectators. The number of entries was eleven single ox teams, and three horse teams; the ploughs used were Currier, Doe, & Co's., and J. L. Robinson's patterns, both Concord ploughs. The teams were well trained, of fine proportions, in good order, and were as fine specimens as need be seen. One eighth of an acre was allotted for each team. The time of ploughing did not exceed twenty minutes. There have been better matches than this; there should be better at the next show.

We close as we began, by saying, that, all things considered, the fair showed a strong interest among the people; one which will, rightly directed, accomplish great good for the state. It was triumphantly successful.

THE VALUE OF CANALS AND RAILROADS TO FARMERS.

Canals and railroads are what, in popular language, are termed internal improvements, the philosophy of which has not generally been duly considered. The community has seemingly looked upon them with apathy. Instances have not been few, where there have been obstacles thrown in their way, as if the country were to be ruined by them. And they have been mainly viewed in reference to the stock-owners, as sources of unnatural wealth. Or, if canals and railroads were to be tolerated among the yeomanry of a country, they must be located in the immediate vicinity of every man's own door; or they were to be execrated and condemned.

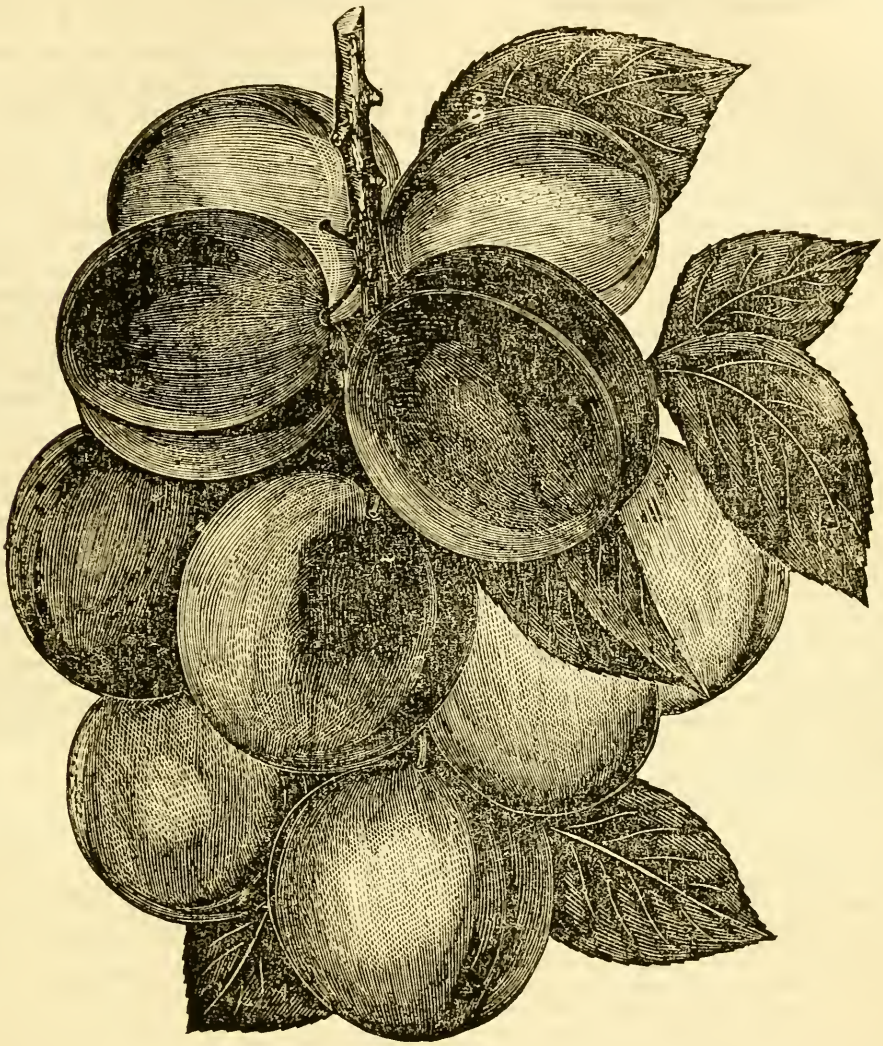
Dr. Blake, in his recent excellent work, the Every-Day Book for Farmers, remarks, "Canals and railroads may now and then be found first-rate investments. Ordinarily, they are not. Hence, nothing is now said of them as investments. This is a matter for individual capitalists to investigate. The yeomanry and the business men of a country are to look upon them principally as the agents for developing and promoting the individual and combined wealth connected with, or located in, the districts affected by them. Hence a state or a populous city, in establishing them, may be comparatively indifferent about the percentage annually to be received upon their cost. If the locations are judicious, it is of minor importance nothing is received.

We will illustrate that meaning by a familiar case, readily understood by agriculturists. Here is an individual owning a farm of two hundred acres of excellent land. A broad river, without a bridge, runs through the centre of it. The land was bequeathed to him on the condition that he should never sell or lease any part of it, but cultivate the whole as one farm. His house and outbuildings are on one side of the river; and, to get at the other side, for every day's work, or for every load of manure put on it, or every load of produce to be returned, he has to go a distance of five miles; ten miles both ways, which takes up one half of an entire day. Now, is it not apparent that it costs the owner double to cultivate that portion of his farm beyond the river that it does the other? Hence, if the latter is worth one hundred dollars per acre, the other cannot be worth above fifty dollars an acre. Now, if a bridge were made across the river, connecting the two portions of the farm together, it is evident that the one beyond the river would be doubled in value; that is, that hundred acres will at once be worth one hundred dollars per acre instead of fifty, as it was before. The bridge, therefore, to this farmer is really worth five thousand dollars. Here is exhibited the operation of railroads and canals."

We will now suppose an individual, with a valuable farm in the south portion of the state, and two hundred miles from the city of New York. The farm is fertile, and produces most abundantly — perhaps four times as much as needed for consumption on it; but so far from any market, nothing could be sold from it. This farm, in the immediate neighborhood of the city of New York, would be worth two hundred dollars per acre; but, remote as it is, it has been estimated at no more than fifty or seventy-five dollars per acre. Yet the moment the Erie Railroad is completed, it becomes worth, at least, one hundred and fifty dollars per acre, inasmuch as all its surplus produce can be carried to market, as conveniently and as cheap as though it were only fifteen or twenty miles from the city, and no railroad. Thus, under corresponding circumstances, all property upon or adjacent to a good railroad or canal rises in value, perhaps, even more than to balance the amount of outlay for the improvement.

Why is it that in the northern part of the state of New York cities and villages have arisen, and wealth has been created, as if under the influence of magic? It is because of the Erie Canal. So hereafter cities and villages will arise, and wealth will be created in the south part of the state, on the completion of the Erie Railroad. So it would be every where under analogous auspices. Farmers, therefore, should not fail to encourage internal improvements. Choose men in your state and national legislatures who will vote for them. No matter whether they are near you or remote. No matter if they pass through the centres of your farms, obliging you to make miles of additional fence. You will be paid for it over and over again, no one can tell how many times. No matter if they are ten, fifteen, or twenty miles from you; the life-giving impulse to business will be felt by you. Every one cannot be equally near to them. To a community, good roads, good bridges, and railroads or canals, are the same as good fences and fertile fields are to a single farm. Here is a rational foundation for politics, whether exerted for the state or the general government. Viewed in reference to such an end, the elective franchise is of inestimable worth; whereas exerted only for the benefit of demagogues and poverty-stricken politicians, it is of no essential value. — *The Farmer and Mechanic.*

None are so hard to please as those whom satiety of pleasure makes weary of themselves; nor any so readily provoked as those who have been always courted with an emulation of civility.



LOMBARD PLUM.

Synonymes. — *Bleecker's Scarlet, Beekman's Scarlet.*

This plum is one of the greatest of growers; it is remarkable for its productiveness, and it is very sure to bear a large crop, even when most other varieties fail from unfavorable weather. It is of good size, and of handsome appearance. These great and important excellences rank it among the most valuable kinds, although it is not of first-rate flavor. Many kinds equal it in quality, and several varieties excel it in this respect; yet it is a very good, sweet, luscious fruit.

Fruit of medial size; roundish-oval, slightly flattened at the ends, slight suture; pale red in the shade, and delicate violet red in the sun, thin bloom; stalk two thirds of an inch long, quite slender; flesh deep yellow, juicy, pleasant, and of fine quality, but not rich. Clingstone. Good for cooking, and for the dessert. Ripens early in September, and continues till the 20th or 25th. The shoots are smooth and glossy, of a bright purple. It is well adapted to light soils.

Our engraving is from a fine bunch presented by Mr. Andrew Lackey, of Marblehead. The fruit is rather larger than usual.

Money is a very good servant, but a bad master. It may be accused of injustice towards mankind, inasmuch as there are only a few who make false money, whereas money makes many men false.

Domestic Department.

Letter to Country Girls. — I have wanted, girls, for a long time, to give you a long lecture on dress; not because you do not think enough about it, but because you do not think right. It is a very important matter to be well dressed, and most people feel this; but very few ever learn the art. Women waste more time and money disfiguring themselves than in all other occupations and amusement. Yes, and they waste health and happiness also. There is an inconceivable amount of worse than useless sewing done in this country. Thousands of women ruin their health, send themselves to an untimely grave, putting in stitches that are neither useful nor ornamental. I believe you country girls are peculiarly addicted to this folly. Most of you make your own dresses, and few of you understand it well; consequently, you imagine the more stitches you put in, the better.

Then, from want of properly cultivated taste, you are addicted to buying cheap finery. You need not deny this to me, for I know you too well. I have carried my slippers to meeting, and hid my coarse shoes behind a log, a little too often not to know how country girls dress. Your storekeepers know it too, and bring out such a parcel of cheap, tawdry, many-colored finery as would be likely to take the fancy of a set of Indians. If they can get a lawn or a calico with sixty-seven dozen colors in it, so much the better. You buy it, — spend a great deal of time to make it nicely, — spatter it over with ruffles, folds, and frumples, that would disfigure any thing. Then, the first time it is washed, fifty-two dozen of the colors fade; you have a dirty rag that is fit for nothing but to wipe the floor.

You lament the loss of your money; but what of your *time?* The habit of sew, sew, sewing at a garment sixteen times as much as is necessary to make it, has become an evil of sufficient magnitude to require legislative interference. I once saw a city lady go to the country for *health*, pale, nervous, cross, miserable, with a little child as miserable as herself. By way of enjoying fresh air and exercise, she sat down and sewed diligently, for two full days, to *make an apron* for the child. There were folds, buttons, and braid, frumples, and fandangoes past count; and she had some dozen to make of that same sort, while the poor little child martyr was condemned to imprisonment and stripes, to prevent its disfiguring the evidences of its mother's insanity, which it wore on its poor miserable little person. I never felt more strongly tempted to do any thing, than to roll mother and child, finery and work-basket, in a mud-puddle. I really thought her husband should have been entitled to a divorce. Health, happiness, and comfort were banished from his fireside by the sewing demon. She completely ruined her own health sewing, then murdered her children by inches, to keep them from spoiling her work. A woman who cannot make a half dozen bibs for children in one day, and with all the requisites of comfort and convenience, should never take her needle in her fingers. — *Mrs. Swishelm.*

Pumpkin Pudding. — Take a pint of pumpkin that has been stewed soft, and pressed through a colander. Melt, in half a pint of warm milk, a quarter of a pound of butter, and the same quantity of sugar, stirring them well together. If you can conveniently procure a pint of rich cream, it will be better than the milk and butter. Beat eight eggs very light, and add them gradually to the other ingredients, alternately with the pumpkin. Then stir in a wine-glass of rose water and a glass of wine mixed together, a large teaspoonful of powdered mace and cinnamon mixed, and a grated nutmeg. Having stirred the whole very hard, put it into a buttered dish, and bake it three quarters of an hour. Eat it cold. — *Exchange.*

Youth's Department.

Temperance Fables. — The rats once assembled in a large cellar, to devise some method of safety in getting the bait from a small trap which lay near, having seen numbers of their friends and relations snatched from them by its merciless jaws. After many long speeches, and the proposal of many elaborate but fruitless plans, a happy wit, standing erect, said, "It is my opinion that, if with one paw we can keep down the spring, we can safely take the food from the trap with the other." All the rats present loudly squealed assent, and slapped their tails in applause. The meeting adjourned, and the rats retired to their homes; but the devastations of the trap being by no means diminished, the rats were forced to call another "convention." The elders, just assembled, had commenced their deliberations, when all were startled by a faint voice, and a poor rat with only three legs, limping into the ring, stood up to speak. All were instantly silent: stretching out the bleeding remains of his leg, he said, "My friends, I have tried the method, and you see the result! Now, let me suggest a plan to escape the trap — *Do not touch it.*"

The Laborer.

The laborer, the laborer!
God's nobleman is he:
His works are graven in the soil;
They float on every sea;
The keystone in the social arch,
Utility his crest;
His days are spent in manly toil,
His nights yield balmy rest.

Health Department.

Frauds in Vinegar. — It is not generally known to what extent the adulteration, or rather the counterfeiting, of this article is carried on in this city. Under the name of *vinegar*, deadly poisons are sold in large quantities. The mode of this dangerous swindle is, to manufacture a spurious article from vegetable or mineral poisons, to wit, of sulphuric acid, or of nitric acid, or citric or tartaric acids — a sufficient quantity to give to a barrel of Croton a sharp, pungent, acid taste. This, colored with sour beer, or burnt sugar, is sold for "cider vinegar," or is sold uncolored for "white wine vinegar." Sulphuric and nitric acids, by their common names of oil of vitriol and aquafortis, are known by all to be deadly mineral poisons; and the others, though to a less degree, highly injurious. A mock article, called vinegar, can be manufactured of any of these materials at an expense of *ten* cents per barrel, exclusive of the cost of the barrel. — *Farmer and Mechanic.*

Mechanics' Department, Arts, &c.

Iron coated with Glass. — From the great tendency to oxidation, and the consequent decay which iron, in every shape of rolled or wrought manufacture, has inherent in its nature, it has ever been the practice to cover it with an artificial coat, to preserve it from the destructive effects of the elements; and within comparatively few years past, many plans have been adopted for this purpose. Various paints and pigments, zinc, enamel for culinary utensils, and numerous other appliances, have been laid before the public, each, perhaps, good in its own way, but neither of them applicable as a universal coating for iron under all circumstances, in numerous cases.

At the *soirée* of the president of the institution of Civil Engineers, last week, some specimens of iron manufacture were exhibited, coated with glass, from the Smethwick iron works of Messrs. Selby & Jones, near Birmingham, and which would appear to be the very desideratum so long sought for. There were three ornamental dinner plates, three pieces of iron tube, a frying pan, a piece of corrugated iron roof, all covered with a clear transparent glass, and which were viewed with much admiration by the visitors. In the process of coating plates, corrugated or plain roofing, tiles, tubing of all kinds and dimensions, frying-pans, gridirons, saucepans, kettles, caldrons, or boilers, in lieu of coppers, and a host of other implements, domestic, agricultural, and manufacturing, — the article is first thoroughly cleansed in an acid solution, to free it from every particle of grease, similar to the preparation for tinning, zincking, &c. It is then covered with glutinous preparation, over which is laid a coat of glass, ground to a fine powder.

The article is then introduced into a furnace of a peculiar construction and sufficient temperature, in which the glass is fused, and the intermediate glutinous matter being evaporated, the glass fills the external pores of the metal, and becomes firmly united to it; and in answer to our inquiries, we were informed that, as the manipulation became facilitated by practice, it was probable that the cost of a glass-coated iron material of these common kinds would be but a mere nominal trifle more than the plain articles themselves.

With respect to the ornamental articles, they, of course, involve some little more complexity, but bid fair to open a field of design and novelty of much interest. We were shown some ornamental dinner-plates of the same material, each of which was four ounces lighter than an earthen-ware plate of the best construction, size for size. The foliage and designs are in relief, and are executed by a kind of stencilling: one color being put on, it is transferred to the kiln and fixed; then, when cold, another color is added, again fixed, and withdrawn, and so on until the design is complete. From the inspection afforded us, we have no doubt whatever, that as, by practice, the colors become improved, and full command over their application obtained, this really elegant invention will be applied to numerous purposes at present scarce thought of. To washstands and toilet furniture it would be most applicable, as also for sideboards, *chiffonnières*, door plates, and panels, fire grate ornaments, and to numerous other purposes in decorative building and architecture. For plates for the names of streets it would be almost indestructible, and might be brought into use with much effect for shop front architecture. We were shown, among other specimens, a small door panel, with a bunch of foliage in the centre, surrounded with an arabesque border, to represent gold, which had a very pleasing effect. The invention is another step onward in the progress of art and science, and is of much interest. — *Mining Journal.*

SOME USES OF YELLOW DOCK.

The yellow dock is a pernicious weed in cultivated grounds. It is a tough, hard, long-lived plant, exhausting to the soil, and difficult to eradicate. It is nevertheless useful for some purposes, and is often serviceable as a medicine.

Two or three years ago, Professor Salisbury made an analysis of it.

100 grains of the ashes of the root gave,
11. grains of carbonic acid,
.500 of a grain of siliciac acid,
26.20 grains of different kinds of phosphates,
3.827 " of lime,
7.620 " magnesia,
9.723 " potash,
18.480 " soda,
4.502 " sulphuric acid,
3.898 " chlorine,
11.600 " organic acids.

Any one can see that a plant which contains so large a quantity of phosphates, as well as so much lime, magnesia, potash, soda, &c., must necessarily exhaust the soil, and is therefore an unprofitable companion for those crops which we are cultivating.

Now, what are the good properties of this "*nuisance?*" Professor S. says the leaves are sometimes eaten for greens. This is true; every good housewife knows that the tender leaves of the curled dock are excellent for greens. He also remarks that they are somewhat laxative, and form an excellent diet in scorbutic complaints. The roots contain a yellow dye, and are sometimes used for coloring. This dye, on exposure to the atmosphere for some time, changes to a reddish color.

As a medicine, it has enjoyed some reputation. A decoction of the root, when made into a sirup, is a laxative, and also has tonic properties, and is useful in such diseases as the salt rheum, and other cutaneous affections. In its tonic and laxative properties it somewhat resembles rhubarb. It has also been used as medicine for the itch, and an ointment made of it for external application in such cases.

The powdered root has also been used as a tooth powder in case of tender and spongy gums. It is extensively used in patent medicines. Some of the famous sarsaparillas are composed in part of this root.

Professor S. says it yields its active properties to water and alcohol. The infusion or decoction is yellow, and the tincture is of a dark yellow color, (the alcohol takes up nearly all of the coloring matter,) with an odor of the root, and an excessively pungent, bitter taste.

It requires several fresh additions of water and alcohol before the active properties can all be extracted. The residue, after sufficient maceration, is inodorous and almost tasteless. In several trials of this kind, it was found necessary to add water or alcohol from four to five times, keeping the whole addition briskly boiling for ten or fifteen minutes, before the bitter, astringent principle could all be taken up.

On subjecting the green root to a temperature of 212°, in a partially closed vessel, it turns to a dark brown color, and gives off a very strong, pungent odor, like that of the dry root.

By long-continued boiling, the pungent, bitter qualities become greatly diminished: a protracted heat will therefore diminish its activity as a medi-

cine. The bitter principles, especially, escape by the evaporation of the liquid, and the residue is more nauseating.

It should be gathered while in flower, whether needed for medicine or to eradicate from your fields. — *Maine Farmer.*

PROFITS OF FINE WOOL.

Mr. Editor: It seems to be the opinion of some, that fine wool cannot be as profitably grown, in this section of country, as the coarser or medium grades. Now, I think this a decided mistake. I have taken some pains, for the last few years, to ascertain what kind of wool was the most profitable, and for that purpose have used both Merino and Saxon, and the two crossed. The result has been rather in favor of the fine grades. The average weight of fleeces of the different grades of my flock this season, together with the prices they sold for last, was as follows: —

	Pounds.	Ounces.	Price per Pound.	Value per Fleece.
Extra,	3	14	50	$1 94
Prime,	4	3	44	1 84
No. 1,	4	5	41	1 77
No. 2,	4	12	39	1 85
No. 3, de Laine,	4	12	34	1 61

The finest grade extra were all ewes, with the exception of one yearling buck: the coarsest, Nos. 2 and 3, were heavier in proportion to the rest, in consequence of my having selected principally from those grades for sale.

The two highest grades, I believe, are what would be called Saxon wool, ranging from twenty-one to twenty-six curves to the inch, although taken in part from Merino sheep; Nos. 1 and 2 Merino, numbering from seventeen to twenty; No. 3, although not coarser than some Merinos in this section, I consider too coarse for profit. My sheep were not weighed this year as usual, but will probably not vary much from the last three years, the average weight of which has been about sixty-eight pounds. The average weight of fleece this season was about four pounds and five ounces. My aim is to so improve my flock as to produce both a heavy and fine fleece; or, in other words, a Merino fleece of Saxon wool. How near I shall come to the accomplishment of my object, will be, of course, for time to determine.

W. D. DICKINSON.

APPLES AS FOOD.

The late Payne Wingate, of Hallowell, Me., made some experiments in feeding pigs with apples, compared with potatoes. Both the apples and potatoes were boiled, or rather stewed, separately, and about four quarts of oat and pea meal mixed with each bushel, at the time the cooking was finished — the meal being intimately incorporated with the potatoes and apples while they were hot, and the mass left to ferment slightly before it was fed to the pigs.

Two pigs of the same litter, and, as near as practicable, of the same weight, were taken; one was fed for a week on a given quantity of the cooked potatoes per day, and the other on the same quantity of apples. At the end of each week the pigs were weighed, and the food was reversed: the pig to which potatoes had been given was fed on apples, and the one which had received apples was fed for the next week on potatoes. This course was continued through several weeks, the food of each pig being changed every week. The result was, that the apples proved to be fully equal, or somewhat superior, to the potatoes. In this instance, the apples were mostly sweet, and they, as well as the potatoes, were nearly in a ripe state.

On another occasion, Mr. Wingate experimented with sweet, compared with sour apples, in various ways. He found that when they were fed *raw* to swine, the sweet apples were preferable; the animals ate them better, as the sour apples seemed to make their teeth sore; but when both were cooked and mixed with meal in the way above described, there was no difference in the gain produced by an equal quantity of each. It should be stated, however, that all the apples used were of palatable kinds, nearly ripe; and that unripe and ill-flavored apples are known to be less relished by stock, as well as less nutritive. It is probable, also, that when sour apples are eaten raw, and in considerable quantities, the animal may take into the stomach too large an amount of acid, which may tend to derange the digestive organs. This objection would be chiefly obviated by cooking, and the saccharine fermentation, by which the pulp loses much of its acid, and becomes nearly sweet. It does not appear, from analysis, that the amount of actual nourishment is much greater in sweet than in sour apples. (See comparison of the analysis of the Roxbury Russet and Talman Sweeting.)

Mr. Wingate practised fattening swine, for several years, on food composed principally of apples. The animals attained good weights, and the pork was solid, and of excellent quality. In other instances, we have known apples fed raw to horses, cows, and other stock through the winter, with much advantage. For using in this way, sweet apples would probably be best, and they should be such as will keep till spring. They may be stored in a cellar under the barn, or in the bottom of the hay-mow — a proper place having been left for that purpose when the hay was put in. They will be more likely to be injured by heating than freezing. They will seldom freeze in such a situation as is mentioned; and if they should be touched by frost, their nutritive properties will not be much lessened, if they remain in a dark place where they will thaw slowly.

A peck of apples a day, fed to a cow, has been found to add more than a quart to the daily quantity of milk, besides greatly increasing its richness, as well as improving the condition of the cow. The effect of apples is equally favorable to other stock. Horses fatten on them, and their coats assume the brilliancy which hardly any other food will give them. For all stock they answer a similar purpose as vegetables, in preventing costiveness, which is likely to ensue from the exclusive use of dry food; and in this way, and by the nutriment they contain, they contribute much to the animal's thrift.

An impression prevails that apples will dry up the milk of a cow. This idea has been imbibed either from the effect produced on a cow by eating a very large quantity of apples at once, by which surfeit and fever were brought on, or from the trial not being properly conducted till the animal had become habituated to the food. The ill effects attributed to apples would have occurred with any other rich food, as any kind of grain, potatoes, or other vegetables.

A fair average product of an acre of orcharding, in good bearing condition, may be estimated at two hundred to three hundred bushels a year; and at this rate we doubt whether so great an amount of animal nourishment can be obtained from the same extent of land, in proportion to the expense, by any other crop. We should not hesitate, therefore, to recommend the cultivation of apples as food for stock. — *Albany Cultivator.*

Nothing is more frightful than active ignorance.

FARMER'S CLUBS AND ASSOCIATIONS.

Man being by nature a social being, it is a matter of considerable importance to know how to turn this sociability to the most agreeable and useful account. In every thing which we do, system is better than confusion, because it is more effective in attaining any desired, not to say desirable result. The pleasure of a social dance is increased by observing certain rules which art and decorum have prescribed. So, too, the pleasure of a social meeting among farmers will be enhanced by the aid of a system, which happily combines the useful with the agreeable, in the intercourse between neighbors pursuing a common profession. A club or society has for its object an organized effort to promote an interest common among all its members. In this way, by small contributions, each member of the club has the benefit of a good agricultural library purchased by its funds. Its wealth becomes the property of all; for each member of the society is ready to communicate to his associates all new facts which his reading, or his experience, has brought to light. Information is vastly extended in all directions, and the community becomes at once distinguished for its general intelligence and its skilful and profitable agriculture.

Nothing great and valuable has been achieved in the world without an association of effort. Farmers very generally neglect this element of strength, and hence their advancement is comparatively slow. Military men, lawyers, and physicians have their professional libraries, and study them closely, if they would understand the true principles of their respective pursuits. This mental training is invaluable in developing human intellect, no matter what the calling. Lawyers fill three fourths of all the important offices in the United States, from that of president downward; not because they are the most numerous class, but because farmers and mechanics omit to qualify themselves to command the suffrages of their brother farmers and mechanics, whose votes rule every state in the Union. If Congress were filled with honest farmers from our thirty states, they would settle all sectional disputes in a week; and we trust that before the close of the present century, the cultivators and owners of American soil will have a majority in their national legislature. The elevation of farmers in their own estimation, and in reality, by wise intellectual culture, can be effected by the aid of clubs, whose members meet often for the purpose of mutual instruction. The secretary or president of such a club should be directed to subscribe for eight or ten of the best agricultural journals in the country, and to purchase books relating to rural affairs, to the extent of the means of the society, whether small or great. There is no power equal to that of knowledge; and it is time for the farmers of the Union to understand this fact, and act accordingly. Most of the natural sciences have a direct bearing on the rewards of farm labor; and those agriculturists who acquire a competent knowledge of these, will have the advantage, other things being equal, in every community.

All colleges and academies should be encouraged to teach chemistry, geology, physiology, physical geography, and meteorology, in their connection with agriculture. This will soon create a higher standard of popular intelligence on these important subjects. Farmers' clubs and societies can then be maintained in a flourishing condition, without the least difficulty. Horticultural societies will also be equally popular; for all will rejoice in the culture of choice fruits, beautiful shrubbery and flowers. A refined taste and discriminating judgment will follow all well-directed labors to improve the invaluable advantages which Providence has conferred on the American people. Without labor, nothing useful is attainable. Savages never cease to be such till they make an effort to improve their condition. Isolated efforts made by individuals can do something, but infinitely less than well-concerted, associated action. Wise and efficient action is what is needed. All county agricultural societies should be cheerfully sustained, and new ones established where none exist. The gentle stimulus of numbers does a world of good in the way of keeping up a general interest in the cause of improvement. Without this genial excitement, little or nothing is done for the advancement of this most honorable and ancient of all human arts. Professional enthusiasm may be indulged to a limited extent to decided advantage. — *Southern Cultivator.*

LIGHTNING.

So long as lightning is occasioned merely by the action of two clouds, not the slightest danger is to be apprehended. Thunder, being only a report, is perfectly harmless at all times. But when the electricity comes within the attraction of the earth, either by a cloud crossing over a lofty mountain, or sinking near the earth's surface, it passes down from the cloud to the earth, sometimes rolling along like a large ball, clearing out of its way every thing that offers resistance to it; thus it will often tear up trees, set houses on fire, and even destroy animal life, should it impede its progress. This ball is a liquid in a state of fusion, and not (as has been supposed by some persons unacquainted with the science) a metallic substance called *thunder-bolt.* There are metallic substances sometimes precipitated from the air; these are termed *aërolites*, and have nothing to do with the electricity of storms. As soon as the clouds disperse, which is usually after a vivid flash of lightning, and a very loud clap of thunder, the rain descends, the electric power is destroyed, and the storm ceases. Although storms arise from what may be called the accidents of nature, and are of great importance as an effort of nature, by which the atmosphere is cleared of all those impurities it imbibes from their dangerous tendencies, and the terrors to which they give rise, they are productive of much advantage. — *Sharp's London Magazine.*

NUTRITION IN VARIOUS GRAINS.

Wheat is one of the most important of all crops. The grain contains from fifty to seventy per cent. of starch, from ten to twenty per cent. of gluten, and from three to five per cent. of fatty matter. The proportion of gluten is said to be largest in the grain of quite warm countries.

It is a singular fact, that, in all the seed of wheat and other grains, the principal part of the oil lies near or in the skin, as also does a large portion of the gluten. The bran owes to this much of its nutritive and fattening qualities. Thus, in refining our flour to the utmost possible extent, we diminish somewhat its value for food. The phosphates of the ash also lie to a great degree in the skin. The best fine flour contains about seventy pounds of starch to each hundred. The residue of one hundred pounds consists of ten or twelve pounds of gluten, six to eight pounds of sugar and gum, and ten to fourteen pounds of water, and a little oil.

Rye flour more nearly resembles wheaten flour in its composition than any other; it has, however, more of certain gummy and sugary substances, which make it tenacious, and also impart a sweetish taste. In baking all grains and roots which have much

starch in them, a certain change takes place in their chemical composition. . . . By baking, flour becomes more nutritious, and more easily digestible, because more soluble.

Barley contains rather less starch than wheat, also less sugar and gum. There is little gluten, but a substance somewhat like it, and containing about the same amount of nitrogen.

Oats. — Oatmeal is little used as food in this country, but it is equal, if not superior, in its nutritious qualities, to flour from any of the other grains; superior, I have no doubt, to most of the fine wheaten flour of northern latitudes. It contains from ten to eighteen per cent. of a body having about the same amount of nitrogen or gluten. Besides this, there is a considerable quantity of sugar and gum, and from five to six per cent. of oil or fatty matter, which may be obtained in the form of a clear, fragrant liquid. Oatmeal cakes owe their peculiar agreeable taste and smell to this oil. Oatmeal, then, has not only an abundance of substance containing nitrogen, but is also quite fattening. It is, in short, an excellent food for working animals, and, as has been abundantly proved in Scotland, for working men also.

Buckwheat is less nutritious than the other grains which we have noticed. Its flour has from six to ten per cent. of nitrogenous compounds, about fifty per cent. of starch, and from five to eight of sugar and gum. In speaking of buckwheat or of oats, we of course mean without husks.

Rice was formerly supposed to contain little nitrogen; but recent examinations have shown that there is a considerable portion, some six or eight per cent., of a substance like gluten. The percentage of fatty matter and of sugar is quite small, but that of starch much larger than in any grain yet mentioned, being between eighty and ninety per cent.; usually about eighty-two.

Indian corn is the last of grains that we shall notice. This contains about sixty per cent. of starch; nearly the same as oats. The proportion of oil and gum is large, about ten per cent.: this explains the fattening properties of Indian meal, so well known to practical men. There is, besides these, a good portion of sugar. The nitrogenous substances are also considerable in quantity, some twelve to sixteen per cent. All these statements are from the prize essay of Mr. J. H. Salisbury, published by the New York State Agricultural Society. They show that the results of European chemists have probably been obtained by the examination of varieties inferior to ours; they have not placed Indian corn much above the level of buckwheat or rice, whereas, from the above, it is seen to be "in most respects superior to any other grain."

Sweet corn differs from all other varieties, containing only about eighteen per cent. of starch. The amount of sugar is, of course, very large; the nitrogenous substance amounts to the very large proportion of twenty per cent.; of gum, to thirteen or fourteen; and of oil, to about eleven. This, from the above results, is one of the most nourishing crops grown. If it can be made to yield as much per acre as the harder varieties, it is well worth a trial on a large scale. — *Prof. Norton's Elements of Scientific Agriculture.*

DRESSING CATTLE.

Much has been said on the propriety of wisping and currying cows and fattening oxen in the byre, and much may be said in recommendation of the practice, were the cattle always confined to the byre; but animals which are at liberty a part of the day, do not require artificial dressing except when in high condition; inasmuch as they can dress their own and one another's skin much better than any cattle-man. With cattle constantly confined in the byre, it seems indispensable for their good health to brush their skin daily; and I believe no better instrument can be used for the purpose than an old curry-comb, assisted with a wisp of straw. Currying should only be performed on the cattle when not at food; and this should be strictly enjoined, for people who have charge of animals have a strong propensity to dress and fondle them when at food; from no desire to torment them, but chiefly because they will then be in a quiet mood. Still, the process has a tendency to irritate some cattle, and please others so much as to make them desist eating, and on that account should be prevented. Many other animals are never more jealous of being approached than when eating their food, as exemplified by the growl of a dog, and the scowl of a horse. — *Stephens Farmer's Guide.*

AMOUNT OF FOOD CONSUMED BY CATTLE.

It is supposed that an ox which attains the weight of 70 stones imperial at the end of the season, consumes, in fattening, a double horse-load of turnips per week; and as carts are usually loaded at field-work in winter, the weight of a load may be estimated at about 15 cwt.; so that the ox will consume about $2\frac{1}{6}$ cwt., or 16 stones 2 lbs. a day, or 5 stones 5 lbs. at each of three meals; and about $19\frac{1}{2}$ tons during the season of twenty-six weeks. The calves may consume one half, or 8 stones, and the two-year-olds three quarters, or 12 stones a day; cows receiving one third of the oxen, 5 stones 5 lbs. a day. Each scullful contains about $37\frac{1}{2}$ lbs. These comparative quantities are given from no authenticated data; for I believe no comparative trials, with different ages of cattle, have ever been made, but merely from what people imagine to be near the truth; and such an estimate should be made at the beginning of every season, that you may know whether there are turnips enough to serve the stock. It was correctly ascertained by Mr. Stephenson, Whitelaw, East Lothian, in a careful experiment of feeding 18 oxen of 42 stones, that they consumed 10 stones 2 lbs. on an average, each, of turnips daily; and Mr. Boswell Irvine, of Kingcausie, found that oxen of 43 stones consumed only 9 stones of turnips, each, daily. This discrepancy between the two statements might be explained, perhaps, if we knew every particular of the treatment in the two cases. Taking $9\frac{1}{4}$ stones as the average quantity of turnips consumed every day by oxen of 42 stones, and taking it for granted that oxen consume food nearly in proportion to their weight, the result will be very nearly what is stated above by guess, nearly 16 stones per day, by cattle of 70 stones. — *Stephens Farmer's Guide.*

SCIENTIFIC MEMORANDA.

It has long been alleged that the aurora borealis has the effect of producing a certain direction of wind, and colored aurora borealis is always indicative of a change of existing weather.

The mean annual fall of rain on the surface of the globe has been taken at 34 inches; which, taking the area of its surface, 196,815,658 square miles, would amount (at 1000 ounces to the cubic foot) to 431,033,808,959,644$\frac{1}{4}$ tons per annum.

It is a fact undeniably proved, that if sheep are

allowed free access to salt, they will never be subject to the disease called the "rot."

Wooden posts or stakes driven under salt vats, owing to the preserving quality of the salt, are practically indestructible. It would be very easy to adapt this hint to the preservation of fence, garden posts, &c., as they do in Syracuse.

The elastic force of steam is the moving agent of the machinery attached to an engine; and therefore, to keep the velocity constant, the supply of steam must be regulated to the resistance to be overcome.

Twenty-seven inches of snow give three inches of water when melted, and the water thus obtained is found to contain ammonia, which is the cause of its great softness.

A large species of the star-fish possesses the power of breaking itself into fragments under the influence of terror, rage, or despair.

When we look at the moon through a telescope which magnifies two hundred times, we behold the objects on its lunar surface in the same manner as if we were standing at a point 238,800 miles from the earth, in the direction of the moon, or only 1200 miles from that orb, reckoning its distance to be 240,000 miles.

A cement composed of four parts of pure chalk, and five and one half parts of fresh blue alluvial clay, will be found cheaper than any other as an hydraulic mortar.

A vessel, moving through the water, communicates a motion to the same, and this quantity of motion is equal to that which is lost by the moving vessel. — *Canadian Agriculturist.*

It is observed, that the most censorious are generally the least judicious, who, having nothing to recommend themselves, will be finding fault with others. No man envies the merit of another who has enough of his own.

NOTICES OF PUBLICATIONS.

Lectures on the General Relations which Science bears to Practical Agriculture, delivered before the New York State Agricultural Society, by James F. W. Johnston, F. R. S., &c., &c. New York: C. M. Saxton, 123 Fulton St.

Prof. Johnston is among the ablest writers on the science of agriculture, and his works are justly noted for their practical bearing; therefore they rank high in point of utility, and are among the most interesting and instructive works extant, on agricultural science.

Hovey's Magazine of Horticulture. — This work, which has been recently reduced to $2 per annum, sustains a high rank, particularly in pomology and floriculture.

Downing's Horticulturist is a very interesting work. Besides the various subjects of horticulture, it is a work of fine taste on the subjects of rural architecture, which is attracting much attention. Joseph Breck & Co., Boston.

Transactions of the New Haven Horticultural Society, for 1849, with an Address by Professor J. P. Norton, is received by the politeness of Levi Durand, Derby, Ct.

Farmer's Guide. — This valuable work, which may be obtained at far less expense than the English edition, has arrived to the tenth number. Fetridge & Co., 15 State St.

American Flora is among the most interesting and beautiful works of the day. It is now in a course of republication, with improvements. New York: Greene & Spencer.

Illustrated Natural History is a very popular work, containing life-like representations of various animals, with scientific and interesting descriptions. Greene & Spencer, New York. This is also a republication. The first volume is now in progress.

ACKNOWLEDGMENTS.

Of Calvin Haskell, Harvard, specimens of the Spice Sweeting, a large and beautiful apple, of excellent quality. It is so much like the Hubbardston Nonsuch in size, form, and color, that it would be difficult to distinguish them, as to appearance, were it not for the russety patch that occasionally appears as a prominent mark on the Nonsuch.

There are several other varieties of apple under the name of Spice Sweeting. The most prominent kind in this section is an early variety, that originated on the farm of Jacob Deane, Mansfield, and it has often been seen at the exhibitions of the Mass. Horticultural Society. As this has been long known to the public, we think it should be regarded as the true, and entitled to the name exclusively. See American Fruit-Book.

From E. W. Bull, Concord, a lot of fine seedling grapes, which he produced by a cross of the Catawba with a native grape. It is very good, and partakes of the nature of its parents, having some of the vinous flavor of the Catawba, and a little of the acid peculiar to our native fruit. This is not a good season for testing grapes, as but very few come to perfection, owing to the coldness of the season, and a blast on the leaves. The bunches and berries of this grape are large, and Mr. Bull remarks that it is productive, perfectly hardy, and that it generally ripens early in September.

From Moody Ordway, of the Garrison nursery, West Newbury, a box containing a variety of excellent apples and pears. Among the most prominent is the Rock Sweeting, an apple of a high character, both for the dessert and for baking. It is very tender and rich. The size is medium; form flattish; and the color is nearly all a beautiful red. It is doubtless one of the finest of sweet apples. In use from the middle of August to November. It originated on the farm of the late Elihu Pearson, Esq., "Byfield Mills," Newbury. It came up between two rocks; hence its name. We have growing another Rock Sweeting, from Capt. Silas Allen, Shrewsbury, which is a late winter and spring fruit. We know not for which variety the name may be claimed by right of priority. The same name for several fruits produces confusion in the pomological nomenclature, which ought to be avoided. Also fine specimens of

the Hubbardston Nonsuch, and other apples, and Beurre Bosc pears, which are among the very finest of this or any other season.

Friend J. Oliver, of Lynn, has sent us some native grapes, from Loring Burrell, of that town, which we think are the finest native grapes that we have tasted this season. The size is medial.

Of Briggs Arnold, East Abington, a large late seedling peach, very fine for the season; but peaches do not come to perfection in this month. Also Peck's Pleasant apple. Excellent specimens. This is one of the finest of apples, when the fruit is fair, but generally the crop of fair fruit is small, so that it is not a valuable variety to cultivate for the market.

From George Bryant, East Bridgewater, Long Stem apples. This apple is among the finest in quality. It is not of a high flavor, but it is very pleasant, mild, crisp, and juicy, and such as almost every one would admire.

From J. L. Lovering, Hartford, Vt., several varieties of pears. The one now in use is the St. Michael, as it is called in New England, and Virgalieu of New York. White Doyenne is a general name in different parts of the country. On the seaboard in New England, it generally blasts and cracks, so that it is worthless. It succeeds pretty well in the interior. In the Middle and Western States, it is very hardy, both in tree and fruit, and is one of the very best and most profitable varieties. It is now the principal pear in this market, brought from New York. The other varieties will receive attention in due time.

From G. F. Chandler, Lancaster, a fine bunch of Kloss Blue Stem winter wheat, or Banner wheat, as generally called in Maine. This is in the straw, and is between four and five feet high, very large and full heads, and fine plump kernel. Last season, Hon. Rufus M'Intire, of Parsonsfield, Me., sent to us half a bushel of this wheat, for distribution. We furnished Mr. Chandler with one quart, and he raised eighty-eight quarts from it, on fourteen rods of land. It is probably one of the finest varieties of winter wheat, and we have a little more for distribution.

We have some fruit from Leonard Cheney and others, which has not yet received proper attention.

GRAND FOWL EXHIBITION.

It will be seen by advertisement on our cover, that a grand show of fowls will come off soon in this city. It will doubtless be the largest exhibition of the kind ever made in any part of the world. All who have fine fowls should contribute, and have them put into neat and convenient cages, so that they will show to advantage. We hope that the native fowls of the country will be well represented, for some of them are as beautiful as any foreign breeds; and in their excellent qualities, also, they are not excelled. Let not our fine natives be kept at home, and foreign breeds take the most prominent place in the show.

THE WAY-SIDE WELL.

O, the pretty way-side well,
Wreathed about with roses,
Where, beguiled with soothing spell,
Weary foot reposes.

With a welcome fresh and green,
Wave thy border grasses,
By the dusty traveller seen,
Sighing as he passes.

Threads the drover on thy sward,
Comes the beggar to thee,
Free as gentleman or lord
From his steed to woo thee.

Thou from parching lip dost earn
Many a murmured blessing,
And enjoyest in thy turn
Innocent caressing.

Fair the greeting face ascends,
Like a naiad daughter,
When the peasant lassie bends
To thy trembling water.

When she leans upon the pail,
Glancing o'er the meadow,
Sweet shall fall the whispered tale,
Soft the double shadow.

Mortals love thy crystal cup;
Nature seems to pet thee;
Seething summer's fiery lip
Hath no power to fret thee.

Coolly sheltered, hid from smirch,
In thy cavelet shady,
O'er thee, in a silver birch,
Stoops a Forest lady.

To thy glass the star of eve
Shyly dares to bend her;
Matron Moon thy depths receive,
Globed in mellow splendor.

Beauteous spray! forever owned,
Undisturbed by station, —
Not to thirsty lips alone
Serving mild donation.

Never come the newt or frog,
Pebble thrown in malice,
Mud, or withered leaves to clog
Or defile thy chalice.

— *Dickens' "Household Words."*

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, NOVEMBER 9, 1850. NO. 23.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

ANNIVERSARY OF CAMBRIDGE CATTLE MARKET.

WEDNESDAY, October 23d, was the first anniversary of the Cambridge Cattle Market. In one short year this market has grown from a small beginning of a few hundred cattle, and a few hundred sheep, to thousands in each of these departments. At this anniversary (and the market was no larger on this account) there were 3019 cattle, and 7580 sheep at market. The demand for pens, which caused the erection of one hundred and thirty-seven new ones this season, shows how rapid has been the increase of this market. Its peculiar location in regard to travelling and transportation, by land, by railroad, and by water, and its immediate location for pleasantness and nearness to a large city, seem to point out this spot as destined to become one of the largest markets in the world.

Mr. Porter, who keeps the hotel at this market, has been very enterprising and generous in building pens at his own expense, costing several thousand dollars, and taxing nothing for their use. At this anniversary, Mr. Porter, without any previous announcement of his intention, invited about six hundred market men, and some other guests, to an excellent dinner; but an excellent dinner at this hotel is no unusual thing, as the host is distinguished as a liberal caterer, and, like a good soldier, ready at a short notice. We are happy to find that this undertaking, which offers facilities and advantages to numerous producers and dealers in stock, has flourished so well, and promises so fair for the future. See report on another page.

ADVANTAGES OF SCIENCE.

A valuable horse was recently injured in this city by a wheel passing over his foot. Dr. Dadd, a skilful veterinary surgeon, advised killing the horse, as the *os coronet* was crushed. The parties concerned were astonished at this opinion, as the foot retained its usual form, and there was no external injury, but merely a slight mark. Yet the advice was followed. The owner of the trespassing team paid for the horse; he was killed, and the foot saved for inspection. We have examined it, and find that the bone was thoroughly crushed, it now being in nineteen pieces. The advantages of science are seen in this case; for, without this light, the horse might have been subjected to excruciating pain, and a heavy bill incurred for *doctoring*, keeping, &c.

PREPARE FOR A HARD WINTER.

A very careful observer of the signs of the times remarks that we shall have an early, a long, and a hard winter. He considers the principal indications of this, the early heavy rains this fall, by which the earth has become fully saturated with water, and the streams, swamps, and fountains well filled.

Whether there is any thing in these signs or not, it is best to prepare for the worst, and there can be no disadvantage in being ready for a hard winter. If too much fuel be prepared, it will answer for future use. If the cellar be made unusually warm, the temperature can be moderated, if there be too much warmth. Should the farmer provide fodder for his stock beyond what they consume, it will be but a trifling disadvantage, compared with starving stock and an empty barn, or paying extravagant prices for hay to finish wintering too large a stock. So we hope that all will be cautious, and prepare for a surly blast from old Boreas; and if it come not, so much the better for us.

NATIVE AND WILD GRAPES.

In our last number, we acknowledged the receipt of a good native grape from Lynn. A correspondent infers from our remarks, that we considered it better than some of our best standard varieties. It is a wild grape, and one of the best of its class. We did not intend to say that it was equal to the Isabella, Diana, Catawba, &c. Most of our wild grapes are unpalatable, owing to their astringency, acidity, and pungent musky or foxy taste. Occasionally we find

one that is less objectionable in these respects, and such is the case with the grape in question.

It would be well to make a distinction in our grapes, calling all from the forests and fields wild grapes, and those raised from seed, natives or seedlings. We will endeavor to be definite in future; yet it is proper to remark that some natives are as unpleasant as the wild, often yielding the same, or nearly the same, from seed.

TIME FOR SECURING ROOTS.

It is best to secure beets early in November, before we have very hard frosts, as they often project above the ground, and are injured by freezing. Carrots will endure severer frosts without injury. As the white carrot grows partly above ground, it is more readily injured by hard frosts than other varieties.

Turnips and cabbages are better for remaining out late. The time that they should be secured in this climate is the middle of this month. Sometimes the weather for harvesting these vegetables continues fine till the 20th or 25th, but this is uncertain. It is better to be ready in season for snows, cold storms, and hard frosts.

POTATOES.

Notwithstanding the great destruction of potatoes by the rot in most parts of the country, the market here is pretty well supplied, though at rather high prices. Potatoes are brought into the market from the provinces east, from the region around Lake Champlain, from New Jersey, and various other sections, where the rot was not very severe. Apples, turnips, beets, carrots, and squashes are generally plenty, and are very good substitutes for the potato. Sweet potatoes are plenty in our market, and some persons prefer them to the common potato.

Salt as Manure. *A Great Mistake.* — In a late article on this subject, we recommended, for asparagus, one hundred and sixty bushels to the acre, or one bushel to the square rod. The article has been copied extensively, and in some cases there has been an omission, so that it reads *one hundred and sixty bushels to the square rod.* Those who have made this mistake will please correct.

The copper mines near Litchfield, Connecticut, are being worked with increasing success. The ore extracted yields a large percentage of pure copper, and no doubt now remains, that, as the miners penetrate deeper into the bowels of the mountain, the ore will be found to be of a richer and better quality.

A farmer should never be so immersed in political matters, as to forget to sow his wheat, dig his potatoes, and bank up his cellar.

FATTENING HOGS.

For several years, I have paid some attention to fattening hogs, and find that they will thrive much faster on corn and sweet potatoes, or on peas and sweet potatoes, than they will on any one of these alone. I am well satisfied, also, that they will fatten much faster on boiled and raw food mixed, than they will on either separate.

The year before last, I turned my hogs into a potato patch, and every evening fed them with corn. Under this treatment, the old hogs soon got very fat; but in the lot there were ten long-legged pigs not a year old, which, at the time I killed the old ones, were in as good order for running races, perhaps, as hogs could be put in for that purpose. I despaired of making them fat enough for bacon; but as I did not wish to keep them another year, I determined to try what effect cooked food would have on them, as I was well convinced that they could not be made fat on raw corn and potatoes; and with this view, I put them into a close pen, with sufficient pine straw in it to keep the hogs from the dirt. I then boiled sweet potatoes until they would mash up freely, into which I stirred corn meal until the whole became mush; and after feeding them on this, until they appeared satisfied, I gave them corn, then raw potatoes, and sometimes turnips with the tops on. Under this treatment they fattened faster than I had ever seen hogs before. In two weeks after I put them into the close pen, they were fat enough for any use — fatter than they ever could have been made on corn at that age, or on any one kind of food.

Hogs ought never to be put on a floor of plank, nor rails, if pine straw can be had; because they cannot be made comfortable on a floor of wood. Fill the pen two feet deep with pine straw, and when it becomes foul, put in more straw. In this way the hogs can be made comfortable, and no part of the manure lost.

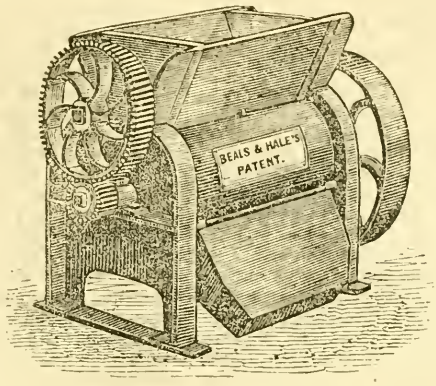
A. E. ERNEST.

Macon, Ga., *July*, 1850.
— *American Agriculturist.*

IMPROVEMENT IN BRICKS.

The London Patent Journal states that Mr. Henry Roberts, of Hyde Park, London, has taken out a patent for a new kind of bricks, which are so made that there will be no vertical joints in the wall which may be built of them, as are now made by the headers, where the English and Flemish *bonds* are used. The bricks are made hollow, to be lighter. They are made so that one side of the brick is inclined to the top or the bottom, or the one part projecting beyond the other; so that one brick being laid, the other is to be reversed, so that the projecting sides of the bricks will fit into one another, to bond the work, using only stretchers to avoid vertical joints. We do not believe that this invention will come into use. The hollow brick will be lighter, and should be easier fired than the solid brick, and on that account may have advantages; but the dovetailing form will be rather a detriment than a benefit to the mason. — *Farmer and Mechanic.*

Agricultural Papers. — The American Agriculturist says, that of the twenty million inhabitants of this country, — more than three fourths of whom are engaged in agricultural and horticultural pursuits, and most of whom obtain their entire support from these avocations, — not one in two thousand (and we much doubt if there is one in three thousand) subscribes for and reads a purely agricultural paper!



BEAL'S PATENT CORN-CRACKER AND COB-CRUSHER.

This machine is used for cracking cobs and corn previous to passing through the millstones, and for reducing the same for provender; and for cracking corn alone, suitable for hominy and for stock.

This is a valuable invention, as it is remarkably compact, very durable, uniform in its work, and economical in power. Its height, when set up, is two feet eleven inches. It will crack cobs and corn as fast as a mill will grind them.

The experience of the most intelligent men in the farming community shows the great utility of grinding cobs with the corn, for cattle, horses, and sheep. These animals are accustomed to coarse fodder; and when fed on corn separate from the cob, the food is too much condensed, and there is a lack of bulk to the food, to give the stimulus of distention. Besides this advantage, there is nutriment in the cobs, as has been abundantly shown by the production of alcohol by fermentation and distillation. And when cobs have been boiled and fed to cattle, they have made a great saving of food, and kept the animals in a healthy condition.

MANAGEMENT AND PROFIT OF FOWLS.

Since the exhibition of fowls last November, there has been a great interest shown in regard to the different breeds of hens and their management. It is a subject of more or less interest to every reader of your paper. Most persons are trying to obtain the largest hens. I think that small hens are much more profitable as layers. They will lay more eggs than those of the large breeds, and they can be kept at half the expense of those that are extremely large. My object is to obtain the hens that will yield the most eggs according to the expense. I have purchased a pair of Poland Topknots, from which to raise stock for the next year. They weigh about seven pounds to the pair.

I will now give you an account of my management the past winter. I kept twenty-five hens and a protector, of the native breed. My pullets that were hatched in April commenced laying in November, and those hatched in May began to lay in December. I have not kept an account of the number of eggs laid during the winter. The first week in January they laid ninety-one eggs. In the first two weeks in February, they laid one hundred and ninety-two eggs. I sold the eggs at fifteen cents per dozen; and, during the winter, the cost of keeping the hens was only equal to two fifths the value of the eggs.

I give my hens corn and cob meal every day, mixed in milk or hot water. I kept corn, barley, and oats by them all the time; I also kept by them ashes, lime, and oyster shells. Raw meat was given to them every day; I kept all the egg-shells during the summer, and gave them to the hens in the winter. I kept my hens in a house twenty by fifteen feet, with a large window in the south side. I find no difficulty in making my hens lay in winter; most people fail by neglecting to supply animal food, as a substitute for the numerous insects which they devour in summer.

Hens should be left out a few hours every day when the ground is bare. The best layers should be selected as breeders, and the protector changed every year. Grain should be kept by hens all times during the year. The principal reason that some farmers find no profit in keeping hens, is because they only half feed them; therefore they are always in mischief, scratching for food. When farmers plant corn, they should give their hens a good supply, and they will not scratch it up. If hens are well managed, they afford more net profit than any other stock. Young hens should always be kept over, as they will lay better in winter than old hens. — *Mass. Ploughman.*

FOWL EXHIBITION.

On our cover is a full advertisement of this show. Particular attention should be paid to the arrangement. Let every one who can, aid in making this not only one of the greatest, but *the* greatest of fowl exhibitions ever held in any country. Let every breed, and every valuable variety, be represented. Those persons who cannot contribute to the show, may encourage the enterprise by visiting it.

The present price of wheat in France is ninety-one cents a bushel! In New York it is one dollar and forty cents. This fact will explain why it is that France is just now sending into European markets a vast deal more wheat and flour than the United States.

For the New England Farmer.

"STUDY TO HAVE A LARGE DUNGHILL."

Mr. Cole: The value of farm-yard manure seems to be generally admitted. Its application to the soil lies at the very root of success in husbandry. With it, the farmer can accomplish every thing that others have done before him; without it, he is as though his hands were tied; he can do nothing. It is his capital, which, when safely invested and prudently managed, will ere many days return to him with interest. In all ages of the world has its worth been recognized; and those ancient works on agriculture that have come down to us abound in allusions to its importance, and give curiously minute instructions for its preservation and use. The ancients justly thought that the character of a farmer can best be ascertained by comparing the size of his dunghill with the number of acres he has in cultivation. They all agree in calling it the basis of his prosperity, and the source of domestic comfort and happiness.

But how forgetful of all this are thousands of the *farmers* who make it a boast that they live in the enlightened nineteenth century — many of them claiming to be men of intelligence and sagacity! They appear to think their land does not require a good supply of nutriment, in order to produce an abundant crop. They actually starve their land, while they would not be willing to starve their cattle. They very well know that a poorly-fed ox is not able to labor, and cannot be converted into prime beef, as well as that milk cannot be expected from a cow which is kept on a scanty pasture; and furthermore, that both the quality and the quantity of beef and milk are in proportion to the excellence of the food given. The profit is large or small according to the manner in which the animals may be kept; and surely no profit can be realized where the owner's care is simply to sustain the breath of life. Precisely so is it with cultivated land: it requires nutriment the same as a cow or an ox; and when not kindly treated, it can no more yield a liberal return, than either of those animals can, without being well fed, furnish good milk and beef.

A new soil, that is, one which has long lain idle, may produce several good crops without the assistance of manure; but so soon as the elements of fertility are consumed, unless some fertilizer be applied, it becomes barren, and must be allowed to lie fallow until it can abstract from the atmosphere that of which it has been robbed by the shiftless husbandman. It can be exhausted, just as a source is in the course of time emptied, when it is subject to a constant drain, and never replenished; it can be "worn out," like a man in the prime of life becoming faint and feeble from the want of food. A good soil, in the hands of a good farmer, is more generous than the purse, which restores that only with which it has been intrusted. It acts the part of the faithful servant, who, in returning the five talents to his lord, adds thereto the other five talents which the first have gained while in his care. It is the honest banker, who is, at the appointed day, ready with both principal and interest for the depositor. If it be properly managed, it is sure to be found liberal; but where nothing is given it, nothing can be expected in return. Cato, one of the teachers of Roman agriculture, said the first point in good tillage is to plough, the second is to plough, and the third is to manure. Dig your land well, manure it according to its wants, and you may trust to Providence for a rich reward. The soil will not then lose its fertility; and you should continue improving its character until further improvement becomes impracticable. This is the pleasure, this the profit, of husbandry.

From the foregoing, it appears that farm-yard manure is of some value; that it is necessary to the support of vegetation, as well as to the maintenance of fertility in the soil. Without it or a substitute, the land cannot produce grass, grain, or roots, either in abundance or of good quality; and as without these there can be no beef, mutton, milk, &c., both the farmer's family and his stock must perish. The conclusion is obvious: if manure be so essential to the support of life and worldly prosperity, how valuable is it, how highly ought it to be prized! — Nothing can be plainer. We estimate the value of some things very properly; we do not throw away, or expose to the access of thieves, our dollars and eagles, because we know that, when once lost, they come not to our possession again. As money has a fixed, ascertained value, farmers are apt to look after it carefully. No class of people can be more prudent and economical in its disposition, not spending a cent unnecessarily, nor suffering the opportunity of gaining a sixpence to escape. Even as money has a fixed value, so has manure; it can be sold for cash, or can be brought to market after having been converted into wheat, flour, potatoes, or pork. It is the natural food of the soil, without which it is sterile and unprofitable. And yet these same farmers, who are so provident as regards cents and sixpences, seem to care little or nothing about the proper management of their barn-yards. While each one is careful to keep a strict watch upon his breeches pocket, he is perhaps annually suffering dollars' worth of manure to be wasted on his premises. Having a cash value, either in its natural state or in the shape of "produce," it deserves as much attention as the silver and gold; and to waste the one is quite as foolish, ay, as culpable, as to waste the other.

Though the value of manure is generally understood, and will be universally admitted, yet many of our farmers manifest almost a perfect indifference as to its preservation. Such men can always be identified by their unproductive fields, and by granaries that do not overflow at harvest time. They do not realize the importance of saving all the manure made by their stock, and suffer portions of it to be dropped in lanes and public highways, while the remainder is spread over large barn-yards, as though it were desirable to expose it as much as possible to the atmosphere. That which falls in the road is of course altogether lost, while the most valuable parts of that in the yard are abstracted by the sun and rain. In a hot day, the ammonia rises in such quantities as to annoy the passing traveller; and after a shower, a little stream of rich, highly-colored water may be seen running off to fertilize the fields of a neighbor. This is a serious loss; for those gases that escape in the air, and the "liquid extract" that drains off upon another's land, would, if retained, greatly augment the future crop. It may be easily discovered that this is a total loss, by observing the diminished pile of dung. Farmers might with the same propriety leave the doors of their corn-cribs opened wide, so as to invite the entrance, and tempt the honesty, of every vagabond. No banker would consider the contents of his vaults safe, unless they were under the guardianship of lock and key. No prudent person would trust in his pocket the hand of a stranger, unless, indeed, *the pocket happened to be empty*. Now, why should not the hard-working husbandman be just as particular to protect the treasure of his barn-yard against those notorious thieves called the elements?

We say to you all, brother farmers, look to your manure heaps. Make it your endeavor to save every ounce of the dung and urine that come from your cattle. It perhaps cannot be expected that you will succeed in preserving the whole, but you will have cause for self-congratulation if you avoid only one half of the loss that your neighbors sustain. This is

by no means a difficult matter. In the first place, it ought to be your object to *get* all the manure you can. Therefore, instead of permitting the stock to spend the whole of the day in winter idle in the field, or chased up and down the road by vagrant curs and idle urchins, keep them in the yard, which should be of sufficient extent to allow them room for exercise, and thus you will have their excrements secure in your possession. Let your hogs be at work in turning over the refuse of the premises, such as weeds, leaves, sods, &c., that you have thrown in the pens, and converting it into excellent manure. A clever pig can in this way be made to earn a good part of his living. You must, in the next place, try to save what you have got, and to increase its bulk. The dung ought not to be spread over the whole yard, but, on the contrary, to be gathered in a heap, or heaps, so that no greater portion may be exposed to atmospheric influences than is absolutely necessary. Instead of leaving it to suffer from sun and rain, keep it in the cellar of your barn, or in a shed which can be made with rough boards at a trifling expense. If you cannot give it such protection, then, at least, cover it over with muck or loam, to retain the rising gases. Where the urine that falls in the cattle sheds is not conducted to a cistern or tank, it may be absorbed by some fresh earth, forest leaves, or refuse litter. The mixture of these materials with the dung and urine is beneficial rather than injurious, as fermentation is thereby moderated, and the loss of the most important parts is prevented, so that the whole quantity becomes of nearly an equal value. By following up this course for a few weeks, you will be surprised to see how easily and cheaply you have increased the bulk of your manure heap, and in the coming harvest your heart will rejoice in the prospect of a well-filled garner. To every agriculturist in the land, we say, in the language of good old father Cato, "*Study to have a large dunghill.*"

C. C., Jr.

Hawthorn Hedges, N. J., *Oct.* 17, 1850.

For the New England Farmer.

NEW ENGLAND AGRICULTURE.

Mr. Editor: Permit a New-Yorker, who has just returned from a tour through a portion of New England, to express, through the columns of your journal, the gratification he has experienced at witnessing the improvements in agricultural and rural matters, which have taken place there in the last four or five years. Although Nature has not been so lavish in her bounties, and has not bestowed upon your portion of the earth so rich and fertile a soil, or such facilities for its cultivation, as are enjoyed in other parts of the Union, a substitute has been provided, in the industry, intelligence, and enterprise of your people; who have converted your rocky and barren wastes into productive and fertile fields, and introduced a system of culture in many places highly successful.

To one who has been accustomed to look upon the larger farms of Central and Western New York, and to witness the agricultural operations there carried on upon a more extensive scale, and who has recently travelled over the vast prairies and expanded plains of the *Great West*, your New England farms do indeed look small, and seem pinched and contracted. Instead of broad wheat and corn fields, such as we see in the west, not less, in some instances, than two to four hundred acres in a single field, your little patches look small indeed. But as an offset to all these seeming disadvantages, you have a ready market in your own immediate neighborhood, prices double those obtained by the western farmer, and, what is of still greater moment, you are favored with all the advantages of society and social position. You have churches, schools, and all the institutions calculated to improve and elevate the minds of your citizens, almost at your own doors — privileges which are denied, to some extent at least, to many citizens in the new states.

In the cultivation of the soil, even in New England, where, if any where, perfection ought long ago to have been reached, there has been, it appears to me, evident improvement. The crops are better, and the farms look better, than in former years. In many places the stones have been converted into fence, the bushes have been destroyed, and fields heretofore worthless rendered productive and profitable. But the changes which strike a stranger most forcibly, and which are giving to many of your towns an appearance of beauty seldom equalled, are to be observed in the vicinity of the cities and larger villages. The rapid multiplication of fine country residences, the taste and beauty with which the surrounding grounds are laid out, and the fine order in which they are kept, have given to New England a reputation wider than her limits, and highly creditable to her citizens. In this respect she is far in advance of other sections of the Union, not perhaps in the magnificence and expense of dwellings, but in the simple good taste, harmony, and keeping, which are every where displayed.

The exhibition of the Massachusetts Charitable Mechanics' Association closed before I reached Boston, so that I was deprived of witnessing a show which is spoken of, on all hands, as highly creditable to the institution and to the state. You can hardly appreciate the regret experienced on account of my inability to reach Boston in time to witness the exhibition. As a small recompense, and determined to see some of the sights, I found my way into the weekly show of the Massachusetts Horticultural Society, at its hall in School Street. Although disappointed in the quantity of articles on exhibition, the exceeding beauty and apparent excellence of the fruits on the tables made up for any defects, and I left the hall impressed with the fact that you need not go beyond your own neighborhood for the finest fruits. Such peaches, grapes, and pears it has seldom been my good fortune to see, and I doubt not they would have tasted far better than they looked.

Not the least agreeable was that portion of my stay in the city devoted to an examination of the agricultural implements in the extensive warehouse of Ruggles, Nourse, Mason, & Co., in Quincy Hall. Such a collection can hardly be found elsewhere in the country; and to those gentlemen is the highest credit due for the great improvements in this branch of industry. For nothing has the intelligent farmer greater cause to be thankful, than for suitable, appropriate, and neatly-made implements, increasing as they do, not only the pleasures, but the profits, of agricultural labor.

I fear, Mr. Editor, that the object with which I commenced this article has led me into a longer *talk* than was contemplated, or than you can find room for in your columns; if so, I can only promise not to trespass again. Respectfully yours,

C.

Rome, N. Y., *Oct.* 18, 1850.

Substitute for Soap. — A late French author recommends potatoes, three fourths boiled, as a substitute for soap, in washing hands. The use of this prevents chapping in cold weather, and retains the skin soft and healthy.

Reported for the New England Farmer.

CAMBRIDGE CATTLE MARKET.

ANNUAL REPORT.

There have been at this market during the year ending Oct. 22, 1850, — 56,144 cattle, of which about 28,814 were beeves, and 27,330 stores, consisting of working oxen, cows and calves, yearlings, two and three years old. There have also been at market 168,204 sheep and lambs, 7,678 swine, 1,245 horses, and a large number of fowls and veal calves, not numerically calculated.

Extra cattle, and sheep and lambs, have generally been brisk, and sold readily at fair prices; but the market for the inferior qualities of cattle has been variable. Some days it has been active, and good prices were realized; at other times it has been dull, and sales slow.

Since the first of last January (less than ten months) 2,843 cars have come over the Fitchburg railroad, and 1,447 over the Boston and Lowell railroad, loaded with cattle, sheep, horses, swine, and fowls.

No. from each State during the Year.

	Cattle.	Sheep and Lambs.	Swine.	Horses.
Maine,	17,233	14,056		24
New Hampshire,	13,411	48,371	15	69
Vermont,	17,914	88,442	1,381	418
Massachusetts,	5,749	14,657	431	237
New York,	511	1,043	5,733	15
Canada,	1,326	1,635		482
Ohio,			118	
Total,	56,144	168,204	7,678	1,245

This market is within four miles of Boston. Operations were commenced about one year ago, since which time it has increased in business and importance with unexampled rapidity. It contains one hundred and eighty-eight yards, for the accommodation of cattle and sheep, one hundred and thirty-seven of which have been built the present season, with convenient lanes leading to all of them; the whole covering an area of twelve or fourteen acres. The yards are all free, no charge ever having been made for the use of any of them. The Fitchburg railroad, which connects with the Vermont and Massachusetts, the Cheshire, the Rutland and Burlington, the Sullivan, Central, Ogdensburg, and the Connecticut River and Passumpsic railroads, passes through these yards. By means of these roads, cattle, &c., are brought from Canada, New York, all parts of Vermont, from New Hampshire and Massachusetts, and landed from the cars direct into the yards. The Fitchburg Railroad Corporation have now nearly completed two side tracks for the accommodation of the cattle trains, where they will be able to run off of the main track about ninety cars, which can remain there until wanted.

The Boston and Lowell railroad, which connects with the Northern, and several other railroads leading through the different sections of New Hampshire, has a spacious cattle depot at Somerville, within two hundred rods of the market, with an extensive side track for running off the cattle trains from the main track; and all other requisite conveniences for landing and yarding the cattle, sheep, &c. The eastern drovers, also, coming from Maine and New Hampshire, who drive their cattle on foot, find in this market a desideratum long desired.

From the foregoing statistics, it will readily be seen that nature seems to have pointed to this spot, with an index not to be mistaken, as the most suitable location for the great Cattle Fair of New England.

Wednesday, Oct. 23, 1850.

For the New England Farmer.

THE POTATO ROT.

Mr. Editor: I have a fact to state, in regard to this disease, and wish to know if you or your readers have noticed similar facts this year. In the town of Stonington, Ct., there is a very general complaint of this disease, and I have yet heard of but two pieces of land exempt. These are peat swamps, redeemed by ditching. One of these was planted late on account of the water, and was manured only with coarse sea-weed. The potatoes are of fair size, and without any appearance of rot. If too much moisture be the cause of the disease, why is this piece of land, in a season so wet, entirely free from it? Has the superabundance of carbon in the peat any thing to do with it? Is the gradual exhaustion of carbon in the soil by successive cropping, one of the causes of this disease? It seems to me that facts, in a season so generally visited with this blight as the present, are worthy of particular notice, and may help us to some better knowledge of the cause and cure of the disease.

STONINGTON.

Remarks. — The facts mentioned by our correspondent have been noted in Ireland. Peat has a wonderful preservative quality, so that it protects the potato from disease, even under the serious disadvantage of a wet soil. We should be pleased to have further information as to the effects of raising potatoes in a peaty soil. — Ed.

For the New England Farmer.

CALEF APPLE.

Mr. Cole: I herewith send you a box of apples which were grown on my farm, called by us the *Calef* or *Calf* apple. The original name we do not know, but tradition says that the tree which first produced the fruit, in this section of the country, was grafted by Governor Hancock, of Massachusetts, who brought the scions, and grafted the tree himself, while on a visit at Squire Calef's. The tree is now standing, of a very large size, and has the appearance of one of the "old settlers;" it yet produces well, though it has suffered from neglect. The fruit is of large size, excellent for cooking, and pretty good for eating; in use October and November. The tree is hardy, a great grower, a great bearer, and produces yearly a large amount of fair fruit, fully equal, if not superior, to the Baldwin in productiveness. It blossoms some four or five days later than other trees, so that it is often likely to escape blights from cold, when other fruits fail. All things considered, I regard it as a very desirable variety to cultivate. Yours, &c.,

THOMAS HANNAFORD.

Cape Elizabeth, *Oct.* 22, 1850.

Remarks. — We have tested this apple, by baking and stewing, and find that it is superior for cooking. It is large, and very fair. — Ed.

We do not observe. — If the stars were to appear but one night in a thousand years, how would men believe, and preserve for many generations, the remembrance of God which had been shown! But every night come out these preachers of beauty, and light the universe with their admonishing smile.

NEW SPECIMENS OF GRAIN.

A gentleman from Mariposa states that on entering the San Joaquin Valley, from Los Angelos, in September last, he passed along the eastern banks of Tulare Lake, by a route not travelled previous to that time. He found large and flowing streams emptying into the lake from the east, and numerous well-disposed Indians, with their flocks of cattle and horses. The most singular objects that met his eye were several varieties of grain, which he believes to have never been met with before. One of these resembled barley, and grew in vast quantities, often covering areas of thousands of acres. Another variety was smaller, like millet, but not less beautiful. But the most singular of them all, and equally abundant, was what our informant termed pop-corn. He stated that the natives cut and threshed out large quantities of this, which he supposed they lay up in store. This grain they "*parch*" like pop-corn. — *Pacific News.*

RAISING POTATOES FROM THE BALL.

I took the seed in the fall, put them in paper, and kept them in a dry place. The 1st of April, 1847, I planted the seed in fine, rich earth, in a box in the house, kept them there until the 10th of June, occasionally in the open air, but not under glass, as I had not prepared the means to force them, which I think would be desirable to gain time and size. I then, June 10, planted them in the open ground. I protected the vines the first year from frost, to obtain a longer season until the 1st of November. On digging them, I found some as large as hens' eggs, the largest portion smaller. They produced seven varieties such as I now give you — one like the English red; two like long and round pink eyes; one like the pink eyes, but no red in the eye; one like the dark purple; one like the blue; and one like the lady finger, of large size. The second year, 1848, I planted the seed raised, like other potatoes, but in rich earth, but did not protect them in the fall to increase the growth. The vines were killed before they were entirely mature. I dug them the 20th of October, when they were the usual size of potatoes. This year, the vines were killed by the frost as early as the 2d of October, when they were green and growing vigorously, and I believe they would have been larger. They were dug the 10th of October. One weighed one pound ten ounces; twelve others, twelve pounds ten ounces. The long potatoes are more mealy at one end than the other, which shows they have not their full growth. I do not know the kind of potato from which the seed from the ball was obtained.

The land, half an acre, was a pasture; ploughed once, 1st of May, 1848; carried on eight loads manure from the cow stalls, and eight loads of leached ashes; spread them even, then dragged it well; planted corn about May 10; had a good crop on the half acre; ploughed it in the fall; about May 12, 1849, ploughed, dragged, and planted the half acre without any manure. The soil is fine sandy loam, land rolling, very mellow. The following is the expense of cultivation: Ploughing and tilling the ground, $1 50; seed, six bushels, $3; planting, $1 50; hoeing, $1 50; digging will cost about $3; also, half a barrel of plaster, when up, $1; making the whole expense $10. I am confident that the half acre will yield at least 230 bushels, which, at four shillings the bushel, is $115

Expenses of cultivation,	10
Which leaves a balance of	$105

I am confident I could easily sell the potatoes for the above sum, which would be the nice sum of $210 per acre, for use of land and small capital invested.

The following particulars I consider to be important in the cultivation of potatoes: I ploughed the land six inches deep; planted the potatoes three inches deep, leaving the hills level with the earth, and I planted the rows three feet apart, and the hills two feet from centre to centre, making forty-four hills to the square rod, which gives seven thousand four hundred and eighty hills per acre. Allowing fourteen hills for a bushel, (as some of mine yielded) gives five hundred bushels to the acre. I fully believe that if I had seed from the balls sufficient to have planted an acre, and cultivated them, as I did what I planted, they would have produced at least five hundred bushels this season. My land is mellow; did not plough between the rows, but hoed the weeds up, leaving the hills nearly level with the top of the ground, until the potatoes grew, and then raised the hills above the level. I believe the usual way of ploughing deep between the rows of corn or potatoes is a bad practice, especially in dry seasons; a small cultivator is much preferable.

AARON KILLAM.

— *N. Y. State Transactions.*

PREPARING BONES FOR MANURE — DISSOLVING THEM IN SULPHURIC ACID.

By breaking up the solid and tenacious structure of bones before applying them to the soil, their materials are much more readily appropriated by plants. If applied in the condition in which they are found in the animal, years would elapse before they would thoroughly dissolve and mix their elements with their kindred dust. By the mechanical operations of breaking, crushing, grinding, or sawing, or the chemical change effected by dissolving in sulphuric acid, or by steaming, burning, or fermentation, they are ready, at once, to yield their nutritive properties to the crops.

In this country, bones are generally ground before using as manure. Immense quantities are furnished by the manufacturers of buttons, and other products of bone, and this is so finely divided by sawing and other manipulations, as to need no further preparation. But in Europe, much of the bone is prepared for agricultural purposes by dissolving in sulphuric acid. This is done by mixing two or three parts of water with one of acid. If the bones have been previously crushed, one third their weight of acid will dissolve them; if they have not been previously broken up, then half the quantity may be required. The sulphuric acid is worth, usually, in this market, about two and a half cents per pound, while the bones, especially the refuse ones, in the interior, may be considered as valueless for any other purpose except manure. If there be no means for grinding, then we say decidedly, wherever manure is desirable, (and where is it not?) it will generally pay for dissolving the bones in the acid, if obtainable at the above price. It may, however, be a still more economical preparation to burn them, by which the earthy matters, the phosphates, &c., are all left in the residuum.

The sulphuric acid is, of itself, a fertilizer of much value, and by its application alone, will, under favorable circumstances for its application, produce good returns. We should, however, esteem it, in this country, as too expensive for general use, considering its relative value as compared with our products.

Fermentation of bones is quite as economical as burning, and by this process, fertilizing portions, which would otherwise be expelled and driven off into the atmosphere, will be retained with the earthy matter, and remain to add to the value of the compost

heap. Each of these methods we have more than once detailed in the previous columns of our paper; but the great value of bones, as fertilizers, induces us frequently to recur to it. — *American Agriculturist.*

ANALYSIS OF THE APPLE.

Although apples have been eaten ever since the days of Adam, we believe the chemical composition of them has not, until recently, been determined by actual analysis.

This analysis has been made by J. H. Salisbury, M. D., who has communicated the results to the secretary of the New York State Agricultural Society, and they have been published in the Transactions.

The varieties analyzed were the Tolman Sweeting, Roxbury Russet, Kilham Hill, English Russet, and Rhode Island Greening.

In the ashes of the Roxbury Russet and Rhode Island Greening he found the following mineral substances: —

	Russet.	Greening.
Carbonic acid,	14.11	18.03
Silica, (flint,)	2.278	1.412
Phos. of iron,	1.564	1.277
Phos. acid,	15.057	11.664
Lime,	4.857	4.421
Magnesia,	1.903	2.211
Potash,	34.958	38.440
Soda,	25.173	22.781
Chlorine,	2.300	2.272
Sulphuric acid,	6.889	8.019
Organic matter,	5.021	7.503
	100.000	100.000

Dr. Salisbury observes, that in silica the apple is by no means rich, containing, in the varieties examined, from about 1 to 2.3 per cent.

The phosphate of iron ranges from about 1 to 2.2 per cent.; the phosphoric acid from 11 to 15 per cent.; the lime from about 3 to 5 per cent.; the magnesia from about 1 to 2.2 per cent.; the potash from about 35 to 42 per cent.; the soda from 19.3 to 30.4 per cent.; the chlorine from 1.85 to 2.33 per cent.; and sulphuric acid from 6.65 to 8.02 per cent.

It will be seen, therefore, that the percentage of ashes in the apple is small: 1000 pounds of fresh apple contain about 827 pounds of water, 170.4 pounds of organic matter destroyed by heat, and 2.6 pounds of inorganic matter or ashes.

1000 pounds of dry apple contain between 17 and 18 pounds of water.

100 pounds of the ashes, according to this analysis, deprived of the carbonic acid which is formed when burning, contain 13 pounds of phosphoric acid, 7 pounds sulphuric acid, 38 pounds of potash, and 25 pounds of soda.

The organic materials in the apple are made up principally of a species of gum, and also of sugar and vegetable extract, malic acid, albumen, &c., all of which the doctor has laid down in tables, with their several proportions.

What is the practical use of this analysis? you will say. Why, a guide to the best kinds of manures for your orchard. Supply it with such manures as will afford the materials found in apples, viz.: For phosphoric acid, bones, in the form of burnt bones, or bone dust; sulphuric acid and lime, in the form of plaster of Paris; potash, in the form of ashes, and such like materials, &c., &c. By knowing what are the principal materials of the apple, we can judge better what it requires for food itself, in order to give us the greater return. — *Maine Farmer.*

A CURIOUS FACT.

The relation of the study of plants with agriculture will be well understood by the following extract from Professor Johnston's lectures: —

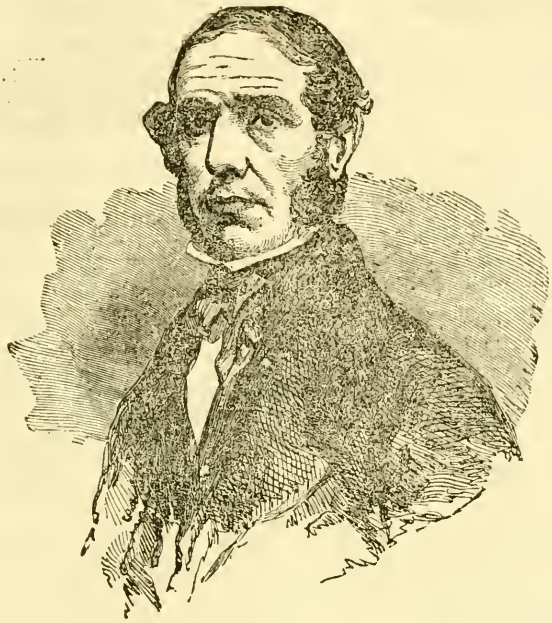
"It is a fact familiarly known to all of you, in addition to those circumstances by which we can perceive the special functions of any one organ to be modified, that there are many by which the entire economy of the plant is materially and simultaneously affected. On this fact the practice of agriculture is founded, and the various processes adopted by the practical farmer are only so many modes by which he hopes to influence and promote the growth of the whole plant, and the discharge of the functions of all its parts. Though the manures in the soil act immediately through the roots, they stimulate the growth of the entire plant; and though the application of a top-dressing to a crop of young corn or grass may be supposed first to affect the leaf, yet the beneficial result of the experiment depends upon the influence which the application may exercise on any part of the vegetable tissue."

In connection with this part of the subject, he adds, "I shall only further advert to a very remarkable fact mentioned by Sprengel, which seems, if correct, to be susceptible of important practical applications. He states that it has frequently been observed in Holstein, that if, on an extent of level ground sown with corn, some fields be marled, and others left unmarled, the corn on the latter portions will grow less luxuriantly, and will yield a poorer crop than if the whole had been unmarled. Hence, he adds, if the occupier of the unmarled field would not have a succession of poor crops, he must marl his land also. Can it really be that the Deity thus rewards the diligent and improver? Do the plants which grow in a soil in higher condition, take from the air more than their due share of the carbonic acid, or other vegetable food it may contain, and leave to the tenants of the poorer soil a less proportion than they might otherwise draw from it? How many interesting reflections does such a fact as this suggest! What new views does it disclose of the fostering care of the great Contriver — of his kind encouragement of every species of virtuous labor! Can it fail to read us a new and special lesson on the benefits to be derived from the application of skill and knowledge to the cultivation of the soil?"

STEADINESS OF PURPOSE.

In whatever you engage, pursue it with a steadiness of purpose, as though you were determined to succeed. A vacillating mind never accomplished any thing worth naming. There is nothing like a fixed, steady aim. It dignifies your nature and insures your success. Who have done the most for mankind? Who have secured the rarest honors? Who have raised themselves from poverty to riches? Those who were steady to their purpose. The man who is one thing to-day, and another to-morrow — who drives an idea pell-mell this week, while it drives him the next — is always in trouble, and does just nothing from one year's end to the other. Look, and admire the man of steady purpose. He moves noiselessly along; and yet, what wonders he accomplishes! He rises, gradually we grant, but surely. The heavens are not too high for him, neither are the stars beyond his reach. How worthy of imitation! — *Rural New-Yorker.*

He who falls in love with himself will find no rivals.



James F. Johnston

Professor Johnston was born in Kilmarnock, Scotland, and was educated in Glasgow University. He paid particular attention to the study of chemistry, and he improved himself in agricultural knowledge by travelling in various parts of Europe. At the foundation of Durham University, in England, he was appointed professor of chemistry and mineralogy. He was also professor of chemistry of the Highland Agricultural Society of Scotland. His lectures on agricultural chemistry and geology, and various other works on agricultural science, have been circulated very extensively in this country, and in the most enlightened parts of Europe.

In 1849, he delivered the address at the annual fair of the N. Y. State Agricultural Society. In the winter following, he delivered a course of lectures before the society, and the members of the legislature, on the relation of science to practical agriculture. He also delivered a course of lectures before the Lowell Institute in this city, and before the Smithsonian Institute at Washington.

Professor Johnston ranks among the first scientific agriculturists, and his writings are well adapted to illustrate and promote correct practical agriculture; and we are pleased that they are so widely diffused, and that arrangements are making to circulate them still more extensively. C. M. Saxton, New York, has recently published, in a neat volume, the Lectures on Practical Agriculture before the N. Y. State Agricultural Society. It should have a place in the library of every agriculturist.

Professor Johnston is still in the best stage of life for collecting and disseminating useful knowledge, in a discriminating and successful manner; and we hope that the world will be further enlightened by his future labors.

FORESTS AND STREAMS.

The remarkable man Humboldt has reduced it almost to a demonstration, that the streams of a country fail in proportion to the destruction of its timber. And, of course, if the streams fail, our season will be worse; it must get drier in proportion. Every body knows, who can number twenty years back, that the watercourses have failed considerably, and that the seasons have been getting drier and drier every year. Humboldt, speaking of the valley of Argua, Venezuela, says, the lake recedes as agriculture advances, until large plantations of sugar-cane, banana, and cotton-trees were established on its banks, which, (banks,) year after year, were farther from them. After the separation of that province from Spain, and the decline of agriculture, amid the desolating wars which swept over this beautiful region, the process of clearing was arrested, the old lands grew up in trees with a rapidity common in the tropics, and in a few years the inhabitants were alarmed by a rise of the water, and the inundation of their plantations.

Let a man be treated as a brute, and he will become more brutish than a brute; but treat him as a rational being, and he will show that he is so.

Domestic Department.

Female Education. — Shame on us, that we, who boast of having raised woman, in the nineteenth century, to the position in life which she ought to hold, so educate her that not one of her powers, physical or mental, can ever attain a full and healthy action. Better go back to the days of our great grandmother, and be content with Dilworth's Spelling-Book, and Assembly's Catechism; — nay, better go to far earlier days, when neither catechism nor spelling-book detained the damsel from the distaff or the loom, than rear, for the coming generation, a race of nervous wives and sickly mothers.

When the boy runs merrily after his ball, or chases in the race, or leaps over the bound, the girl must walk demurely in the garden, because, forsooth, running, and leaping, and jumping are ungraceful in the girl. When the boy runs freely over the hills or through the woods in the summer, or coasts down the hill or skates merrily over the pond in the winter, the girl, untrusted, unbefitted, walks pensively, by the side of her teacher, to the village, or takes a two mile airing in the sleigh, once a week. She never pitches the quoit, never throws the ball, never slides down the hill, never roams through the woods, because, save the mark! these are deemed unfeminine. In fact, she never thoroughly exercises her body at all, and, in consequence, soon becomes unable to endure any kind of physical fatigue.

"Fit only for boys," said a principal of a large female institute to me, the other day, when I remonstrated with him on the importance of these and other like exercises for the girls. For boys, indeed! And has not a girl a physical system to be developed, and matured, and invigorated? Has she not fatigue to bear, obstacles to encounter, hinderances to overcome, enterprises to carry out, duties to discharge? Has she not the burden of life to carry, and its toilsome road to travel for herself? In her own sphere does she not require, through life, all the energy, strength, and endurance of which her system shall be capable? It matters not whether she is to live in the midst of fashion, or to move quietly in the circles of country life, or to find her lot on missionary ground, or to struggle against unforeseen adversity,— all that can be made of her during her years of education, physically, morally, and intellectually, she will need. To every woman, whatever situation she may occupy, life is a *fact*, stubborn, earnest, real, to be shaped and moulded by her own efforts, or to be borne and endured by her own fortitude. Happy is she who is prepared for it, not by her own despairing efforts in after life, but by the judicious, careful, and thorough discipline of early education. — *N. Y. Com. Advertiser.*

The late Mr. Colman, in his letters from Europe, speaks with admiration of the interest the wives and daughters of the farmers and landed proprietors of England manifested in every thing that appertained to agricultural improvement. They composed more than one half the audience at society gatherings, were every where present, and showed an amount of knowledge on all subjects connected with domestic economies and agriculture, (and that, too, without "o'erstepping the modesty of nature,") that rendered them not only the most interesting of teachers, but the most charming of companions. No fine points in a celebrated milker escaped their commendation, nor defects their practised eye; they were amateurs in the flavor of cheese, and discriminating critics on the merits of butter — able as well to arrange a bouquet with the most exquisite taste, as with statuesque fingers to mould butter in its most attractive form. This is as it should be. Knowledge of every thing but evil is the highest civilization, and we hope New England women will not be backward in following, to a greater extent, the admirable example of their elder sisters. — *Mass. Ploughman.*

Youth's Department.

Murderers of Parents. — This kind of murder would seem the most brutal and criminal that can be conceived. Murder is a crime of the darkest dye. It finds no apology with God or man. Yet for a person to destroy his dearest earthly friend seems worse than murder. That children and youth are ever ungrateful and unkind to parents, is unpardonable — that they bring down their gray hairs to the grave by their impiety and recklessness, is inhuman, and more than beastly. Yet the Bible speaks of and rebukes such sins — "murderers of fathers, and murderers of mothers!"

In the first place, a violent destruction of life is not necessary to constitute murder. John says, "Whoso hateth his brother is a murderer;" that is, has the spirit of a murderer. Children sometimes do more than this, however. They bitterly destroy their fathers and mothers by their conduct. How, then, may this be done? let us here enquire.

First. A young man may murder his parents *by the choice of his companions.*

Good parents feel the deepest solicitude for the moral training of their children. They know that the society of the idle and irreligious will corrupt and ruin their children. Indeed, they know that they are already contaminated, when they seek such companions. The "plague spot" on their character is thus revealed. The parent shudders at the thought that his child has chosen the vile and profane for companions. He knows that he has entered the path that conducts to ruin, and sees him, in fearful anticipations, about to be ingulfed in the awful abyss. Especially does this thought sap the life-blood of the parents, when the child has ceased to listen to kind admonitions and anxious warnings. Then it is that anguish fills his heart; early gray hairs cover his head; deep furrows plough his forehead, and a premature grave receives his body, worn out by the care, grief, and anguish caused by the anticipated profligate life of a wayward child.

Second. A young man may murder his father and mother by *immoral and unprofitable conduct.*

This is often done by the anticipation of such a result. But how much more heart-rending and dreadful, that the beloved child is actually contaminated! that his innocence has gone, his heart is hardened, and he has become an abandoned prodigal! Were an assassin to plunge a dagger into the parent's bosom, it would be kind in comparison with the murderous influence of such conduct of their child. They remember his innocent infancy and childhood, his fondness for his parents, his obedience and gratitude, and all that endeared him to his loving parents. They see him now, O, how changed! He has cut himself away from home influences, become profane and dissipated, and is hastening on to certain destruction. What a terrible termination of a parent's fond hopes! How much worse to bear than death by any other means!

Youthful readers, are you becoming the murderers of your fathers and mothers? — *Aurora of the Valley.*

Health Department.

Pepper. — One of the most useful vegetables in hygiene is red pepper. Especially in warm countries has it been considered invaluable as a stimulant and auxiliary in digestion. Among the Spanish and French races it is used in the largest quantities, and they invariably enjoy most excellent health. Of late, particularly since the cholera visited our state, our planters have begun to discover the virtues of this vegetable, and mingle large quantities of it with the food of their negroes. Considerable attention has been drawn to the selection and cultivation of the best kinds of pepper. Among those who have appreciated the importance of this vegetable is that admirable planter, and exceedingly practical gentleman, Col. Maunsel White, the proprietor of "Deer Range," commonly known as the model sugar plantation. Col. White has introduced the celebrated tobacco red pepper, the very strongest of all peppers, of which he has cultivated a large quantity, with a view of supplying his neighbors, and diffusing it through the state. The tobacco pepper yields a small red pod, less than an inch in length, and longitudinal in shape. It is exceedingly hot, and but a small quantity of it is sufficient to pepper a large dish of any food. Owing to its oleaginous character, Col. White found it impossible to preserve it by drying; but by pouring strong vinegar on it after boiling, he has made a sauce or pepper decoction of it, which possesses, in a most concentrated and intense form, all the qualities of the vegetable. A single drop of this sauce will flavor a whole plate of soup or other food. The use of a decoction like this, particularly in preparing the food for laboring persons, would be found exceedingly beneficial in a relaxing climate like this. Col. White has not had a single case of cholera among his large gang of negroes since that disease appeared in the south. He attributes this to the free use of this valuable agent. — *N. O. Delta.*

Mechanics' Department, Arts, &c.

Coating Iron with Copper. — To coat iron with copper, as well as it has long been done by tin, has occupied the attention of many inventors for centuries. Their labors have uniformly failed of success. They have produced a mechanical union between the copper and tin, such as by the electrotype process, but for all truly useful purposes no good result was produced; no coppering of the iron by a chemical union was ever accomplished until within a short period, and a knowledge of this discovery has been known to but a very few. The discoverer is Mr. Pomeroy, of Covington, Ky., who secured, after no little trouble, a patent for the same on the 8th of last January. We have seen samples of plate iron (one of which is in our office) coppered and finished by Mr. Pomeroy's process. Unless the edge of the plate was seen, no one could tell that it was any thing but a copper plate. The application of this discovery to the coating of iron, so as to make it more durable, and render its application to various branches of art more expansive, makes it one of the most valuable discoveries of this or any other age. The iron can be coated with any thickness of copper, and spikes for ship-building have been tested, as we have been told, and found to answer as well as those made entirely of copper. As a matter of economy, then, this discovery will greatly cheapen the price of sailing vessels. For boilers, roofing, coating of pipes, covering iron with the precious metals, harness plating, &c., this discovery is singularly applicable, and will be the means of increasing the general comforts of the human race. — *Scientific American.*

Water-proof Cloth. — The best water-proof cloth made is that of India rubber; no other cloth can equal it. Oil cloth comes next in order. Woollen and cotton cloth may be rendered nearly water-proof by dipping them in a solution of alum and the sulphate of copper. These two substances should be used in about equal quantities. The cloth should be dried in a warm room afterwards. If cotton cloth is dipped into a very weak solution of glue, and afterwards into a hot and strong solution of alum, and then dried at a high temperature, a very good water-proof cloth is the result, ay, and one that is nearly incombustible. — *Scientific American.*

ROUGH FODDER.

Mr. Editor: I do not know whether many of your agricultural readers make much account of their "rough fodder," that is, of their top and but stalks, &c., but one thing I can assert, and without fear of contradiction, I think, by any who have economized this species of feed, and that is, it is much too valuable to be lost. Every farmer should keep on his farm a sufficiency of the various kinds of stock to consume all the vegetable matter his lands produce. In this way he will greatly augment his resources, and at all times be supplied with that most essential requisite to successful agricultural enterprise — an abundance of manure. The belief entertained by many, that there is no nutriment in cornstalks, after the corn has been matured, is altogether a false assumption; it rests wholly on fallacious data, and should be abjured at once as unworthy of a moment's thought. If we take the stalks of Indian corn, and pass them through a chaffing machine, mix them with a small quantity of rasped ruta baga, carrot, or beet root, and a little water, with just sufficient *salt* to season them well, and feed them to stock, we shall find that the animals will not only hold their own, but actually increase in weight. This demonstrates the actual existence of nutritive matter in this species of fodder, and in large quantity; for the small additament of rasped root can be but a slight accession to the alimentary power of the feed, as but a small quantity is supplied; the object being not so much to augment the nutritiousness of the mass by commixing it, as to give a more sapent flavor thereto, and to correct, in some measure, any unpleasant taste which may have been engendered by mould, or the imperfect curing of the fodder, in the field or barn. It has now become quite common in many sections to allow the top stalks to remain till the corn is taken from the field, as the filling of the grain is believed to be more perfectly accomplished under this system of management, than it is when the tops are removed. Of course the top stalks are less valuable as fodder; but they are by no means valueless. Chaffed in this manner, they are eagerly devoured by most animals; and a great advantage resulting from chaffing is, there is no waste or loss. Every particle is consumed, and thus all the products of the farm, which have required manure for their support, are converted to an economical use, and in process of time are again resolved into the food of plants. By having a chaffing machine, and a machine for rasping roots, and

one for crushing corn-cobs, all of which cost but a mere trifle, compared with their actual intrinsic value, a farmer may make an immense saving in the course of a year.

A PRACTICAL FARMER.

— *Germantown Telegraph.*

DOMESTIC FOWLS.

The quality, that is, the fineness, juiciness, and richness of flavor of the flesh of domestic fowls, is of much more importance than their size; and I consequently reject all coarse-meated fowls, however large they may be. There is no difficulty in discriminating between coarse and fine fowls, at any time. When chickens, if the down is straight and stands out, and the body and limbs are loosely jointed, the meat is coarse; but if the down is glossy, and lies close to the body, and the body and limbs are compactly formed, the meat is fine;—and when grown, if the fowl is light in weight, in proportion to its size, the flesh is coarse; but if heavy, the flesh is fine. There is, also, a *fitness* in the quality of the flesh; for, if the meat is fine, the bones are fine, and *vice versa*. If the flesh is fine, it is juicy and richly flavored; if coarse, dry, fibrous, and insipid. The color of the legs, too, is quite material in judging of the quality of fowls. All other things being equal, dark-legged fowls have the finest flesh, and are most hardy. Turkeys, which have the finest flesh of all fowls of their size, have black legs; pheasants, partridges, and quails, all of which are very fine-fleshed fowls, have dark legs; the game cock, likewise, which is universally acknowledged to be the finest-fleshed of all the domestic fowls, except the wild India fowl of Calcutta, has dark legs; and this is equally true of the wild India fowl itself, the specific gravity of which, likewise, exceeds that of any other fowl. I do not wish to be understood, however, to say that all dark-legged fowls are fine, or that all yellow or white-legged ones are coarse, for much depends on the breed; but I do say, that the darkest leg which pertains to the breed, indicates the finest fowl. For instance, the Shanghae or Cochin China fowls, "of the pure blood," always have their legs of a bright red and yellow mixture, beautifully shaded together. Now, if you wish to select a fine fowl of this breed, choose one of the darkest shade of these colors. The great Java fowl, of pure blood, uniformly has black or very dark legs; and if you wish a fine-fleshed one of this breed, select one with the blackest legs. The black Poland fowl, of pure blood, has white or blue legs. Select the blue for the finest, that is, select the darkest of the natural color, whatever that color may be. Fowl fanciers always select yellow legs; but fowl-eaters, that is, those who regard the quality of the bird, select dark legs. The color of the feathers, too, has more or less to do with the quality of the fowl. Some breeds have much more brilliant plumage than others; but when we speak of the brilliancy of the plumage, we mean in comparison with others of the same breed. If, therefore, you select a fowl of rich and glossy plumage, when compared with others of the same breed, depend upon it, the legs will be dark of the kind, and the quality of the bird will excel.

PULVERIZED WOOD FOR CATTLE.

About three years since, I had occasion to send my cart-horses frequently through a piece of coppice wood, and whenever it happened that they stopped within reach of the rods, they would greedily devour every bough they could come at. This I noticed many times. At last I was led to examine the rods on which I had seen them feeding, and found them completely stripped of their branches, some of which were of a very considerable thickness. This led me to suppose that there must be some good qualities in the wood, and this consideration induced me to get some pulverized, and give it to my cart-horses; which experiment was repeated at several different times, until I was fully satisfied that it had no injurious effect upon them. After this, I was led to give it to my gig-horses with their corn; and having ascertained that it did them no injury, I had machinery prepared for reducing the wood for the purpose of food, and began to feed both cart and gig horses, as also my cows and pigs, mixing a portion with all that was given them.

This practice I have continued for the last ten months. Previously to feeding my horses in this way, they had each six quarts of oats and beans given them per day, for which is now substituted three pints of barley per day. They are in equally fine condition as when fed in the usual way, and more playful and free in their work. Soon after the wood was mixed with the fodder given to the cows, their milk, as well as their condition, was much improved. For several weeks past, I have been feeding sheep with the pulverized wood, together with crushed Swedish turnips, and they also appear to improve by it. I have likewise fatted four pigs successively, mixing this food with barley meal, and the results have proved most satisfactory.— *Mr. Daniels, in Chamber's Journal.*

The statement, however strange it may sound, is not so startling, when we remember that the woody matter of trees is, in its chemical nature, nearly allied to starch, and that it always contains some nitrogen; so that, in reality, it furnishes the ordinary materials of food in another form. We presume, however, that white-wooded, not resinous, trees are those which furnish Mr. Daniels's cattle with the ligneous pulp they thrive so well upon. — *Ohio Family Visitor.*

CURE FOR A BELLOWSED HORSE.

Some few weeks since, being overtaken by a severe thunder storm on my way home, I took refuge under a shelter where were assembled several gentlemen from the same cause. One of the gentlemen thus accosted me: "Why do you not cure your horse of the bellows?" "For the very reason that I cannot," I replied.

"Well, stranger," says he, "when I am at home, I cure all such cases, and warrant them, at ten dollars a head; but as I am a long way from home, and your horse is a valuable one, I will tell you how you can cure him effectually in a few days. In the first place," says he, "give your horse salt in his water for three mornings in succession; after that, pound up a piece of blue-stone about the size of a chinquepin, and mix it with wet meal; give him the same for ten consecutive mornings, feeding him rather lightly for those ten days; and if he is not well at the end of the ten days, I will give you my head."

I have tried the remedy, and it has wrought a perfect cure; and I now give it to the readers of the Enquirer, that they may save their ten dollars too.— *Columbus Enquirer.*

Any one may do a casual act of good nature, but a continuation of them shows it is a part of the temperament.

THE FIRST OHIO STATE FAIR—A NEW ERA IN THE AGRICULTURE OF OHIO.

Well, the State Fair is over, and the tens of thousands of farmers, mechanics, and others who assembled at "Camp Washington," during the memorable three days, to witness the triumphs of productive industry, have returned to their homes, well pleased, we trust, with the exhibition, and inspired with new resolutions in favor of *progress and improvement*. Certain we are that the heart of every true Ohioan must have glowed with pride and exultation in view of what was there shown as already accomplished by the industry and skill of his noble state, and the assurance of greater things to be accomplished in the future.

The weather was highly propitious for the Fair. The number of persons in attendance was very great; fully equalling our expectations. At times, we should judge, there were from twenty to thirty thousand people on the ground, and probably not less than forty to fifty thousand entered the enclosure during the exhibition. The low stage of water in the Ohio River prevented thousands from attending who would otherwise have been there; and we learn that it was found impossible to convey all upon the railroad who wish to go by that mode from Springfield downwards.

The amount of receipts from the sale of tickets and badges, including exhibiter's fees, was about $8000; to which may be added receipts from subscriptions of citizens of Cincinnati, say $1600, and from sale of lumber, &c., $1400; — total receipts, about $11,000.

The beauty and fitness of the grounds, and the liberal and convenient arrangements of the committee, were admired and commended by all. The spectacle presented to the beholder during the height of the Fair was very grand and animating. The spacious enclosure, with its grassy slopes and inviting shade trees; its numerous tents and booths with waving flags and streamers; the throngs of cheerful spectators; the countless carriages, omnibuses and canal boats, all moving and swarming with people; the prancing horses, and lines of stately cattle, the whirl and clatter of machinery, and the sound of martial music, — all combined to produce an effect on the minds of spectators not easily forgotten by such as never before attended an exhibition of the kind. — *Ohio Cultivator.*

BENEFITS OF AGRICULTURAL FAIRS.

Horace Greely, of the New York Tribune, in writing from the N. Y. State Fair, thus speaks of the utility of such exhibitions: —

"There cannot be less than two or three hundred different kinds of agricultural implements on exhibition here — horse-rakes, cultivators, straw-cutters, subsoil and other ploughs, new beehives, horse-power saws, &c., &c. I have considered this altogether the most important feature of the Fair. A great ox may be reared by a greater fool; but no man who ever worked a year at farming can spend a day among the implements and inventions without being stimulated to *think*. The great end of all such exhibitions is an improvement of the breed of farmers — of men. Now, the man who has been skimming over a hundred acres of land for the last twenty or thirty years, ploughing six inches deep, manuring with his good wishes, and growing fifteen or twenty bushels of corn to the acre, cannot spend a day in one of these Fair enclosures without being startled and ashamed. These subsoil ploughs, one of which, properly used, would double his product of corn and vegetables, and in dry seasons treble it — these straw-cutters, with one of which his scanty crop of hay might have been made, with the aid of straw, stalks, &c., to winter his stock bountifully — these cultivators, seed-planters, horse-rakes, and other labor-saving implements, must set him thinking.

"What sort of crop do those farmers obtain who use such implements? Who make the most by farming — the fifteen or the fifty bushel corn-growers? What sort of farmers is it who are able to buy land when any is for sale low for cash? What sort of farming leaves land in a condition to sell advantageously? These questions arise spontaneously in the simplest minds, and they can be answered. I don't believe a farmer can attend three successive Fairs and not resolve to farm better through all his life afterwards."

SUGGESTIONS FOR FARMERS.

If you have any bean straw, do not permit it to be wasted, but feed it to your sheep. These animals are remarkably fond of it, and will partake of it freely when they refuse the best English hay, or even grain. It is sometimes passed through a chaffing machine, and fed to them while suckling their lambs; but I consider this superfluous, as I have never yet known them to refuse it even when they have been too sick to partake of other food. Mouldy beans may be cleansed, freed from their disagreeable odor, and rendered excellent feed for sheep, simply by pouring hot water over them. If not very strongly tainted, they may possibly be rendered fit for culinary purposes.

Peas that are "buggy" make an excellent feed for swine. The nutritive matter contained in the pea is greater, per pound, than that of any other vegetable, and when ground into meal, or mollified by soaking, it becomes one of the best articles for fattening swine possible to be obtained. Peas which have "bugs" in them are utterly unfit for human food; and there is no disposing of them in the market; so that, all things considered, their appropriation in this manner is the most economical that can be devised.

Yards. — See that all your yards are now replenished with some substance that will absorb and retain the liquid excrement voided by your animals during the fall and winter. It will subserve a double purpose — furnish a good bed for the animals to repose on before the snow falls, and during the cold, chilling nights of the later autumn, and supply an excellent manure for your field crops in the spring. More attention should be accorded to this subject, and I trust farmers will soon awake to fresh application of its importance, and graduate their course accordingly.

B.

— *Germantown Telegraph.*

A NEW AND ECONOMICAL MODE OF FORCING VEGETABLES.

It has been suggested by a foreign paper, that the waste steam of manufactories may be advantageously applied to the roots of plants; and without any expense for artificial heat, large quantities of tropical fruits and vegetables may be raised at all times, besides such of our own as we can otherwise have in perfection only during the summer months. A series of common draining tile, laid within suitable distances underneath properly prepared beds, containing the plants, which should admit or shut off the exhausted steam by cocks, would be all that is necessary for the underground arrangements. Moisture would be thus communicated as well as heat, and a slight covering of wood, or brick, and glass, to protect the plants from frosts or cold air, would be all that is essential to securing the most prolific growth. — *Rural New-Yorker.*

CATTLE.

Few people are aware that it is nearly as easy to alter the frame of our cattle as it is to alter the style of our dwellings. John Bull, for instance, has gone on to improving his oxen until he has got a breed almost without legs. From the returns of the last census, it is safe to say that 1,000,000 cows are now milked in this state, which are supposed to yield about $20 per head. To improve these up to an average annual product of $31 each, (that is, to one half what the best large dairies in the country now yield,) would add $12,000,000 to the income of the citizens of a single state. This gain, by the improvement of one kind of rural machinery, would be equivalent to creating a capital of $200,000,000, and placing the money where it would yield over six per cent. interest in perpetuity. If the thirty millions of sheep in the United States gave as good returns in wool for the food consumed as the best hundred thousand now do, it would add at least sixty million pounds to the annual clip of this important staple. There are not far from six million horses and mules in the United States; and it is not too much to say, that in a few generations these animals may be improved full $30 a head on an average. If so, the gain by this increase of muscular power, and its greater durability, will be $180,000,000. If we study critically the machinery for converting grass, roots, and grain into beef and pork, the difference is found to be still more striking. If the facts relating to this subject were spread before the people, great improvement would soon follow, and all classes share equally in the profits of more productive labor. — *Albany Knickerbocker.*

THE GUINEA HEN.

The Guinea hen, or Pentado, is near an everlasting layer. They are said to unite the properties of the turkey and the pheasant. They are a native of Africa, though said by some to belong equally to this country, and are easily domesticated. Its flesh is more like that of the pheasant than the common fowl, both in color and taste, and is reckoned a very good substitute for that bird. It assimilates perfectly with the common fowl in its artificial habits and kinds of food. Its gait is peculiar, as are also its cries. They are fond of marshy places — always perch during the night in high situations or on trees. It is a little singular that American farmers do not turn their attention to these fowls. A knowing Jerseyman, named David Bonner, from England, hired a patch of five acres four years ago, and commenced raising eggs for the New York market. — Bonner has never hired any help, and at this moment owns a farm, for which he paid $4700, of which the buildings cost over $3000. His farm is all paid for, he owes not a cent in the world, and he owns a flock which varies from 800 to 1200 Guinea hens. — *Suffolk Democrat.*

PLANTING TREES.

The most remarkable, if not the most culpable neglect — that which indicates an unamiable and uncultivated, as well as an improvident nature — is the omission, on the part of gentlemen in the country, to plant trees about their homesteads, for shade and ornament, if not for fruit and profit. Let any one who would be convinced how easy it would be to provide, in a few years, even in the most exposed and barren situations, all the beauty and luxury of a natural forest, only walk as far as the Lunatic Asylum, between Spruce and Pine Streets, Philadelphia, and see how thriving is every one of the handsome trees so thoughtfully planted out there last autumn, at the instance of Mr. Cresson, in anticipation of the failure, some years hence, of the old sycamores. The work is only to be once well done, and the trees well protected, and then they may be left to endure forever, as monuments of the good taste of the planter, transmitting his memory with gratitude to posterity.

We remember now, at the moment of scribbling this hasty but earnest exhortation to all young friends to plant trees, — maples, horsechestnuts, locusts, linden-trees, (any thing but Lombardy poplars,) — that there is in the garden, near the house at Douraghn Manor, Maryland, the classic residence of the late venerable Charles Carroll of Carrollton, a weeping-willow, stately and graceful, like her who placed it when a child, that will always be associated with the name of Mrs. Caton. How much more are such memorials to be coveted, than monuments stained with blood, and cemented with the tears of the widow and the orphan! — *The Plough, Loom, and Anvil.*

RYE — WHEAT.

We received, several days since, from Mr. B. F. S. Griffin, of West Newbury, a bag of the most beautiful white rye we have ever seen, and, since then, have fully tried its value. Served up at the table in the form of pancakes, it is food fit for the table of a queen, and nutritious and healthful far beyond any preparations of wheat flour. It is well known that the northern nations of Europe, even the Germans, subsist principally on rye, making comparatively but a limited use of wheat and potatoes. We have often thought, in view of the poor, dark-colored rye which is seen in this country, that they were to be pitied for the coarse and hard fare upon which they fed, although it might be pronounced wholesome food. If, however, they have an article of rye any thing to be compared to that which Mr. Griffin has produced, our epicures may envy rather than pity them. Mr. Griffin has been quite successful in growing wheat and rye. He informs us that he has measured his wheat, and found the product fifteen bushels to one bushel of sowing, or at the rate of thirty bushels to the acre. His rye produced twelve bushels to one bushel sown.

The potato fails us so frequently, that our New England farms are in danger of becoming sadly depreciated in value, unless some improvements in husbandry are adopted. We are strong in the belief that it is time for our farmers to bestir themselves in this matter, and pay less attention to the potato, and more to other substitutes for food. We learn that many of them are about to sow wheat this season. — We do not see why this section of the country cannot grow wheat as well as the old lands of Europe, which have been laid down to it for many generations. Let the experiment be tried, and liberal rewards offered for those who succeed best in keeping off the rust and the weevil, its two great enemies. If wheat fails, then why not try rye, barley, and buckwheat, as a substitute for the potato? In Pennsylvania, Western New York, and Ohio, on the best wheat land in the country, the farmers use only a limited quantity of their own wheat, and grow fat and hearty on rye and buckwheat and barley cakes. All that we need is, that the farmers should understand the cultivation, the millers the preparation, and the girls become adepts in cooking these, to supply our tables with more nourishing and healthful food than we now have. We do not know but the potato rot may be sent to save men from indolence in the

cultivation and cooking of their food. The potato has been so easily cultivated and readily cooked, that it has, perhaps, attained an undue importance. — *Newburyport Herald.*

GOLDEN RULES OF LIFE.

All the air and the exercise in the universe, and the most generous and liberal table, but poorly suffice to maintain human stamina if we neglect other coöperatives — namely, the obedience to the laws of abstinence, and those of ordinary gratification. We rise with a headache, and we set about puzzling ourselves to know the cause. We then recollect that we had a hard day's fag, or that we feasted overbounteously, or that we staid up very late; at all events, we incline to find out the fault, and then we call ourselves fools for falling into it. Now, this is an occurrence happening almost every day; and these are the points that run away with the best portion of our life, before we find out what is for good or evil. Let any single individual review his past life, — how instantaneously the blush will cover his cheek, when he thinks of the egregious errors he has unknowingly committed! — say unknowingly, because it never occurred to him that they were errors until the effects followed, that betrayed the cause. All our sickness and ailments, and a brief life, mainly depend upon ourselves. There are thousands who practise errors day after day, and whose pervading thought is, that every thing which is agreeable and pleasing cannot be hurtful. The slothful man loves his bed; the toper his drink, because it throws him into an exhilarative and exquisite mood; the gormand makes his stomach his god; and the sensualist thinks his delights imperishable. So we go on, and at last we stumble and break down. We then begin to reflect, and the truth stares us in the face, how much we are to blame.— *Canadian Agriculturist.*

HOW TO CULTIVATE THE APRICOT.

A sound, practical article from the editor, recommends as the chief requisite for success, and to prevent the frequent loss of the trees from various causes, — First. To keep the trees low, and to head back the shoots in spring, avoiding the practice of trimming up to a naked stem, and thus exposing the bark to the action of the hot sun. Second. To provide a deep, well-drained soil, well fertilized with wood ashes. Third. To plant in a cool aspect, to prevent the too early swelling of the buds, and their consequent danger from spring frosts. Fourth. To prevent the loss of the young crop by daily jarring down the curculio on spread sheets. Where only half a dozen trees are cultivated, there is no mode of making war upon this insect so sure and reliable as jarring the trees daily during the month of May, with a pounder, (sheathed at the end with India rubber,) gathering the insects upon the sheets and destroying them. The experience of a correspondent is added, that though previously unable to depend on his trees for a single apricot, after putting the jarring system into practice, he actually obtained three thousand most beautiful and luscious apricots, the first season of trial, from five trees.— *Albany Cultivator.*

The potato disease is making fearful ravages in some parts of France; more so than during the last two years.

NOTICES OF PUBLICATIONS.

The Marriage Ring; or, How to make Home Happy. From the writings of John Angel James. — This is a most beautiful little work, both in typography and binding; and the good advice it contains corresponds with its fine appearance, and is admirably adapted to *making home happy.* Boston: Gould & Lincoln, 59 Washington St.

Address before the Cincinnati Horticultural Society, by Edward D. Mansfield, Esq. — A very interesting work on the history and progress of horticulture.

Address before the Mass. Charitable Mechanics' Association, at their sixth exhibition, by J. S. Skinner. — This is an able work, by a veteran agriculturist, showing the advantages of *association*, and the intimate connection and dependence of the different industrial classes on each other.

A Treatise on Grape Culture, in Vineyards in the vicinity of Cincinnati, by R. Buchanan, Esq. — We are indebted to friend Ernst, president of the Cincinnati Horticultural Society, for this instructive work.

The Agriculturist's Guide and Almanac, for 1850. New York: James G. Reed. — Besides the usual astronomical calculations, and other matters common to almanacs, this work contains a variety of agricultural matter, and a blank memoranda for every day in the year. It is beautifully illustrated, and bound in a neat, compact form, convenient for preservation.

Monthly Family Circle, and Parlor Annual. — This is a very interesting magazine. Each number contains thirty-six octavo pages, is printed on good paper, and contains a splendid steel plate engraving, and a fine wood cut or colored flower, and occasionally music. Price only one dollar per year. New York: James G. Reed.

ACKNOWLEDGMENTS.

Of John Washburn, Plymouth, Holton Sweeting apple; very large, fair, and handsome; remarkably tender, and of excellent quality. Also, the Loring Sweeting. We have occasionally seen this fruit, and though of superior quality, we have objected to it for want of fairness and sufficient size. Perhaps we ought to have blamed the culture, for these specimens are very large, nearly a foot in circumference, and very fair. This variety is not yet in use. It is a winter apple, of excellent quality. Almost every thing comes to its highest state of perfection under the skilful management of friend Washburn.

From A. S. Sweetser, Cumberland Centre, Me., apples for a name. They are the Moody apple, formerly considerably cultivated about Portsmouth, N. H., and it is still very popular in that market; but of late it is not propagated much, as it is apt to fall, as Mr. Sweetser remarks, and it is rather a poor

bearer. This is its general reputation. The fruit is quite large, nearly round, very fair, yellow ground, mostly covered with red; the cavity is nearly full, and many of the specimens have a very prominent protuberance on one side of the stem; in some cases this fleshy prominence projects considerably above the base. This is a distinguishing characteristic. — We have seen them in this market selling at good prices. The quality is very good. Late fall and early winter.

From J. Cummings Haskell, Rockport, large cranberries, of a singular form, being nearly *square*, the corners only slightly rounded. The largest berries are seven eighths of an inch in length, and two and a half inches in circumference. They were raised in a meadow, without artificial culture.

Of Lovett Pratt, Amherst, N. H., fair-looking sweet apples, good for baking, but rather tough and dry for table use.

From Simon Burnham, Hollis, Me., winter apples, large, fair, and remarkably handsome; which we will notice further when in season.

Of Anthony Hatch, Saugus, very fine-looking apples, rather large, mostly bright red, and very handsome. The quality is pretty good.

From Isaac Steer, Burrillville, R. I., a box of excellent apples. They are large, flat, golden yellow, crisp, juicy, and of a fine, sprightly, aromatic flavor. This is a good-looking apple, and one of the finest in quality that we have tasted this fall. If its habits are good, it is worthy of cultivation. In use in October.

From Andrew Lackey, Marblehead, very handsome specimens of the Compte de Lamy pear. This is an excellent fruit, and we have noticed it at several exhibitions, and it has been remarkably fair. Also, Pierce apple. This fruit is rather small, of fair appearance, and middling quality.

Of Jonathan Fowler, Salisbury, Beefsteak apple. It is of medial size, very handsome, and of pretty good quality. Generally in use late in fall and early in winter. It originated in Amsbury. Also, Glout Morceau and Urbaniste pears.

Since we noticed some St. Michael pears, from J. L. Lovering, Hartford, Vt., another variety has ripened, of excellent quality; but we cannot determine as to the name from a single specimen. We should be pleased to have six or eight fair specimens another season.

The apple No. 2, from Leonard Cheney, Southbridge, is the Hubbardston Nonsuch. A very good fruit, and quite popular in this market. The other variety is not yet in use.

From Cyrus K. Moore, Parsonsfield, Me., apples that strongly resemble the Porter in their general apppearance. They are not quite so large as the Porter, but the quality is fully equal to that popular apple. It ripens about the same time. Also, fine specimens of Louise Bon de Jersey pear.

Fruits from Mr. Elliot, of Greenfield, and Mr. Gwynneth, Portland, will be noticed in our next.

THE FARMER'S BOY.

BY FRANCES D. GAGE.

O, a jovial farmer boy I'll be,
As free as the birds that sing,
And carol my merry song of glee
Among the flowers of spring.
With a whoop who hoy, to drive my team,
Before the rising sun,
To slake their thirst in the silvery stream,
Shall be my morning's fun; —

To see the hungry porker fed,
And hear him grunt his thanks;
To rouse the calves from their grassy bed,
To shake their drowsy flanks;
To draw from the generous cow her store,
With young hands strong and free,
Till the brimming pail is running o'er
With the foaming luxury; —

To haste to the garden with hoe and seed,
While the dew is on the spray,
To plant, to trim, to hoe, and weed
The morning hours away;
To raise the flowers for the honey-bee,
With their petals bright and fair;
O, I love the budding flowers to see,
In my garden here and there; —

Or away to the fields with the reapers hie,
And toil the livelong day,
And think of the happy time when I
Shall be a man — as they,
To plough, to harrow, to plant, and sow
The rich and fertile lands;
To reap and bind, to pitch and mow,
With strong and willing hands.

O, I would not live in the crowded town,
With its pavements hard and gray,
And its lengthened streets of dusty brown,
And its painted houses gay, —
Where every boy his ball may bound
Upon his neighbor's dome,
And every shout and every sound
Disturbs some other's home.

The squirrel that leaps from limb to limb,
In the forest waving high,
Or the lark that soars with its matin hymn,
Is not more free than I.
Then give me the trade of a farmer boy,
From city trammels free,
And I crack my whip, and cry, "Who hoy!"
O, a farmer boy I'll be!

—*Ohio Cultivator.*

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

☞ The Postage ☜

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Agriculture not only gives riches to a nation, but the only riches she can call her own. — JOHNSON.

VOL. II. SATURDAY, NOVEMBER 23, 1850. NO. 24.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

PROFIT OF COWS—USE OF ICE—STEAM ENGINES FOR FARMERS.

MR. JOHN DAY, of West Boxford, has communicated to us the following facts in relation to the profit of cows. Their publication may assist some, who contemplate embarking in this business, in making their estimates on expense and income; and others, who now attend to the dairy business, may from these facts gain some aid by way of improvement.

Mr. Day keeps fourteen cows, and the principal dairy product is butter. He estimated the amount at one hundred and fifty pounds to each cow, for the season. When we saw him, a few weeks ago, it lacked but a few pounds, to each cow, of this amount. He has sold his butter in Lawrence, at twenty cents per pound through the season; this is $30 to each cow. He sold his calves at $5 each, making the income $35 to each cow. The pork made from the milk, and the pigs raised on it, were worth from $80 to $100. Mr. Day supposed that this sum would hardly be sufficient to pay the expenses of taking care of the dairy. The manure from the cows would pay the expense of taking care of them, including that of milking.

Mr. Day reckons the expense of wintering his cows, whether he feeds roots, grain, or other food, equal to two tons good English hay, each, which is worth, with him, on an average, about $10 per ton. The usual price of pasturing is $6 for the season. In the fall, when the feed fails in his pasture, he turns his cows on his mowing fields, not having provided green corn or other food to make up the deficiency in pasturage.

Mr. Day has not lost any cows for fourteen years. He fattens and turns off for beef some cows every fall, and keeps his stock good by purchasing heifers that were two years old the spring previous, that are with calf, and so forward that he can make a sure calculation. He has convenient opportunity for purchasing, as many droves of eastern cattle pass near him, and are kept over night near his residence. As he sells his cows considerably higher than the price of the heifers he buys, — nearly enough higher to pay the expense of fattening his cows, — it costs him but a little to keep his stock good.

The room in which the milk is set, the churning done, and the butter worked, is kept at a temperature of 62°, as indicated by a thermometer suspended in the centre of the room. This is effected by the use of ice, which costs but little, as an ice-house is filled for this and other purposes in the family. Ice water is used generally for drink, as it is regarded as more pure and wholesome than other water, especially in time of drought, when the water in wells and springs is frequently but slow drainings from the soil, impregnated with various unwholesome substances. When the weather is cool and clear, the windows of the dairy-room are opened for ventilation.

Mr. Day uses tin pans, and he fills them only two and a half inches deep with milk. He churns three times a week during the warm season. He usually churns himself, and he does not wish for the butter to come in less than an hour, as he thinks that he gets more and better butter than by rapid churning, or any process that would produce butter in a few minutes. This is a sad commentary on the wonderful inventions for churning, for which great excellence is claimed because they will produce butter in a few minutes.

It is the intention of Mr. Day to have a steam engine for churning. He now has one of four-horse power, for mechanical purposes, when water is low, (but too far from his house to use in churning,) that a boy fourteen years old can safely manage, which requires only twenty cents worth of fuel per day to run it, as he uses cheap kinds of fuel. If he used that which is merchantable, it would cost about fifty cents per day. He intends his steam engine for various other farm purposes, such as sawing wood, &c.

Mr. Day made an ice-house eleven feet square, and seven feet high, at an expense of $25. It holds about twenty-five tons; and three hands, with two pairs of oxen, will fill it in two days. He takes the ice from a mill pond near by.

If farmers knew the great utility of ice, and the small expense at which ice-houses may be built, this luxury, which is becoming one of the necessaries of life, as it becomes well known, would be common among farmers, and contribute largely to the excellence of dairy products.

THE NEW ENGLAND FOWL SHOW.

The first show of the New England Fowl Association came off November 12, 13, and 14. The weather preceding the show, and during the exhibition, as well as the succeeding day, on which there was a sale by auction, was most delightful, being clear and remarkably mild for the season. The show was held under Wright's mammoth tent, that is two hundred and fifty by one hundred and fifty feet. This large area was generally well filled with coops and cages, and in most cases there were two tiers, and sometimes more. The whole arrangements seemed well made, and creditable to the officers of the society, who had the management of the exhibition.

This show was a grand one in very deed, probably never half equalled in extent by any similar exhibition of any country, in any age; and in variety, we believe that it was never rivalled by any excepting that of Noah in the ark. There was almost every breed that we have ever seen, heard of, or read of, and numerous new varieties which some, before they saw this show, never dreamed of; for nowhere on the face of the earth are people so prone to mix up various breeds of animals as they are in New England: hence a great many new crosses are formed.

The whole number of fowls and birds, including *rabbits* and *guinea pigs*, was probably not far from six thousand. We counted them carefully on the third day, in the forenoon; and allowing that eight or nine hundred had been taken out, (which is rather a liberal allowance,) the whole number was about six thousand. This is surely a large number, a grand collection of the feathered race, and ought to satisfy those who feel a deep interest in the success of the affair; and we do know that the frequent statement of the number at fifteen thousand is a great exaggeration, and not to be relied on, though it receive official sanction. This seems like some publishers of newspapers, representing their lists of subscribers to be several thousands higher than reality.

But to return to the fowls, and leave people to crow as they please: it was a most delightful show, so vast in extent that one got tired of seeing; and so various that he soon got lost in comparing, and endeavoring to estimate properly, each lot in so great and various a collection. There were fowls of every size, from the beautiful little Bantam that weighs only a few ounces, to the majestic Shanghae, and other large breeds, that weigh from ten to fifteen pounds. In this collection the large breeds preponderated, not only in weight, but in numbers. Some of these large races that have been kept several years in this country, and skilfully managed, are receiving improved forms.

So far as uniformity of appearance, in many respects, and beauty, is concerned, also in large size, many of the foreign breeds are superior for the amateur and fancier; but for profit in laying a good lot of good-sized eggs, and furnishing a large number of chickens of excellent flesh, many of our common native breeds or varieties still rank among the best; and we regret, as may be well supposed from our previous remarks on this subject, that our own native fowls were not more fully represented at a show so extensive and so various as to include almost every variety of foreign fowl.

Yet the show was a magnificent one, and great good will grow out of it, and out of the excitement that has prevailed to so great a degree, and so constantly for a long period. People will learn, from the deep attention to the subject, what fowls are the most valuable and the most beautiful; common sense will finally prevail, and each breed will be estimated according to its true merits. The subject is worthy the attention of every citizen, whether he be a producer for profit, or a fancier who gratifies a commendable taste for the beautiful and useful, or a consumer, who is particularly interested in the good quality of the flesh and eggs of fowls. Therefore we all have cause to rejoice at the success of this great and useful enterprise, and that a fever so conducive to healthy action on this subject has universally prevailed.

NEW BEDFORD HORTICULTURAL SOCIETY.

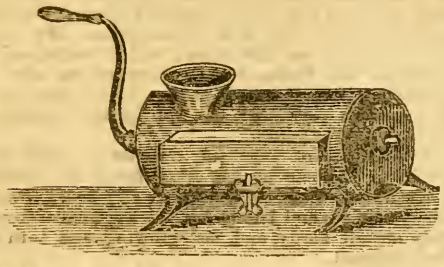
Henry H. Crapo, Esq., chairman of the fruit committee, has politely furnished us with the reports of the annual exhibition of this association. They show that it was large and varied, and indicate that this society, though in its infancy, is in a very flourishing condition. From the long list of contributors, and the variety of fruits generally shown by each, it appears that in extent and variety this exhibition must have compared well with the best shows in the country. We copy the following from the report of the committee on fruits: —

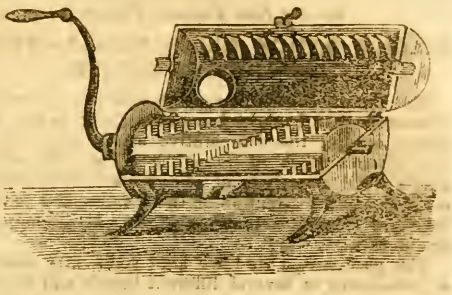
The committee, in presenting their annual report, are much gratified in being able to say that the show of fruits on the occasion exceeded that of any former exhibition, and bore ample testimony to the favorable results which have thus far attended the labors of the society.

The display of fruits, and more particularly of pears, was very fine, notwithstanding the present season has been an unfavorable one for the growth of most kinds of fruits; and especially when the limited means of the society is taken into the account.

Of pears, there were nearly one hundred different varieties upon the tables, embracing most of the really desirable kinds now cultivated. Many of them were truly magnificent in appearance, being very large and fair, and bore evident marks of good culture in a congenial soil. Of other fruits, the show, as formerly, was limited, very little attention having heretofore been given to their culture, although in this respect there was evidently an improvement upon former exhibitions. From the exhibition as a whole, the committee are encouraged to hope that the efforts of the society to advance the cause of pomology by increasing a love, and diffusing a taste, for the culture of choice fruits, will be attended with abundant success.

Happiness depends on the mind, not on any external circumstances.





SAUSAGE OR MINCING MACHINE.

This is a small, compact machine, remarkably strong and durable, as it is made wholly of iron and steel. It works with ease and rapidity, and is very effectual in its operation, performing its work in the best manner. We would recommend, to those persons engaged in the manufacture of sausages, an examination of this machine.

Such is the competition in almost every branch of manufacture, that it becomes necessary for the operative to avail himself of every species of labor-saving machinery. This is true economy, and this cardinal virtue is essential to success.

This machine was formerly constructed mostly of wood; but recently a great improvement has been made by Ruggles, Nourse, Mason & Co., by making the case and cylinder of iron, so that it is now wholly composed of the most durable materials.

The cut on the left represents the machine closed, as it is in operation. That on the right represents it thrown open, exposing the cylinder with its cogs, and the knives. The length of the machine is about fifteen inches, the width eight, and the height about the same. The cylinder can be conveniently removed from the machine for the purpose of cleaning it.

The inner part of the machine forms a barrel, in which is a cylinder with three rows of pegs. The meat is placed in the hopper, and it passes between the cylinder and the case, and is then forced by the pegs against the rows of knives, when it is quickly minced, and it passes onward, tending to the end opposite the hopper, by the spiral form of the rows of pegs, where it is discharged. The strength of a man is amply sufficient for turning it. The price is $12.

BILBERRY, OR SWAMP PYRUS.

In regard to the article on the bilberry, on page 346 of this volume, Dea. S. P. Fowler, who is a nice observer of trees and shrubs, thinks that the inquirer M. is mistaken as to the name of the shrub in question, as it is probably the Swamp Pyrus; called also June Berry, Shad Bush, and Sugar Pear. This has sometimes been used with success as a stock for the pear. We have had fine specimens of the Bartlett pear raised on it. Whether it can be used to advantage in this way to much extent, has not yet been ascertained.

Wrong Credit. — The article "Prepare for Winter," which has recently appeared in several papers, credited to *Deckertown Home Journal*, made its first appearance in the N. E. Farmer, last November. — How did the Journal manage to get the credit of it?

FEATHER BEDS.

The want of feathers is altogether artificial, arising from a disregard of the physical and moral well-being of infants and children; and he who has the good fortune never to have been accustomed to a feather bed, will never in health need or desire one, nor in sickness, except in cases of great morbid irritation, or excessive sensibility, or some disease in which the pressure of a firm or elastic substance might occasion pain. But when a rational regard to the preservation of health shall pervade the community, feathers will no more be used without necessity or medical advice, than ardent spirits will be swallowed without the same necessary advice. The physician has frequent occasion to see persons who are heated, sweated, enfeebled, by sleeping on feathers, as if from a fit of sickness; enervated, dispirited, relaxed, and miserable. — *Medical Intelligencer.*

ASSAFŒTIDA.

This article is obtained from a large umbelliferous plant growing in Persia. The root resembles a large parsnip externally, of a black color; on cutting it transversely, the assafœtida exudes in form of a white, thick juice, like cream, which, from exposure to the air, becomes yellower and yellower, and at last of dark-brown color. It is very apt to run into putrefaction; and hence those who collect it carefully defend it from the sun. The fresh juice has an excessively strong smell, which grows weaker and weaker upon keeping; a single drachm of the fresh fluid smells more than a hundred pounds of the dry assafœtida brought to us. The Persians are commonly obliged to hire ships on purpose for its carriage, as scarcely any one will receive it along with other commodities, its stench infecting every thing that comes near it. — *Scientific American.*

For the New England Farmer.

DIXON'S STOCK CHINA FOWLS—THEIR COMPARATIVE MERITS.

Mr. Cole: In a former number of your journal, I intimated that I might have something to say, in a future one, of the comparative merits of the Hon. Mr. Dixon's stock of Shanghae fowls. We would gladly avail ourselves of the present fowl excitement to call the attention of those interested in fowl breeding to some facts going to show their comparative merits.

The past season we have kept some fifty hens in all, consisting of several different breeds and crosses. We have noted particularly their laying qualities; and are now prepared to state, that we have no hens that have laid as well as those of Dixon's stock of China fowls and their crosses. Next on *our* list stands the Dorking and Dominique fowls. Of the former we had only two hens, and of the latter some half dozen. We had also one pair of Forbes's stock of Shanghaes, but none of Marsh's stock. Hence we cannot speak from personal knowledge of the laying qualities of the latter; but my Forbes hen, although she laid tolerably well, has by no means equalled my hens of the Dixon stock. I am aware that it would be injustice to the Forbes stock to conclude, from the number of eggs laid by this single specimen of that stock, that they are not as great layers as Dixon's stock; but we propose to give extracts from some voluntary letters, received of A. H. Gilman, Esq., an ardent fowl amateur, of Portland, (to whom we sold a number of the Dixon stock,) which go to confirm the opinion we entertained from our own limited experience.

In a letter bearing date of June 24, 1850, Mr. G. says, "My poultry yard flourishes grandly; and as for your stock, it cannot be surpassed in any point. The six hens began to lay the day after they came, and I don't think they have missed a day up to last week, when three wished to sit. As I had a choice lot of their eggs, I set them. They have been perfectly healthy in every respect.

"One thing I wish to mention in regard to your stock: They take care of themselves better than any fowls I ever saw. They are regular in their hours for laying and roosting, and make little or no noise. I would sooner lose any three of my other stock than one of yours. * * * I am keeping a regular account of each stock, as to laying, feed, &c., which, if you care to see, some six months hence, I will forward. * * * My yard contains now Palmer's [Dixon's] Shanghae, one cock, six hens; Marsh's do., one cock, one hen; Forbes's do., one cock, six hens; Cochin China, one cock, three hens."

In a letter of June 27, speaking of some White China fowls of the Dixon stock, which I was about to send him, he remarks, "If they only arrive, and flourish as the Palmer's do, I shall be too glad. * * * I never saw finer looking fowls than yours."

In a letter of July 10, acknowledging the receipt of the White China fowls, Mr. G. says, "The Palmer importation flourish very well, and at the present time four of them are sitting; one nice brood of Palmer's came out three days since, and one is coming to-day. *Every* egg has hatched thus far."

Under date of September 13, Mr. G. says, "The White Shanghaes are doing well. Both hens are with chicks," &c.

"In fact, all the fowls (with the exception of my Marsh cock and hen) that I have had of you are different from my other breeds. Take your Palmer stock, for instance; they are gentle, regular in their habits, never interfere with the chickens that have the same yard. They are also very tame—will all eat from my hand; and then, not one of them has ever been the least sick since I received them. The same can be said of the White Shanghaes. My Marsh cock and hen are the same; but I cannot say as much for the Forbes stock. They are not equal in laying qualities; more *bungling* in all their ways. The male is very large, but not by any manner of means equal to yours."

Under date of Portland, October 18, 1850, after speaking of some of his other fowls, he remarks, "My Palmer's are my pets, after all; every chick is finely formed, and I have not lost *one* from sickness; they are all hardy, and fast growing, and turn out fawn-colored.

"Do you remember that dark hen in the Palmer breed, that you sent me? She has laid over fifty-five eggs, brought up two broods, and now I have sat her again. That speaks well, don't it?"

It seems to devolve on me to relate what that hen did before sending her to Mr. G. I believe she laid about thirty eggs, and, to my knowledge, sat six weeks, hatched two broods, which were given to other hens, the last a few days prior to sending her to Mr. G., which was on the 5th of June. Had I time and room, I might relate other striking facts that have occurred, adapted to show that it would be very difficult, if not impossible, to find greater layers or sitters.

The size of the Dixon stock of Shanghae fowls, we believe, is equal to any of the late importations. The roosters will weigh from eight to twelve or thirteen pounds, and the hens from six to nine. In fact, Mr. Dixon states that it is his impression that he weighed one pullet whose weight was ten pounds.

The name by which this stock is generally designated east of Westerly is Shanghae; whilst at that place, and still west, it is generally denominated China, or Cochin China, probably from the fact that most of them have but few or no feathers on their legs.

A part of this stock is the same, in my opinion, as that received by the Queen, and imported by Mr. Burnham, under the name of Cochin China. This, we think, is demonstrable from the color of the eggs and fowls, and their form, general appearance, and characteristics. We were strongly inclined to this opinion before we saw Mr. Burnham's fowls, but that fully confirmed us in that opinion. The fowls of Mr. Burnham, denominated Royal Cochin China, had it not been for the card on his coops, we should have taken as fine specimens of the Dixon stock. Should any one doubt it, he is requested to call and examine some of our own specimens of the Dixon stock. In fact, Mr. Burnham says that the form of his fowls "resembles that of our best bred Shanghaes; and my opinion strengthens, with a further acquaintance with both, that the two varieties sprang from the same original stock. My Cochin Chinas" he adds, "are clean-legged; the Shanghaes, *feathered*," &c.

We will only add the opinion of that celebrated fowl amateur, Dr. Eben Wight. In a letter under date of Boston, May 23, he says, "I am strongly inclined to the belief that many of the Shanghae fowls which have come out (meaning those with *smooth* legs) are from the same stock as were those received by the Queen, under the name of Cochin China. For instance, Marsh has two varieties; the cock is feather-legged, as well as were some of the hens; but his *best* hen, very dark-plumaged, smooth-legged, was probably from the same stock as were the famous Cochin Chinas. That best hen has laid one hundred and seven eggs in the last consecutive one hundred and fourteen days."

Again, speaking of Dixon's stock, he adds:—"Whether white or red, they are very fine in form, and here have proved very prolific." He also gives

it as his opinion, that Dixon's stock and Marsh's "are *among* the best, if not the best, ever imported into this country." In this opinion of Dr. Wight we most heartily concur, for our own experience has led us to believe that there has been no better stock imported into this country than that of the Hon. Mr. Dixon; and we presume that a part of Mr. Marsh's is the same. Many who have that stock speak of it in high terms.

In conclusion we ought perhaps to state, in justice to the stock, and to prevent imposition, that it is very difficult to obtain the pure stock, even in the immediate vicinity of Mr. Dixon; and I am confident that much that has been sold in Boston and elsewhere as pure Palmer or Dixon stock * has been almost any thing else. This is emphatically the case with the White Shanghae, or those sold for that fowl.

CHAS. H. PENDLETON.

Pendleton Hill, *Oct.* 31, 1850.

For the New England Farmer.

EFFECTS OF FOOD ON MILK.

Mr. Cole: I wish to make some inquiry, through the medium of your valuable paper, concerning the method used by the dairymen who use carrots and other roots as feed for milch cows. Now, with me, there is a difficulty which I have hitherto been unable to overcome in this matter. I can taste the feed in the butter. If the cows are allowed to feed on lands where leeks grow, the milk is scarcely fit to feed to hogs. Moreover, if the cows are allowed to feed in the swamps, then something combines with the milk, we know not what it is, and the butter is neither fit to eat or sell. We have sometimes allowed our cows to feed on turnips, cabbages, and carrots; but I can always taste the food given to the cows in the butter, except when they are fed on Indian meal, pure grass only, or hay clear from weeds.

I frequently read of good dairy people living near the cities, and I understand they make great use of roots to feed to cows in milk, as well as other stock; and I hear of no complaint of the effluvia communicated to their butter, or even the milk, where there is so much sold every day in the year. Am I mistaken? I think I can most certainly taste any thing in butter that ought not to be found there. Is there any way to prepare roots so as to prevent them, when fed to cows, from communicating any disagreeable or unpleasant flavor to the milk? If so, why do not some of the wise ones speak out, and let the public know about these matters? Or have they done so, and I not observed it?

We believe our agricultural editors know a great deal about such matters; and we are inclined to look to them for information on agricultural subjects as we would to Webster's Dictionary for the true diffinition of words.

Respectfully yours,

JOHN M. WEEKS.

West Farms, near Middlebury, Vt., *Nov.* 1, 1850.

P. S. Please inform me where a few pure Alderney cows may be found.

Remarks. — The subject here presented is one of great importance both to the farmer and consumer; and we hope that some of our correspondents will attend to it, and prescribe some remedy or abatement of the evil complained of, and show what kinds of food are most desirable for milch cows, otherwise than the common and staple articles, good sweet grass and hay.

* We have designated the first importation of Capt. Palmer by Dixon stock, in order to distinguish it from a recent importation by his brother.

For the New England Farmer.

CARBONATE OF LIME.

Mr. Editor: I have heard it stated that a mill was soon to be set up at North Adams, Mass., for the grinding of common marble. It is claimed for the carbonate of lime, that it is as good a fertilizer as the sulphate. Will you, Mr. Editor, inform us, if common marble, reduced to powder, possesses any value as a manure? and if so, what is the philosophy of its action upon vegetation?

STONINGTON

SALE OF FINE STOCK.

An account of the recent sale of the excellent stock of the late Mr. William Stickney, at Westminster, Vt., may be interesting to many of our readers. We copy it from the Montpelier Watchman. It was marked for an earlier number, but it was mislaid.

At this sale, about seven hundred and fifty farmers, stock breeders, and gentlemen amateurs, representing every New England state and the border counties of New York, were gathered together at one o'clock precisely, on the afternoon of the 9th instant, at the quiet and beautiful little village of Westminster; and five minutes afterward the first animal offered (Jessica, seven years old, a full blood Devon, from the Patterson herd) was struck off to Col. Lewis G. Morris, of New York, for $125.

The following are the prices for which some of the sales were made: —

Bulls and Bull Calves. — William IV., a full blood Devon, seven years old, $90. Duke of Devonshire, a full blood, $70. Comet, full blood, imported, two years old, $270. Boz, five months old, $25. Dandy, four months old, $10. Red Jacket, three months old, $25.

Cows. — Juno, nine years old, half Creampot and half Durham, $42 50. Lady Anne, nine years old, half Creampot, one fourth Devon, one fourth native, $47 50. Jessie, seven years old, full blood Devon, $125. Stately, four years old, half Creampot, half Devon, $50. Delight, four years old, half Devon, half native, $40. Star, four years old, three fourths Devon, one fourth Creampot, $75. Gypsy, seven years old, half Devon, one fourth Creampot and one fourth Durham, $87 50. Beauty, three years old, $57 50. Lady Anne, three years old, three fourths Devon, one fourth Creampot, $57 50. Cherry, three years old, $57 50. Belinda, three years old, half Devon, one fourth Creampot and one fourth Durham, $70. Cream Cup, three years old, $57 50. Lady Jane, three years old, full blood Devon, $107 50. Dido, a full blood, same breed, $95. Flirt, four years old, $62 50.

Two-year old Heifers. — Jeannie Deans, $65. Kathleen, $57 50. Fashion, $57 50. Jessie, a full blood Devon, $160. Annette, $62 50.

Yearling Heifers. — Butter Cup, $105. Jessamine, $150. Belle, $40. Dairymaid, $400. Frolic, $57 50. Gazelle, $42.

Heifer Calves. — Fanny Elsler, $31. Fancy, $16. Bessie, $22. Jessamine, $150.

Steers. — One pair, four years old, $100; one pair, three years old, $80; one pair, one year old, $66.

Sheep. — Mostly South Downs, from $16 to $18.

Swine. — All the way from $15 to $80, mostly of

the Suffolk and Middlesex breeds. One Suffolk sow, $80. One sow of the Middlesex breed, $70. Pigs six weeks old, $11.

Mr. G. F. Whitney, of this village, purchased one of the full blood Suffolk, imported by Mr. Stickney in 1847, which weighs 450 pounds, and may now be seen at his stable.

THE PRINCIPLE ON WHICH PLANTS ARE PROPAGATED BY CUTTINGS.

The propagation of plants by cuttings is an operation of frequent use, and of considerable importance in all horticultural establishments. The many thousand plants that are annually propagated to embellish flower-gardens and pleasure-grounds, and the taste displayed in the arrangement of colors, demand the greatest skill, vigilance, and forethought to prepare, to arrange, and to provide for the display.

The conditions necessary for the propagation of plants by cuttings are, a certain portion of organized matter, the assistance of leaves, a degree of heat and moisture accordant with the nature of the plant, and free drainage at the roots.

When the ascending sap reaches the leaves, the water is discharged through the minute invisible pores, and by the decomposition of carbonic acid gas, which separates to carbon, and sets the oxygen free, a vital action is performed, by which the sap is changed into the organic matter, or descending sap. It is then that all parts of the plant are supplied with a store of organized matter, which renders the parts fit to be employed as cuttings. When removed from the parent, that store, under proper management, will enable them to put forth roots and new leaves, and develop all the parts required for the growth of the plant. If the shoots are in a rapid state of growth, full of rising sap, their tissues lax and not matured, failures may be expected to attend all attempts to propagate them by cuttings.

The next part of the subject is to inquire in what manner the leaves retained on the cuttings assist the protrusion of roots, and the development of other leaves.

As the removal of the cuttings from the parent branch will make no change in the nature of the sap, which is always more or less in circulation in the whole system of the plant, and it is the office of the proper juice to descend in the cuttings to the joint at which it was cut; when its downward course is impeded, it accumulates there until a callus is formed, and roots are protruded; the organized matter of the cutting is diminished to supply the development of roots, and leaves are required to secrete more, to replace that which was expended in the formation of roots. It is when there is sufficient organized matter in the cutting to supply the roots, without exhausting its own vital energies, that the external assistance derived from the leaves may not be needed. — *Scientific American.*

NAMES OF PLANTS.

The importance of having all plants, including fruit-trees, properly named, even in small gardens, cannot be too clearly pointed out. A plant may have beautiful foliage and flowers, but without a name it yields comparatively little interest. Every plant has a history of its own, and the first step towards obtaining a knowledge of that history is its name; the next, its native country and year of introduction into our gardens. A garden of plants without names is like a library of books without their exterior superscriptions. Numbers are only useful to nurserymen.

All garden plants should be properly named. The season of propagation is chiefly when plants are out of bloom, and the want of diligent care in retaining their names too frequently leads to a confused nomenclature. The vast numbers of new plants which are being continually introduced, as well as the host of garden varieties every year brought under the amateur's notice, are quite perplexing to him, unless constant attention to correct labelling is observed. Then, again, with regard to fruits, how much uncertainty would be removed by keeping labels of a permanent kind to every tree! Small gardens cannot, or ought not, to find room for indifferent kinds of fruit, or uncertain bearers; hence the importance and the advantage of knowing every kind we cultivate. How much trouble is thereby avoided! for it frequently happens that the difficulty and expense of obtaining the name of a single fruit are much greater than the attention necessary in keeping the names to the small collection which the limited space of a suburban garden admits.

With respect to the particular kind of label which is most desirable to employ, there is a good deal of uncertainty. Some persons prefer some of the new kinds now in existence, while others adhere to the old wooden label, which, after all, has not yet been very satisfactorily superseded; whatever kind of material is employed, however, the names should be accurately and distinctly written. — *Granite Farmer.*

Remarks. — The best mode that we have ever seen for marking trees, either on labels or stakes for nurseries, is that recommended in the American Fruit-Book, by cutting notches. These labels are easily made; the materials are always at hand; the system is so simple that a child will learn it in five minutes. By hanging the labels with wire, they will last twelve or fifteen years; and by writing the name on the label, it may be easily read, and the numbers by notches may be relied on when the writing has faded; and the name may be renewed occasionally, if necessary, as it fades, by whitling the label again and writing anew. It is the simplest, cheapest, most convenient, and most reliable mode for reading readily, and preserving the name permanently. — Ed. N. E. Farmer.

CULTIVATION OF CRANBERRIES.

The Barnstable Patriot gives a full account of the sixth annual meeting of the Barnstable County Agricultural Society, on the 16th ult. We select the following report: —

This statement of Mr. Edward Thatcher, of Yarmouth, was made to the Committee on Fruit.

The following is a statement of the course pursued by me in the cultivation of the cranberry. July 12, 1845, I purchased, for $40, one and a half acres of land — about one half a sandy beach, and the remainder a low peat meadow covered with water. A rim of about six feet in width, around the bog and between the water and the beach, had a few cranberry vines on it, which had been closely fed off. In the spring of 1846, I drained the bog and covered about one eighth of an acre with sand three inches thick, and set it with cranberry vines in rows two feet apart, and hoed them four times in the season of 1846, and once in the spring of 1847. The grass then got advantage of me, and I left the vines to work their own way. They have now nearly overcome and worked out the grass and rushes. On the remainder of the bog I strewed vines, and trod them in the mud, by walking over them. These grew with rapidity without

any further care except flowing in the winter. In the fall of 1848, I gathered from ten rods, where no sand had been spread, as many bushels of cranberries, while on the part sanded I had scarcely as many quarts. The latter are now doing better, having got the advantage of the grass, and I think will finally work it out. I have this year, on the quarter of an acre offered for premium, quite a good crop, although the worms destroyed nearly one half. I have picked one square rod of the light-colored variety, set in the mud, and it yielded two bushels and twelve quarts. One square rod of the small dark-colored variety, on the mud, yielded one bushel and two quarts. The large red variety yielded on the mud two bushels to the square rod. The whole quarter is not yet gathered; it will yield about thirty-five bushels, about one half of the vines being set on mud and one half on sand.

In selecting meadow for cranberries, it is highly necessary to select such as will not dry in summer; but much also depends on the selection of the vines, as the committee will see by the samples here presented, all having the same soil and the same treatment. The *samples are not selected, but sent in precisely as they grew.* The whole expense on the above bog up to the present time does not exceed $40.

I have received from the sales of cranberries, up to the fall of 1849, $320 00

Deduct for picking, one fourth	80 00	
All other expenses for setting, interest, &c.,	40 00	
		120 00
Net profit,		200 00

EDWARD THACHER.

Yarmouth Port, *Oct.* 15, 1850.

We know not why it is that so little attention is paid to the cranberry in this county. In the eastern part of the state it is considered a valuable crop, and one raised without difficulty. There is a great abundance of land in almost all our towns, and especially all those bordering on the Housic or Housatonic Rivers, well adapted to this fruit. Indeed, any ground which will produce corn, it has been said, will produce good cranberries. Still their native place seems to be in low grounds. That its cultivation is profitable, there can, as we think, be no doubt. Nor is there any danger of an over-supply. The price might become less, but improved methods of culture and implements for gathering would enable the article to be afforded at a lower price; and if that was the case, the consumption would increase with the supply. We should like to see some of the grounds which are now completely worthless producing their fifty or one hundred dollars per acre, in cranberries. We should like to see the hardhack give place to the cranberry, having the utmost confidence that it could not be less profitable. — *Culturist and Gazette.*

BEANS — HARVESTING CORN.

Mr. Editor: Since my last letter, I have harvested my beans, and am now ready to give you my opinion of the best way. I pulled them when the leaves were quite green, and laid them on the grass sufficiently long to let the leaves wilt a little, and then hauled them in, and spread them on some poles, across the beams, directly over the barn floor. I spread them a foot thick, and when I got them down to thresh, I found them in good order. The beans turned out bright, and the vines were completely dried. I consider this much the best way to save beans. You not only avoid the exposure to rains and mildew, which they are liable to when stacked in the fields, but the vines, by being cured when a little green, retain their sweetness and make better fodder. Stacking them is a very good way, if rightly done; but after the labor is expended, what better are we off? they are still in the field. The labor of stacking them is enough to get them into the barn and put them where they will dry equally as well, if not a little better, than when stacked.

In regard to corn: much has been said, through the columns of your paper, about the best way to harvest it. I *have been*, heretofore, rather in favor of the old way of topping the stalks; but this year I let it stand until the ear was pretty well ripened, cut it up at the roots, and then got it into the barn and husked it. I think this the better way. Some stack it in the field after cutting it up. This is also a good way. The fodder is much better, and the corn ripens better, to let the top stalks remain. After husking, I stowed the stalks away as usual.

In writing the above, I do not pretend to say that my way is altogether the best — I express my opinion. Others may think differently, and perhaps have a better way; if so, let's have it.

F. A. A. K.

Fayette, *November* 2, 1850.

— *Maine Farmer.*

A MINE OF PAINT.

Yesterday forenoon we spent a short time very pleasantly in an examination of the paint mine, recently opened in West Springfield, by Skinner and Hancox, of this town. The substance from which the paint is obtained is a shelly stone, hard in its natural state, but affected like lime by the air. Ground fine, and mixed with oil, it forms, without other ingredients, a neat, durable, fire and water proof paint. The stone lies in diamond-shaped masses, and extends through four acres of a bluff on the bank of the Agawam River, opposite the Mitteneag factory. Two colors have been obtained so far — slate and freestone. The stone is entirely free from grit, and affords a paint one half or two thirds cheaper than lead. We have been shown some very handsome specimens of work done in this paint. An analysis of the stone by Prof. Jackson has resulted in a highly favorable report. — *Springfield Post.*

WORKING COWS — HORSES.

In France, it is not uncommon to see the cow performing, in the fields and on the roads, the tasks usually imposed on the males of her species. A few cases of the same have occurred recently in our own country, and the presumption is that the practice will, ere long, become quite common. The people of France assert — and the assertion is corroborated by the attestation of many Scotch farmers — that the cow, if properly managed, is capable of performing as much labor as the ox; that her motions are quicker, though her strength is less; and that she is seldom irritable or vicious under the yoke. But the French are a remarkable people. The Horse Abattoirs, Montfaucon, in Paris, — places where all sentiments of kindly commiseration and pity for these useful and valuable animals are utterly banished from the human breast, — show the *penchant* of the French for economy in a revolting light. A vast number of these animals, living and dead, are brought annually to those shambles, where they are mercilessly huddled together in enclosures so limited and confined as scarcely to admit of the slightest exercise, and not unfrequently without even an apology for food, or the blessings of rest or air. By an estimate compounded in the year

1827, it was ascertained that not less than thirty-five of these miserable animals were brought to Montfaucon daily, making a yearly aggregate of twelve thousand seven hundred and eighty-five! Of this vast number, upwards of three fourths entered the shambles alive. They are usually despatched by one of four methods; the first of which is by injecting air into an opened vein; the second, by severing the spinal marrow in the neck; the third, by felling with a blow on the head; and the fourth, and most cruel, by stabbing the victim repeatedly in the chest with a knife. Before slaughtering, the hair is removed from the neck and tail, and disposed of generally to the saddler and chair maker; the hides are sold to the tanners. In the year 1739, a previous ordinance was revived, prohibiting, under certain penalties, the sale of horse-flesh, in the Parisian markets, as human food; but during the revolutionary struggle, when the farming interests were in a depressed and languishing state, the scarcity of provisions was so great that horse-flesh was again used by most classes; and it is asserted that many, who partook of no other food for six months, received no injury whatever from its use. The aborigines of this country, however, who, during Philip's war, were, from their straitened circumstances, often compelled to live for weeks, and even months, on horse-flesh, appear to have experienced very different results.

"We have eaten horse-flesh," said an old warrior, who had fallen into the hands of the whites, "and now horse-flesh is eating us." By them it was generally deemed harmful, and was never partaken of as common food, unless from necessity alone.

In 1803, the open use of horse-meat ceased altogether in Paris, and mostly through France; but during the scarcity of 1811 many butchers again made sale of it, and the medical faculty having decided that the flesh of the horse, when uncontaminated or unaffected by disease, was a sound and perfectly healthy article of food, its open sale was once more sanctioned by a public law. But in 1814, this privilege was again withdrawn, but to be revived in 1816; and, "at this day," remarks a late writer, "horse-flesh is daily exposed for sale, with other animal flesh, in the meat stalls of the Parisian market." It is, however, supposed, on credible data, that a very large, perhaps a greatly predominating proportion of the horse carcasses of Montfaucon are used as manure, and for feeding animals; yet, notwithstanding this appropriation of large quantities, much is undoubtedly sold to the poor without their knowledge. All the workmen employed in the abbatoirs live wholly upon it, and are a singularly hardy and active set of men. "It probably," remarks a distinguished writer, "strengthens their nerves for their disagreeable business, as it spirited up our early ancestors of the north to their human butcheries." The use of horse-flesh as an article of food among the northern nations is demonstrated, by the existence of certain papal bulls, to have ceased upon their conversion to Christianity; but the people of Denmark appear to have recently recurred to their old habits, and are the first to have authorized the plenary sale of horse-meat among the ordinary articles of the market. The various parts of the animal are worked up, at Montfaucon, into oil, glue, and other articles of commerce; in short, the whole animal is appropriated to some use. Even the shoes go to the cutlers and ironmongers. It is a trade to gather the larvæ for fowls and animals. The camel is a valuable animal to the Bedouin; so also is the horse to the ingenious people of *la belle France*.

A COUNTY FARMER.

November 4, 1850.

Weeds exhaust the strength of the ground.

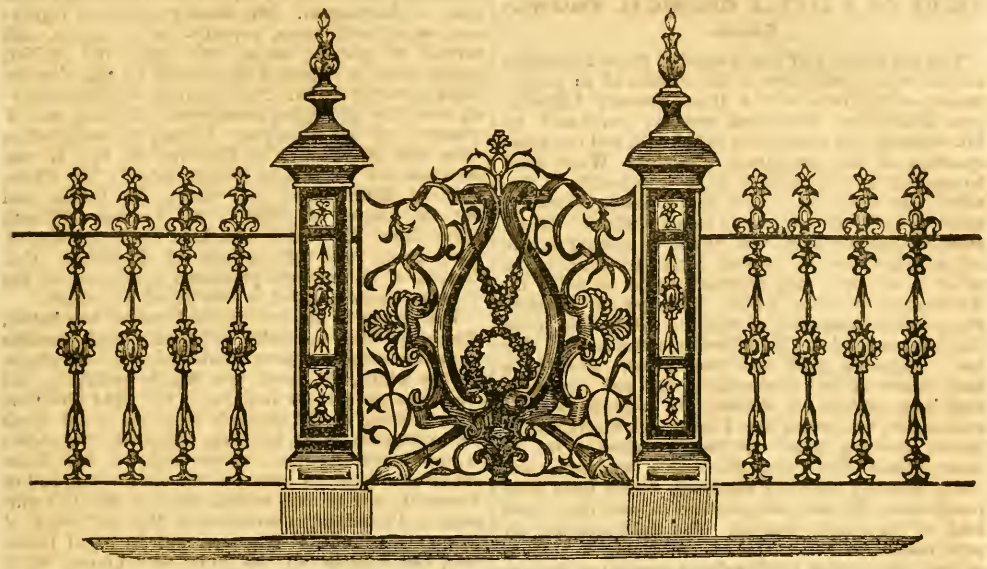
HIGH FARMING.

The English journals are filled with experiments of high farming, and all agree that fair remunerative profits can only be realized by such practice, while the political economists of England boldly assert "that the adoption of high farming alone will render legislative protection unnecessary." If this be true of England, why not with us? Has it not been proved that, by using full quantities of manure with thorough cultivation, better profits can be realized even with the first rotation of crops, than by the ordinary sluggish mode of farming? Are the farmers of New York and the adjacent states asleep, that they do not see from past experience what must be the result of longer continuing the exhausting process? Do they not know that one half of the farms of Virginia are worn out? that the wheat crop of Ohio is less than two thirds per acre what it was thirty years ago? and that the average wheat crop of New York is not more than fifteen bushels per acre? We have published that Dr. John Woodhull, of Princeton, has raised fifty-seven bushels of wheat per acre; that Allen Middleton, of Crosswicks, N. J., and many others, have raised one hundred and twenty-four bushels of shelled corn per acre; and indeed that all who pursue *high farming* properly are rendering their vocation profitable, in addition to rendering their land more valuable for future crops.

We are tired of hearing those who have neither tried nor investigated the truths of high farming assert that "*it costs too much.*" Those who have tried it know better; the excess of profits are always many times greater than the excess of expenses. A manufacturer who requires one hundred horse-power to turn his machinery, might as well do it by hiring men enough to perform the whole labor instead of using the steam engine, as for a farmer at this day to refuse the lights of science as applied to agriculture. We have visited many farms during the last three years, and advised modes of manuring, culture, &c., based on the chemical constituents of the soil, and we venture to assert that in every case the improved profits of any two acres would have paid our whole charge for services. Nor is it necessary that we should be employed; for every farmer who has an analysis made of his soil, and reads *The Working Farmer* attentively, is capable, without the advice of any one, to farm with profit. We should be glad to publish the English articles on this subject, but at this time they are so much mixed up with the local politics of the day, in which our readers have no interest, that we cannot use them.

We last year hired a piece of ground in our own neighborhood, which was worn out, and had refused corn. Last winter we made an analysis of the soil, and found it short of chlorine, phosphate of lime, soda, potash, and ammoniacal matter. We manured it this spring with a compost costing one dollar and thirty-one cents per acre. The chlorine and soda was supplied by common salt, the phosphate of lime, potash and ammoniacal matter by Peruvian guano, and the volatile matters of the compost retained by the use of charcoal dust and plaster of Paris. We have now a crop of corn standing on this land which will yield certainly more than fifty bushels of shelled corn per acre; and after measuring, we hope to be able to report a much larger crop, and think too without the proper preparation of the ground by subsoil ploughing, &c., as on our own farm. We invite our readers to visit us and see this field for themselves. — *The Working Farmer.*

When an implement is no longer wanted for the season, lay it carefully aside, but first let it be well cleaned.



ORNAMENTAL IRON FENCE.

This cut represents a new pattern of iron fence, got up by Mr. Ebenezer Weeman. It is adapted to front yards, cemeteries, &c. It is a very elegant pattern, having the appearance as well as the reality of strength ; and, at the same time, it is neat, and free from the heavy and clumsy appearance so common to many patterns of iron fence.

Mr. Weeman pays particular attention to the invention and construction of new and superior patterns of fences, balustrades, verandas, &c., specimens of which may be seen at his place, No. 18 Merrimac St. A specimen of this fence may also be seen at Mount Auburn, on Pine Avenue, lot No. 1290.

SEA-SICKNESS.

M. Currie, recently, in a paper read before the Paris Academy, has pointed out the cause of sea-sickness. He has shown that it depends upon the movement of the intestinal canal, which floats, as it were, in the abdomen. It descends with every movement of the vessel, and then, ascending, pushes up the stomach and the diaphragm. His theory, well explained, was well received, and Magendie and Keraudien gave their assent to it. But his remedy was thought more ingenious than practicable. It was to breathe in with every downward movement of the vessel, and expire the air with its ascent. What seemed more easy, and is known to be more effectual, is a horizontal position in the middle of the ship, and a tight bandage over the abdomen.

It is well known that the latter plan is very effectual to relieve sea-sickness, but it is not a good plan to pursue, after the first sea-sick bout is over. Active exercise, and frequent action on deck, soon drive away sea-sickness ; and without this course is pursued, those liable to sea-sickness need not expect to get over it at all; they are liable to have it during all rough weather. — *Scientific American.*

CHICKEN POT-PIE.

Cut up and parboil a pair of large fowls, seasoning them with pepper, salt, and nutmeg. You may add some small slices of cold ham ; in which case add no salt, as the ham will make it salt enough. Or you may put in some pieces of the lean of fresh pork. You may procure a suet paste; but for a chicken pot-pie it is best to make the paste of butter, which should be fresh, and of the best quality. — Allow to each quart of flour a small half pound of butter. There should be enough for a great deal of paste. Line the sides of the pot, two thirds up, with paste. Put in the chickens, with the liquor in which they were parboiled. You may add some sliced potatoes. Intersperse the pieces of chicken with layers of paste in square slices. Then cover the whole with a lid of paste, not fitting very closely. Make a slit in the top, and boil the pie about three quarters of an hour or more.

This pie will be greatly improved by adding some clams to the chickens while parboiling, omitting salt in the seasoning, as the clams will salt it quite enough. — *Miss Leslie's Receipt Book.*

WATER.

Several interesting experiments have been made by distinguished philosophers, showing the effects of pure water upon vegetation.

Mr. Bowles dried in an oven a suitable quantity of earth proper for vegetation, and after carefully weighing it, planted in it the seed of a gourd. He watered it with pure rain water, and it produced a plant which weighed fourteen pounds, though the earth producing it had suffered no sensible diminution.

A willow-tree was planted by Van Helmon in a vessel containing a thousand pounds of earth. This plant was watered with distilled water ; and the vessel was so covered as to exclude all solid matter. At the end of five years, upon taking out the plant, he found it had increased in weight one hundred and nineteen pounds, though the earth had lost only two ounces of its original weight. — *Prairie Farmer.*

VALUE OF A LITTLE CHEMICAL KNOWLEDGE.

The last number of the American Farmer contains an interesting statement of the results of an experiment on the farm of the Hon. Reverdy Johnson, near Baltimore. The farm recently purchased by Mr. Johnson was completely exhausted, and the great question of the proprietor was this: What shall be applied to it in order to bring it to a state of fertility? In order to answer this question, common sense would dictate the Yankee rule of asking another question first, viz., What is lacking in the soil which causes its present barren condition? In order to ascertain this, chemistry must be called in. An analysis must be made. In order to illustrate the practical operation of this, we will extract from the communication the following statements: The land, originally good, had been impoverished by a long course of bad husbandry. The soil contains a very large proportion of iron. So complete was its exhaustion, that when first I saw it, all the vegetable matter growing upon the two hundred acres of cleared land, (including the briers, sassafras, and other bushes,) carefully collected, would have been insufficient for the manufacture of one four-horse load of barn-yard manure. The field selected for experiment contains ten acres, embracing the slopes of two hills, and a small valley intersecting it diagonally. It was at that time in corn, and did not produce one peck of corn to the acre, although it had been cultivated in the usual manner, and with ordinary care, and the season had not been below the average of seven years.

An analysis of the soil was made by Dr. Stewart. He found it to contain the following ingredients: —

Sand and bases insoluble,	71.20
Lime,	0.30
Magnesia,	0.40
Manganese,	0.10
Potash,	0.23
Water and organic matter,	10.07
Phosphoric acid, none.	
Iron and alumine,	17.70
	100.00

The doctor remarks, that from this analysis, the soil contains as much lime and magnesia as could be furnished by a dressing of one hundred and fifty bushels per acre — an uncommon quantity of iron. As there was a lack of phosphates, he recommended a preparation composed of biphosphate of lime. — This is obtained by dissolving bones in sulphuric acid; bone dust is similar in its effects — a part of the lime being combined with carbonic instead of sulphuric acid.

The corn was accordingly cut off and removed, the field ploughed and harrowed, and laid off into sixteen and one half feet lands. The preparation was then scattered regularly over it, costing, all told, $10 per acre. One and a quarter bushels of Mediterranean wheat was then sown upon each acre, and harrowed in. No barn-yard or other manure was used. The yield was more than twenty-nine bushels per acre!

Is not this a triumph of science, as applied practically to the renovation of exhausted land? — *Exchange.*

POMOLOGICAL.

The exhibition of fruits on Thursday, at the Pomological Convention, surprised every body in the variety and excellence of the specimens — a result due, in a very great degree, to Mr. J. Battey, of the Union Nurseries, Keesville, N. Y., and Mr. Chauncey Goodrich, of Burlington. Mr. Battey exhibited eighty-one varieties of pears, seventy-five of apples, and several of grapes; among the latter, the McNeil grape, which is regarded as the best for this climate, being perfectly hardy. Mr. Goodrich exhibited sixty-six varieties of apples, twenty-two of pears, one of quinces, and one of grapes. Among the contributors were also Mr. Pinneo, of Hanover, N. H.; Messrs. Judkins and Perkins, of Weathersfield; Mr. Chapman, of Middlebury; Col. Green, Mr. Curtis, and Mr. Atwood, of St. Albans; Mr. Landon, of South Hero; Mrs. R. G. Cole and Mrs. Z. Thompson, of Burlington; and Mr. Spear, of Braintree. Col. Jewett, of this village, presented specimens of the Fameuse apple as good as ever raised elsewhere.

The variety of native fruits of Vermont was better, altogether, than generally anticipated, and promises to furnish some excellent kinds unknown elsewhere. On the whole, the result was highly gratifying, and doubtless gave a new impulse in the right direction. Of a portion of Mr. Battey's fruit we could speak authoritatively, if we had time and room; but suffice it now to remark, that whoever wishes to find either old or new varieties, suited to the climate and soil of Vermont, will be able to find them in Mr. B.'s nurseries. Probably the nurseries of Messrs. Battey, of Keesville, Pinneo, of Hanover, and Spear, of Braintree, can furnish all the fruits now known which will flourish in this climate. — *Montpelier, (Vt.) Watchman.*

SWEET POTATOES.

Having been for some time an interested reader of the agricultural department of the Dollar Newspaper, I have thought that it may not be unprofitable to offer, through your columns, some suggestions, together with a little practical experience, relative to the culture of the sweet potato in comparatively northern latitudes. All may not deem it a matter of such importance, or think the vegetable so great a luxury as myself; but those who do will consider themselves more than compensated for the care and attention necessary for their production. — Sweet potatoes can be grown in perfection as far north as latitude 42°, and probably farther, by carefully pursuing the following directions: One of the most difficult parts of the process is preserving the seed through the winter. It will not do to put them in a cellar that never freezes, for the dampness of a common cellar is as fatal as the frosts of winter. To obviate this, the smaller potatoes are selected, (because they are more hardy, and not so liable to rot as the larger ones,) and packed perfectly dry in a box, with sand also perfectly dry. If sand cannot be obtained entirely free from moisture, it should be rendered so by means of fire heat, and the box containing them should be kept in a dry, warm room. In the spring, we must not wait till the ground is warm, and then plant the potatoes where they are to be grown, as is done at the south; but in the latter part of March, fill a box to the depth of one and a half or two feet with fresh horse stable manure, and spread over it three or four inches of rich, loose earth, and in this plant the potatoes close together, for the purpose of raising *plants*. This bed should be exposed to the sun in the daytime, and covered with a cloth or blanket at night to keep off the frost. About the 10th of May, the plants will be of sufficient size, and, as soon as there is no more danger from frost, may be transplanted to the ground where we wish to grow the potatoes. The manner of preserving the seed during winter, and preparing the hotbed to furnish the plants, I give on the authority of a neighbor of mine, who pays great attention to

gardening, and furnishes the "region round about" here with sweet potato plants, at twenty-five cents per hundred. My experience on the subject is this: Last spring, about the 20th of May, I selected a corner of my garden, lying considerably inclined towards the south-west, the soil of which is a dry and somewhat sandy loam, and threw it up in nills ten inches in height, and three feet apart each way. I procured two hundred plants, and set them out, two plants, six or eight inches apart, on each hill. There was a gentle rain about the time of setting them out, so that not more than a half dozen of them died. I hoed them twice, taking care to keep the hills perfect by replacing as much earth as was drawn away in hoeing up the weeds. This was all the care I bestowed on them, except going through them once in the month of August, and lifting the vines, to prevent their attachment to the ground, forming potatoes in other places than the hills.

We have been digging and using the potatoes for more than a month past, so that I have not measured the whole product; but by counting some of the hills, and measuring the potatoes obtained from them, I found ten to twelve hills would yield a bushel; consequently at a fair estimate, the product of one hundred hills, set out with two hundred plants, would be eight or ten bushels of good, dry, and mealy sweet potatoes, as large and as good as any that have for years past been brought to our market from the south, and sold for $1 to $1 25 per bushel. A great proportion of those I raised will exceed a foot in length, and several measure ten or twelve inches in circumference.

FRANKLIN.

Will Co., Ill., 1850.
—*Dollar Newspaper.*

COAL ASHES AS A MANURE.

I noticed in No. 50, vol. v., of the Scientific American, an article headed "Hard Coal Ashes," which goes strongly against the use of that article as a manure, which, in my opinion, is not well founded, as a general thing, as I know by experience, and also from observation, that it is beneficial on some kinds of soil. In the spring of 1849, I applied fifty bushels of hard coal ashes to a lot of ground fifty by one hundred and fifty feet, my neighbors telling me at the time that I would burn it up, particularly if it was a dry season, which it proved to be; but instead of burning it up, my trees and vegetables grew most luxuriantly, and at the same time their gardens were mostly dried up. Last spring I planted apricot, peach, and other fruit-trees in the same lot, some of which have grown shoots from four to five feet already, and are still growing very fast — one of the peach-trees producing ripe fruit of first-rate quality. In 1847, I saw hard coal ashes applied to a part of a field of corn, which was at least a third better than that on which there was none used; and again, on the first of August, I happened to see a large heap of hard coal ashes in my brother's garden, in Reading, Pa., on which there were corn and cucumbers growing as thrifty as I have ever seen them, and that too where there was nothing but the ashes. The lots referred to above were of a gravelly nature

GEORGE W. LEE.

Exchildown, Chester Co., Pa., 1850.

The article to which friend Lee refers states a positive fact; but there might be some other cause of the failure of the crop, than the coal ashes, although none could be adduced. Here, however, we have Mr. Lee's experience, and it is just such experience as we like to publish, because it is useful, and can be depended on. As there are hundreds of thousands of tons of coal ashes thrown away every year, we hope Mr. Lee and others will give us the results of their future experience with them, for this is something which concerns the whole country. — *Scientific American.*

ETRURIAN WHEAT.

The superiority of Etrurian wheat is so well established by six years' culture here, that I deem it proper to give some little account of its history. Its history, so far as I am acquainted with it, is as follows: —

Six years ago, I was at Washington, and Mr. Ellsworth, then commissioner of patents, called my attention to a new variety of wheat from abroad, that he had for distribution. Its appearance was so attractive, that I obtained about one large spoonful of it, that I sent home and had carefully cultivated, from which I have obtained my present supply. — Each crop has been equally successful. It has grown entirely free from chess, smut, rust, and weevil. The straw is stiff, and not subject to crinkle. Just previous to ripening, the straw assumes a beautiful purple color, which changes in ripening to a golden yellow. It is the bald variety, with a white or very light yellow berry, enclosed sufficiently firm by the husk to prevent waste in harvesting, and not so tightly set as to thresh hard. It is very hardy to stand the winter, and grows as well in the wet and low lands, apparently, as on the more elevated and drier grounds.

For flouring, this wheat is unsurpassed by any variety. It yields more pounds per bushel, measured, than any variety I know of, and the yield of flour is proportionably large. It promises fair to prove the most valuable variety of wheat that we ever had in this section of the country.

E. CORNELL.

Ithaca, *July*, 1850.
—*American Agriculturist.*

FOWL EXHIBITION.

There was quite a fine show of fowls at this place on Thursday last, there being nearly two hundred choice birds exhibited. The most prominent of these were the Shanghaes, of which there were a number of very large size, and young ones, which bid fair to become a good deal larger. This breed of fowls, though ungainly in appearance, are excellent layers, hardy, and particularly desirable for the quietness of their disposition and their early maturity. There were also present some good specimens of the Cochin Chinas, Dorkings, Polands, Pheasants, Javas, Chittagongs, Malays, Boltons, Bantams, and other varieties. There were also several cages of beautiful doves, such as the Dutch Tumblers, Ruffs, Fan-tails, Blowers, Turbans, Bald-head Tumblers, &c. These were in great variety, and most beautiful variegated colors; some with neck dresses and head ornaments that any lady might envy, desire to vie with, and imitate, but could not excel.

According to the accounts given of these various fowls by their owners, they are, some of them at least, very great layers and eaters, and gave satisfactory evidence of being very noisy birds. This exhibition has shown what improvement this department is susceptible of, both as to beauty and utility. — Whether the benefit or profit of the new breeds over the "old natives" is more than the additional expense of procuring them, we have our doubts; but to

those who take pleasure in mingling the beautiful with the useful, and who wish to adorn their yards and grounds, and give home new attractions, these newly-imported rarities offer a fine chance. — *Farmers' Cabinet, Amherst, N. H.*

MECHANICAL IMPROVEMENT OF SOILS.

There are two modes of improving soils. I have spoken of the composition of soils. You see how they vary, and what differences there are in the qualities of soils, and what it is that constitutes equality of soil, and what the relation between these and the chemical composition of soils. But how are soils to be improved? There are two methods, the mechanical and the chemical. Of the mechanical method I shall now speak, and of the chemical in my last lecture. Among the various mechanical methods of improvement, there are three principal kinds. The first is deep ploughing; that, in almost all cases, is found to be important and profitable. In all countries where I have been, in all parts of Europe which I have visited, experience has shown that the soil generally is not ploughed to a great depth: three, four, or five inches, is almost the maximum depth of exhaustion. It is very often the case, that persons exhaust land, until they can raise no more crops, and are then compelled to leave. The person who succeeds them, seeing the system of tillage that has been practised, instead of adopting the former system of shallow ploughing, goes down deeper, and turns up a new soil altogether. Very likely in this new soil are found accumulated the materials which the other soil once contained. The manure that has been put on and accumulated below is turned up, and the new comer gets, perhaps, not only a good virgin soil, but much of the money that the old farmer has buried there. This is no hypothetical case. If it were, I would not state it, for speculation and hypothesis are good for nothing. In the neighborhood of Edinburgh, there are farmers of the greatest skill, and who make a great deal of money; and, as a general rule, you may judge of the skill of a farmer by the number of sovereigns that he has pocketed at the end of the year; it is a very good test. One of these farmers, after hearing one of my lectures, in explanation of this simple principle, told me, that, though he lived so near Edinburgh, the thing had never occurred to him before, nor had he ever heard of it; and he immediately went to work to carry out the principle, and, by ploughing down, he had brought to the surface a fresh soil, and was then growing luxuriant crops, where he had thought the land entirely exhausted. Therefore, it is quite true, that in the under, or subsoil, there accumulate many substances which have drained through from the upper soil, which make it fully as rich as the upper soil once was, and that the farmer takes the cheapest steps to reclaim poor land, exhausted by severe cropping, who ploughs deep.

This must be sufficient to show the value of the subsoil, when turned up and mixed with the upper. I need not dwell on this; but I have this remark to make. It happens sometimes that various substances accumulate beneath, which are injurious to the plant, and in order that they may not injure the upper soil, it is not always advisable to bring them up. There are districts, in my country, where the subsoil is a white clay, which is so barren, that if brought up, it might destroy the upper soil, and therefore it is carefully avoided. This is the case in many parts of the world. It is quite proper not to do so; but not an unfrequent resort with us, as a means of deepening the soil, where the subsoil is impervious or noxious, is to cut it through, so that the water sinks, and as it sinks below the level of the soil, the rain falls, filling up all the pores in the soil to a certain point, which, with the fresh air, effects a chemical action on these substances, changes them chemically, and gives them either a nourishing quality, or modifies the subsoil, so that, when brought up, it will not be injurious, or noxious to plants.

This is the object of subsoil ploughing; this is common in England, after draining in stiff clay soils. But the practice is also adopted where the land has been long drained. In Scotland, the farmers plough from seven to twenty inches deep, and experience has shown that lands thus treated not only retain every thing put on them in the form of manure, but are capable of growing crops for a longer time, without exhaustion, than if they did not plough so deep. — *Johnston's Lectures.*

THE FRUITFUL BEES.

Messrs. Editors: I find in page 39, No. 1, vol. ix., of the Prairie Farmer, an article headed "Fruitful Bees." A Mr. Nelson Soule, in Yankee Settlement, Iowa, should have been Steele. It is a fact, that ten swarms sprung from one, in one season; the old swarm made eleven. That terrible long story can be seen through with a small telescope by a good mathematician or astronomer. It is this: the old stock swarmed four times, one of them swarmed three, another two, another one. According to my arithmetic, four, three, two, and one, together with the old stock, make eleven. He has had sixteen swarm from six, this season. He makes his hive to hold about a bushel, which is sufficient to hold eighty pounds of honey. Hives of that size will throw out a swarm of from ten to fourteen quarts of bees, and more swarms than larger hives. A good plan for a hive: Take boards twelve and fourteen inches wide, which will make it one foot square on the inside; two feet high, with a partition six and a half inches from the top for boxes; put in two in each hive; bore the hole in the partition, and bore so far as to meet each other; a box five inches square and eleven long in the inside, will hold ten pounds of nice honey. I have tried it, and you may. Have your door in the back side of the hive; then you can take out a box at any time; bore a hole in front of the box so as to see when it is full, put a glass over it, slide a piece of tin under the box, and draw it out and replace with another, and the work is done without destroying the bees.

A LOVER OF GOOD HONEY.

York, Delaware Co., Iowa.

— *Prairie Farmer.*

The great palace of glass for the Great Industrial Exhibition of 1851 is now being constructed. We believe we have already given the dimensions of this enormous structure, but the following brief summary will be perused with interest: The building is designed by Mr. Paxton. Its length is 1848 feet, width 408 feet, height 66 feet. The transept is 108 feet high; except the timbers for floors and joists, it consists entirely of glass and iron. There will be 3230 iron columns, 2244 iron girders, 1128 iron bearers, and 358 iron roof-supporters; 34 miles of gutters, 202 miles of sash bars, and 900,000 feet of glass. — The gallery will be 24 feet wide. The site covers 18 acres. The exhibiting space is about 21 acres, which can be greatly increased by additional galleries. The contract with Messrs. Fox and Henderson is for £79,800, or £150,000 if the building is permanently retained. — *Exchange.*

PLUM CULTURE—THE CURCULIO.

An Imperial Gage plum-tree on my premises has annually produced a good crop for the last five years, while four Red Egg plum-trees, on the same ground, have given only one good crop during the same period — the curculio destroying the Egg plum four seasons. The reasons for this difference are, the curculio has a preference for the Egg plum; it is also rather a shy bearer. The Gage is so prolific, that if it ripens half its crop there is a fine show of fruit.

There are probably other varieties of plums equally desirable as escaping the curculio. It would be well for plum culturists to give some attention to this point. We may succeed in making head against this troublesome pest by growing prolific sorts, so as to share the crop, and by planting, occasionally, in the plum orchard, such fruits as have proved to be peculiarly attractive to the enemy, thereby drawing their attention somewhat from the main point, or tempting them to a smaller share, where despatching may be more convenient. A few nectarine trees would be the most attractive. I have not been allowed to gather a ripe nectarine from a tree that has been perfectly loaded with fine-looking fruit three or four different seasons.

S. MOULSON.

Rochester, *Aug.* 1850.
— *Rural New-Yorker.*

TREES, SHRUBS, FLOWERS.

It is a fact, admitted by all gardeners, as well as botanists, that if a tree, or plant, or flower, be placed in a mould, either naturally or artificially made too rich for it, a plethoric state is produced, and fruitfulness ceases. In trees, the effect of strong manure and over-rich soil is, that they run to superfluous wood, blossom irregularly, and chiefly at the extremities of the outer branches, and almost, or entirely, cease to bear fruit.

With flowering shrubs and flowers, the effect is, first, that the flower becomes double, and loses its power of producing seed; next, it ceases almost to flower. If the application of the stimulus of manure is carried still further, flowers and plants become diseased in the extreme, and speedily die; thus, by this wise provision of Providence, the transmission of disease (the certain consequences of the highly plethoric state, whether in plants, animals, or in mankind) is guarded against, and the species shielded from danger on the side of penalty. In order to remedy this state when accidentally produced, gardeners and florists are accustomed, by various devices, to produce the opposite or plethoric state they peculiarly denominate "giving a check." In other words, they put the species in danger in order to produce a corresponding determined effort of nature to insure its perpetuation — and the end is invariably attained. Thus, in order to make the fruit-trees bear plentifully, gardeners delay, or impede, the rising of the sap, by cutting rings in the bark around the tree. This, to the tree, is the production of a state of depletion, and the abundance of fruit is the effort of nature to counteract the danger. The fig, when grown in this climate, is particularly liable to drop its fruit when half matured. This, gardeners now find, can be prevented by pruning the trees so severely as to give it a check; or, if grown in a pot, by cutting a few inches from its roots all round, so as to produce the same effect. The result is, that the tree retains, and carefully matures its fruit.

In like manner, when a gardener wishes to save seed from a gourd or cucumber, he does not give the plant an extra quantity of manure or warmth. He does just the contrary; he subjects it to some hardships, and takes the fruit that is the least fine-looking, foreknowing that it will be filled with seed, whilst the finest fruit is nearly destitute. Upon the same principle, it is a known fact, that after severe and long winters, the harvests are correspondingly rapid and abundant. Vines bear most luxuriantly after being severely tried by frost; and grass springs in the same extraordinary manner. After the long and trying winter of 1846–7, when the snow lay upon the ground in the northern counties until June, the spring of grass was so wonderful as to cause several minute experiments by various persons. The result was, that in a single night of twelve hours the blade of grass was ascertained frequently to have advanced full three quarters of an inch; and wheat and grain progressed in a similar manner.

Aware of this beautiful law of preservation, the florist, when he wishes to insure the luxuriant flowering of a greenhouse or hothouse shrub or plant, is followed invariably by an effort of nature for its safety, and it flowers luxuriantly, and, if a seed-bearing plant, bears seed accordingly.

There is another curious modification of this law exhibited by the vegetable creation; and this is, that immediately before the death, or sudden cessation of fruitfulness, of a tree or shrub, it is observed to bear abundantly. This is remarkably the case with a pear and apple, when the roots touch the harsh, cold, blue clay, or any other soil inimical to the health of the tree. It is a last effort to preserve and perpetuate the species, and is the effect of that state of depletion through which the tree passes to sterility and death. — *Doubleday.*

Remarks. — In the preceding article, there is a mistake as to the effect of ringing. The sap rises in the sap-wood, and after becoming digested in the leaves, and forming nutritious juices, it returns in the inner bark, and furnishes food to all parts of the plant, fruit and all. The object of ringing is to prevent the return of food to the plant generally, and form it into fruit. By this operation, the branch that is rung will produce superior fruit, but other parts of the tree suffer by it. Every branch should contribute to the support of the trunk and roots. — Ed. N. E. Farmer.

NEST-BUILDING FISHES.

Professor Agassiz delivered some oral remarks, at the late scientific convention, upon the care which certain fishes take of their young. Having alluded to the lower species of the fish, which lays its eggs, and leaves its young, who never know parents, and rise but to be swallowed by larger species, he said, that when he arrived in this country, he heard of fish that did protect their young, but could get no further information on the subject. The professor then proceeded to detail an incident which came under his own observation last May. When walking on the sea-shore at ———, he saw two catfish rushing from the shore to the water. He went to the place from which they started, and he saw a black mark formed where they had been. There were two tadpoles in it; and by-and-by he saw the two catfish return to the spot, and looking as if to see if their spawn had been disturbed. They got on their nests again. He watched them for a while, and threw a stone to disturb them. They ran to the water as before, but in ten minutes they returned again; and in this manner he disturbed them and they returned four times, which convinced him that they were anxious to return to their young and protect them. — *Granite Farmer.*

AGRICULTURE.

In few, if any, of the pursuits of life have there been more improvements made, or a deeper interest awakened, within the past few years, than in that of agriculture. It is well known that, until within a very recent period, the employment of farming was looked upon almost with contempt by nearly every person who had any ambition to attain an elevated position in the community. It was considered as a fitting employment rather for the dull and stupid, than for the ambitious man, or the man of taste and science; and, as is well known, in consequence of this feeling, it was almost impossible for farmers' sons, young men of energy and enterprise, to be retained upon the old homestead, to pursue the plodding course which their fathers had trodden before them.

But within the last dozen years, a great change in public opinion has been made in regard to this matter. It has been discovered that agriculture is in itself a science worthy the attention of the ablest minds; a science the thorough and practical understanding of which calls into operation more of the physical and mental powers of man than most any other, and which, rightly understood and practised, is one of the most ennobling to the mind and heart in which man can engage. It has also been made clearly manifest that the "farming" of by-gone days was not "*agriculture*," understood in its proper sense; that it was a perversion of the sense and meaning of the term, and that the principles of the science were almost unknown to those who called themselves farmers. To be sure, farmers then, as now, ploughed, planted, sowed, and reaped. If they got an abundant harvest, it was good luck; if their harvest failed, it was bad luck. Besides a few old women's whims, they had no reason to give, either for success in the one case, or failure in the other. The analysis of soils for the purpose of ascertaining their adaptation to a particular crop was unthought of. Chemistry, geology, botany, entomology, and zoölogy, with other sciences, were as sealed books to the farmer, and for the want of a knowledge of them the earth withheld her richest stores. But now these "sister sciences" have lent their aid to agriculture. The hidden treasures of the earth have been wrung from her sterile bosom, and the reward of the toils of the husbandman has been increased a hundred fold.

The contrast between the present and the past is indeed striking. The farmer of the present day who understands not the *science* of his calling, and cannot account for the different phenomena in the various departments, which in his every-day experience he encounters, is behind the age. The reasons which, a dozen years ago, husbandmen would have advanced and stoutly maintained for this success or that failure, they would now blush to own. Instead of being carried on in the dark, hap-hazard, the business is now conducted by the light of science, and in accordance with well-known principles. This is it which has raised the calling so much and so rapidly in public estimation — has caused it to be considered as an employment worthy the attention of the most cultivated and enlightened of the human race — and has made it so popular, that there is hardly a class in the community, from the highest to the lowest, the members of which are not often heard wishing most earnestly for the time to come when they can lay aside the vexatious cares of "business," and retire to their beau ideal of earthly happiness — "*a snug little farm.*"

A gratifying feature of this awakened interest in the improvement of agriculture is the fact that it is not confined to one state, or one section of the country, but extends in a greater or less degree to nearly all sections of our land. In the New England States, any one who has had occasion to travel for any distance cannot have failed to have discovered this improvement. In other sections of the country, it is doubtless as clearly perceptible. In New York, we know that much has been accomplished — that the state, with a praiseworthy liberality, has contributed liberally from her resources to improve and advance the cause of agriculture. Other states have done the same, and the good effect can be easily seen.

A writer truly remarks, that, "notwithstanding what has been accomplished, we are yet but in our infancy as to improvement." The work is yet to go on, until results will be attained, at which the faith of the most sanguine of the present day would waver. That this will be the case, we have no doubt; that it may be, and that with it the noble yeomanry of our land may be elevated to that position to which their calling entitles them, is a wish in which every class in the community ought most heartily to join. — *Boston Journal.*

REFINING SUGAR — NEW DISCOVERY.

A discovery has been made in the refining of sugar, of as much importance to domestic economy as any improvement that has been introduced during the last fifty years.

The sirup, or common brown sugar, is taken from the boilers, and again mixed with molasses, till it assumes a semi-fluid consistence, and in two minutes, without the use of heat or any drug, is refined into the state of the finest crusted loaf sugar. In the old process, the refining took nearly three weeks, together with a great expense of labor, fuel, machinery, and buildings.

This process, as we understand it, is simply admitting the sirup into a cylindrical sieve containing about two hundred pounds, the meshes of which are so fine that the crystalline particles cannot pass, and, giving it a rotary motion of about two thousand revolutions per minute; the centrifugal force drives off the liquid, and leaves the sugar pure, and, what is still more singular, dry enough for market.

The annual consumption of refined sugar in this country is more than a hundred millions of pounds. A saving of one penny per pound to the consumer would be a million of dollars per year.

The owners of this discovery, which has been patented, are Messrs. Aspinwall and Woolsey, of New York. The action of the discovery has been fully tested at Mr. Hartson's works, Vesey Street, New York, before a large number of practical and scientific gentlemen, when two hundred pounds of very impure sirup were perfectly converted into pure crystals of sugar in two minutes. These facts are condensed from the New York Sun. — *Rural New-Yorker.*

SHOEING HORSES.

It appears that the practice of shoeing horses was brought into England about the time of William the Conqueror. It is said that Welbeck, in Nottinghamshire, belonged to a Saxon chief named Gamelbere, who held it on condition of shoeing the king's palfrey, whenever he should lie at the manor of Mansfield, and that, if he should lame the palfrey, he should give the king another worth four marks. William the Conqueror is said also to have given the town of Northampton, as a fief, to a certain person, in consideration of his paying a certain sum yearly for the shoeing of his horses; and it is generally believed that Henry de Ferrers, who came over with William, and whose descendants still bear on their arms six horseshoes, received that surname because he was

intrusted with the inspection of the farriers. At what period horses' shoes, as we now have them, were introduced, is, like many other things, lost to us forever. Historians inform us that the Emperor Nero, when he undertook short journeys, was drawn by mules which had silver shoes, and those of his wife, Poppæa, had shoes of gold. But these shoes appear to have been a kind of plait of gold and silver stripes, covering the hoofs. About the year 1038, when the Marquis of Tuscany, one of the richest princes of his time, went to meet his affianced bride, (Beatrix,) his horses were shod with silver: the nails were of the same material. Yet in much more modern times, an English ambassador at the court of Paris had silver shoes to his horses, and caused them to be so slightly fixed that they soon came off. This appears to us, in the nineteenth century, extravagant folly, and scarcely to be believed; yet we have evidence of the truth of it. — *Farmer's Magazine.*

FARMING SCENES IN THE WEST.

About eight years ago, a Dutchman, whose only English was a good-natured "yes" to every possible question, got employment as a stable man. His wages, six dollars and board, that was thirty-six dollars in six months, for not one cent did he spend. He washed his own shirt and stockings, mended and patched his own breeches, paid for his tobacco by odd jobs, and laid by his wages. The next six months, being now able to talk good English, he obtained eight dollars a month; and at the end of six more, had forty-eight dollars; making in all, for the year, eighty-four dollars. The second year, by varying his employment, — sawing wood in the winter, working for the corporation in the summer, and making gardens in the spring, — he laid by a hundred dollars; and the next year, one hundred and fifty-five dollars; making, in three years, three hundred and ninety-nine dollars. With this he bought eighty acres of land. It was as wild as when the deer fled over it and the Indian pursued him. How should he get a living while clearing it? Thus he did it: he hires a man to clear and fence ten acres; he himself remains in town, to earn the money to pay for clearing. Behold him already risen a degree — he is an employer. In two years' time, he has twenty acres well cleared, a log-house and stable, and money enough to buy stock and tools. He now rises another step in the world, for he gets married, and with his ample, broad-faced, good-natured wife, he gives up the town, and is now a regular farmer. In Germany, he owned nothing, and never could own any thing; his wages were nominal, his diet chiefly vegetable, and his prospect was, that he would be obliged to labor as a menial for life, barely earning a subsistence, and not leave enough to bury him. In five years he has become the owner in fee simple of a good farm, with comfortable fixtures, a prospect of rural wealth, an independent life, and, by the blessing of Heaven and his wife, of an endless posterity. Two words tell the story — industry and economy. These two words will make any man rich. — *Indiana Farmer.*

THE WAY TO PULL TURNIPS.

The Yankee grasps the root by its top, and pulls it with his hand, and then cuts off the tops with a knife. The Englishman has a better way. He sharpens his hoe, and, passing along, cuts, with a single stroke, the tops of the turnip; then, with the same implement, strikes under it, so as to cut off the tap-root, and brings it out of the earth. In cutting off the tops, he guides his hoe so as to throw them into a sort of row in one place, and in digging, he guides it so as to throw the roots together in another row. He will dig the roots about four times as fast as one Yankee with his pulling and knife. — *Prairie Farmer.*

PRIZE HAM.

At the recent Agricultural Fair in Montgomery Co., N. Y., a prize was awarded to Nathan White for the best hams exhibited. His mode of curing is as follows: —

The pork should be perfectly cold before being cut up. The hams should be salted with fine salt, with a portion of red pepper, and about a gill of molasses to each ham. Let them remain in salt five weeks, then hang them up and smoke them with hickory wood for five or six weeks. About the first of April, take them down, and wet them with cold water, and let them be well rubbed with unleached ashes. Let them remain in bulk for several days, and then hang them in the loft again for use.

SHEPHERD DOGS.

Among the wonderful animals exhibited at the State Fair, says the Albany Journal, was Robert Middlemist's intelligent shepherd dog. He is a beautiful animal, and has performed many wonderful exploits. Among those which come strongly authenticated, was one where he had followed up a stray sheep, and after scenting him for a mile, found him among a flock of forty, picked him out unaided by any person, and, after a hard struggle, separated him from the flock, and drove him home. Mr. M. is an old Scotch shepherd, and his dog is one of the best from the Highlands. He attracted general admiration. — *Rural New-Yorker.*

Useful Method. — M. Mammere, the professor of chemistry at Rheims, has published a method of detecting cotton or linen in wool or silk goods. His method consists in applying to the stuff which is suspected a chloride of tin, (*chlorine d'étain.*) If there is in the stuff any linen or cotton, its presence is immediately indicated by their coloration in black, which they undergo under the action of the chloride of tin, while it has no action upon the wool or silk, this salt being without action upon animal substances. — *Maine Farmer.*

Mammoth Ox. — At the fair of the American Institute, New York, there is an ox supposed to be the largest ever known. He is purely of American stock, and will be exhibited at the approaching World's Fair in London. The animal is eight years old, 18½ hands high, and measures 14 feet in length, and 11 in girth.

ACKNOWLEDGMENTS.

Of Gen. Josiah Newhall, Lynnfield, a large apple, rather flat, dark red, very fair and beautiful; the quality about middling. Also, Oakes apple. We have heard different opinions, from fruit-growers in Essex county, as to the identity of the Fall Harvey and Oakes apple. But from these specimens, we

consider them entirely distinct; and Gen. Newhall considers this apple distinct from the Fall Harvey, which he also cultivates. Dea. Fowler, of Danvers New Mills, where the Oakes apple is cultivated, has examined these apples from Gen. Newhall, and he says that they are the Oakes apple, and different from the Fall Harvey. With these facts and opinions, we will consider this doubtful question settled. The Oakes apple is large; flat, and rather conical; bright yellow; very fair. Not yet in use. It is an early winter fruit, of good quality. The Fall Harvey is liable to objections, on account of its falling before ripe, or its liability to rot on the tree.

From William O. H. Gwynneth, Portland, Me., various kinds of apples. No. 1 is a fair fruit, of medial size, said to keep two years. No. 2, large, but not excellent. No. 3, large, fair, very tender, sweetish; pretty good. No. 4, medial size, handsome color, similar to Hurlbut in general appearance, mild sour, tolerably good. No. 5, large, fair, handsome, quite pleasant. No. 6, hard. No. 7, not good. No. 8 is the Pound Sweeting of New York; common in this market, from that state. It is a very good fruit, and sells well. Its large size is a good recommendation, as well as its quality. No. 9, Hubbardston Nonsuch, very fine specimens.

Of James Dorr, Dorchester, several varieties of apples. One is a very pleasant sour, of medial size, and very fair. A good sweet of the same size, fair and handsome. One variety looks so much like the Baldwin that it would readily be mistaken for that variety, but it differs in quality, being more mild and tender; and as it is an earlier fruit, it is superior at this season.

Of Calvin Haskell, specimens of the Mother apple; large, very fair and beautiful. This is one of the best of apples in quality.

From William Elliot, Greenfield, apples from a pear-tree of William Mitchell in that town. The fruit is fair, rather large, and of good quality. That tree has borne apples and pears for several years. Mr. Elliot's remarks on this tree may be seen in our first volume, p. 79. Also fine specimens of St. Michael pears and Baldwin apples.

Of G. I. Haywood, Hancock, N. H., apples for a name. They are the Holden Pippin, which had its origin in Holden, in this state. The tree is a great grower and bearer; the fruit large and fair; very good for cooking, and tolerably good for the dessert; it is very tender, but it lacks flavor, and is rather too acid for a first-rate table fruit.

From W. N. Andrews, Dover, N. H., specimens of the Size apple. We received a single specimen of this fruit from Mr. Andrews last spring, and we were much pleased with it for its fine appearance and long keeping; and we are much obliged for this favor, which will enable us to make a better test of this promising fruit. Also, large, handsome winter apples, of whose qualities we cannot judge now.

In our last, we acknowledged the receipt of apples from Cyrus K. Moore, Parsonsfield, Me., which should be from John Moore, West Parsonsfield.

AUTUMN AND WINTER.

BY FRANCES D. GAGE.

The Autumn is going, with its beauty so glowing,
And winter o'er all things is casting its pall;
The rose-tree is fading — no longer 'tis shading
The arbor of love or the bright waterfall.

The dahlias are lopping, the ripe fruit is dropping,
The corn-leaves are withered and dry on the stalk;
The ring-dove is sighing, the grasshopper dying,
The fire-fly no longer enlivens the walk.

The forests are changing, the wild birds are ranging,
To hunt out a home where the skies are more clear;
The streams deeper flowing, the chilly winds blowing,
All tell us that winter, cold winter, is near.

Summer's sweets, while we're tasting, away all are hasting;
The days of the peach and the melon are o'er;
Then let us be trying, while Autumn is dying,
To lay up for Winter a plentiful store.

Work freer and harder, fill the barn and the larder;
Then give to old Winter, whene'er he shall come,
A welcome most willing: we'll heed not his chilling,
If there's warmth round the hearth-stone, and plenty at home.

But while we are cheerful, no cause to be tearful,
Let us think of the children of sorrow and wrong,
And give from our treasure, with no stinted measure,
Of the good gifts of Heaven, to help them along.

—*Ohio Cultivator.*

THE OLIO.

The Grandeur of Man. — "The birth of an infant," it has been truthfully said, "is a greater event than the production of the sun. The sun is only a lump of senseless matter; it sees not its own light; it feels not its own heat; and with all its grandeur, it will cease to be: but that infant, beginning only to breathe yesterday, is possessed of reason, claims a principle infinitely superior to all matter, and will through the ages of eternity." Let the immortal mind shed its lustre upon the world.

"How shall I stir the fire without interrupting the music?" asked some one. "Between the bars," was replied.

We notice the marriage of Mr. Day to Miss Field, which presents this singular anomaly, that although he *won the Field*, she *gained the Day*.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own. — JOHNSON.

VOL. II. SATURDAY, DECEMBER 7, 1850. NO. 25.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

THE WORLD'S INDUSTRIAL SHOW.

THIS grand exhibition, which will commence at London, May 1, 1851, is attracting great attention; and well it may, for it will doubtless far excel every thing of the kind that has ever taken place. The cost of the building for the exhibition is about three quarters of a million of dollars.

The governors of the several states have appointed committees to correspond with the *Central Authority* in the city of Washington, and to make arrangements to enable agriculturists, manufacturers, mechanics, and artists, to exhibit specimens of their products.

The Central Authority has made arrangements with government to forward to London articles for this show, and to return, if desired, at the close of the exhibition, free of all charges for transportation.

Messrs. John J. Nicholson, Beesley, & Co., Lower James Street, London, have offered to enter and pass through the custom-house all foreign goods intended for exhibition, without any charge.

All cost of drayage in Boston, or other place in this country, where the goods are deposited, must be paid by the contributors.

The following committee have been appointed for this state: Hon. Marshall P. Wilder, chairman; and to facilitate the despatch of goods, the committee have been divided, so that one or more members will inspect such goods as may be prepared in each congressional district of the state, as follows: —

No. 1. Henry N. Hooper and Erastus P. Bigelow, Esqrs., Boston.

No. 2. Hon. John Aikin, Andover.

No. 3. William A. Burke, Lowell.

No. 4. William Riddle, Esq., Charlestown.

No. 5. Hon. Alexander De Witt, Oxford.

No. 6. Charles Stearns, Esq., Springfield.

No. 7. David Carson, Esq., Dalton.

No. 8. Hon. Marshall P. Wilder, Dorchester.

Nos. 9 and 10. Hon. Samuel L. Crocker, Taunton.

All articles for exhibition from this state must be deposited in this city by January 10; and persons intending to contribute articles must state the area required in superficial feet, and the average height for their goods, on or before the 10th of December.

No goods will be forwarded unless first approved by the committee of the district from which they come; or contributors may exhibit their articles to the full committee in Boston, before packing for shipment.

Correspondence with the full committee should be addressed "To the Massachusetts Committee on the Industrial Exhibition." Henry N. Hooper, secretary, Boston.

REGULATIONS BY THE COMMISSIONERS IN LONDON.

1. The exhibition is to be opened in Hyde Park, London, on the 1st day of May, 1851. The building, constructed chiefly of cast iron and plate glass, 1848 feet long, 408 feet wide, and 108 feet high, with a machinery room 936 feet long and 48 feet wide, will be nearly fire-proof.

2. Goods will be received between the 1st of January and the 1st of March, 1851. After the latter day, none can be received.

3. The productions of all nations will be exhibited under one general classification.

4. Articles exhibited will be divided into four sections, namely: 1st. Raw materials and produce; 2d. Machinery; 3d. Manufactures; 4th. Sculpture, models, and plastic art.

5. Exhibiters will deliver their goods, at their own charge and risk, at the building in Hyde Park.

6. Articles liable to perish during the period of eight months, from the 1st of January to the 1st of September, are not suitable to be exhibited. This applies more particularly to certain articles derived from the animal and vegetable kingdoms.

7. Exhibiters will be at the cost of their own insurance. Glass cases, when required, must be furnished by the exhibiter.

8. Any exhibiter may, by permission of the royal commissioners, employ a servant to keep in order and explain the articles which he exhibits, but not to invite purchasers.

9. Prices are not to be affixed to the articles exhibited, but may, at the option of the exhibiter, be stated in the invoice sent to the royal commissioners.

10. No articles of foreign manufacture can be admitted for exhibition, unless they come with the express sanction of the Central Authority of the country of which they are the produce.

11. Goods will be admitted without payment of duty, and sealed with the official seal of the board of customs till their arrival at the building; but bonds will be required of the owner or agents for the payment of duties in case they should be sold in

England after the exhibition is over. No goods can be removed until the exhibition is finally closed.

12. The rules of awarding prizes will conform to the section or department to which the goods belong.

13. In the department of raw materials and produce, prizes will be awarded upon a consideration of the value and importance of the article, and the superior excellence of the particular specimens exhibited; and in the case of prepared materials, the novelty and importance of the prepared product, and the superior skill and ingenuity in the preparation, will be considered.

14. In machinery, prizes will be given with reference to novelty in the invention, superiority in the execution, increased efficiency or increased economy in the use of the article exhibited. Its importance in a social view, and the difficulties in perfecting it, will also be taken into account.

15. In manufactures, increased usefulness, such as permanency of colors, improved forms and patterns, superior quality or higher skill in workmanship, new materials used, and combinations of materials, beauty of design in form and color, with reference to utility, and cheapness relatively to excellence of production, will be the basis of decision.

16. In sculpture, models, and the plastic art, rewards will have reference to the beauty and originality of the specimens, to improvements in the processes of production, to the application of art to manufactures, and, in the case of models, to the subjects they represent.

17. Juries, to consist partly of Englishmen and partly of foreigners, will be composed of men of known ability to form a judgment — above the suspicion of either national or individual partiality.

18. No competitor for a prize can be placed on a jury in the particular department in which he is a competitor.

19. To exhibiters from the United States, there have been allotted, of ground space, 85,000 square feet, subject to a deduction of one half for passages; and of wall or hanging space, 40,000 square feet, not subject to deduction.

Articles must be consigned to the secretary, at Boston, who, with permission of the collector, will place them in government stores, without charge for storage.

The committee indulge a hope that the liberal provisions made by the federal government for transportation, will insure from their fellow-citizens a full display from the farm, the garden, and the dairy; the forest and the mine; the factory and the workshop; the laboratory and the studio; and that not only articles possessing the merit of *novelty*, *rarity*, and *high excellence*, but also those of more humble pretensions, which are calculated to promote the well-being of mankind, and are so often met with in Massachusetts, will be contributed to the *Great Industrial Exhibition of the World.*

SAVE MANURE.

Those farmers who have not barn cellars to enable them to save all their manure in the best manner, should contrive to save it in some way, though attended with more trouble than falls to the lot of those who have made preparation for this purpose.

In barns without cellars, the liquid manure may be saved by using various absorbents, as may be convenient; and almost every farmer has loam, sand, or other materials at hand which are useful. Some use coarse fodder for this purpose; but in most cases, by the use of a fodder-cutter, and a little attention in preparing it, it may be used as food, affording nutriment for the animal, and be readily converted into manure.

Sawdust is a good absorbent; so are fine shavings, and the dust from carpenters' and other shops. — Charcoal dust is another valuable absorbent. From many shops and manufactories much refuse matter may often be obtained, that is not only valuable as absorbents, but they will greatly add to the quantity of manure.

Some farmers take up the floor in their cattle-house, and fill loam, muck, or sand under it, to catch and absorb the liquid manure, and then replace the floor. The soil becomes saturated with rich matter during the winter, and is excellent manure in the spring.

Another mode is to remove the floor, fill up with loam to a suitable height, and let it be a bed for the cattle; and, on removing the manure daily, remove the loam that has become wet. Some farmers provide loam or other earth, and place it where it will be convenient to scatter over the floor. There is a great advantage in having dry loam for this purpose; a ton of it will absorb as much as four tons of moist loam, thus saving much in carting and shoveling.

As the liquid manure of animals is worth as much as the solid, every farmer must be aware of the importance of saving it, and he should make arrangements for that purpose.

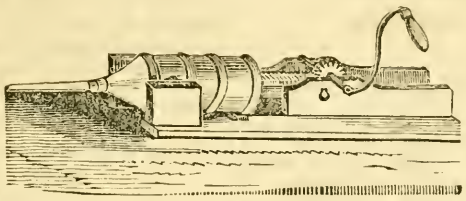
On many a farm where now it is doubtful whether there is profit or loss, this question would become settled at once, in the most favorable manner, on doubling the amount and value of manure.

THE AMERICAN CHURN.

My experience differs so widely from the advertised testimonials, that I am very curious to learn what has been the case with others who have tried the American churn. My dairymaid has had a six-pound churn in use for the last month, (perhaps ten or twelve churnings,) under favorable circumstances, at 58° or 60°. The butter has never come in less than seventeen minutes, usually in about eighteen, and once, it did not come in less than three quarters of an hour; while the testimonials state a much shorter time, namely, from twelve minutes even to four minutes. — *London Gardener's Chronicle*

The manufacture of brandy is now successfully carried on by John A. Scott, Esq., of Washington county, Miss. It is made from the Scuppernong grape, and is pronounced as good and pure an article as the best French brandy.

The Cincinnati Price Current publishes a statement of the number of hogs assessed in seventy-six counties, which show a deficiency of 246,000 head, compared with last year.



SAUSAGE-STUFFER.

With this machine, sausages are stuffed with great expedition and ease. The cylinder is filled with minced meat, into which a follower or piston plays, operated by a crank acting with a cog-wheel upon a rachet bar, forcing the meat into and through the small pipe at the end of the cylinder, stuffing sausages with great rapidity, compared with the old-fashioned method without machinery.

As these machines are now constructed, the gearing is cast iron, and, of course, very substantial and durable; and the only part of wood is the bed or plank at bottom. This simple contrivance, which costs but a trifle, saves much labor.

TREATMENT OF SCARLET FEVER.

Dr. Lindsly, of Washington, strongly recommends the mode of treatment of scarlet fever resorted to by the king of Hanover. It is as follows, and exceedingly simple: —

"From the first day of the illness, and as soon as we are certain of its nature, the patient must be rubbed morning and evening, over the whole body, with a piece of bacon, in such a manner that, with the exception of the head, a covering of fat is every where applied. In order to make this rubbing-in somewhat easier, it is best to take a piece of bacon the size of the hand, choosing a part still armed with the rind, that we may have a firm grasp. On the soft side of the piece slits are to be made, in order to allow the oozing out of the fat. The rubbing must be thoroughly performed, and not too quickly, in order that the skin may be regularly saturated with the fat. The beneficial results of the application are soon obvious: with a rapidity bordering on magic, all, even the most painful, symptoms of the disease are allayed; quiet, sleep, good humor, appetite return, and there remains only the impatience to quit the sick-room."

FRUIT IN CELLARS.

A great deal of winter fruit suffers early decay, in consequence of a deficiency of ventilation, especially during autumn, and after the fruit is deposited. — Another cause of decay is the improper location of the shelves or bins, which are placed against or around the walls. By this inconvenient arrangement, the assorting of decayed specimens must be done all from one side, and the shelves must hence be very narrow, or the operator must stretch himself in a most irksome horizontal position. The circulation of the air is at the same time greatly impeded by the want of space next the walls. To avoid these evils, the shelves should be in the centre, with a passage all round. This allows circulation of air: and the shelves may be twice the width, with the same convenience in assorting or picking. If suspended from the joists above on stiff bars, rats cannot reach them. We have never succeeded so well by any other than this arrangement. It is said that the Germans are very successful in the ventilation of their cellars, by a communication with the principal chimney, the heated air in which necessarily maintains a current, which sweeps out the noxious and stagnant gases from the vegetable and other contents. — *Albany Cultivator.*

SCALDING MILK.

I noticed in your paper of September 25 an article under the above caption, which states that, in Devonshire, England, milk is scalded as soon as taken from the cow, &c., &c. This, I think, is not exactly correct, but cannot state for certain what is done in Devonshire; but in Cornwall, the county next adjoining, the process is, to strain the milk in pans of about two or two and a half gallons, and let it cool in the dairy. Some of those dairies are so constructed as to have a small stream of water to set every pan in to cool. It should be cooled before scalding: the milk taken at night is scalded the next morning; that taken in the morning, in the afternoon. Care must be taken to place the pan over a slow fire, so slow that it would take from thirty to forty minutes to bring it to a scalding heat, which can easily be ascertained by noticing a slight swell in the milk. It is then taken from the fire and set away to cool, as before. The cream is taken off in twenty-four or thirty hours from the time of milking, as needed. Cream from milk thus managed is delicious — too good to talk about — and so rich and thick that I have seen a common dinner-plate laid on the pan on the cream, without breaking the surface of the cream. T. G.

URBANA, Mo., 1850.

— *Dollar Newspaper.*

RECLAIMING LAND.

We frequently meet with instances of reclaiming lands that are quite refreshing in these days of speedy and general exhaustion. A gentleman has just brought us a few samples of timothy-grass, the heads of which are over nine inches long, and the stalks some four and a half to five feet. The land was purchased by its present owner about three years since, and was then so poor that a crop of corn then raised upon the ground was fed off in the field, being too worthless to harvest. Green manuring, (crops raised on the ground and turned in,) and the ordinary manures of the farm, have, in the short period above indicated, effectually resuscitated this worn-out land — *American Agriculturist.*

For the New England Farmer.

INSECTS—POTATOES.

MR. COLE:—

"Just when I thought my work all done,
Alas! I found it scarce begun."

I quote from myself, to show that I am a poet, lest the world should not know so important a fact. Yet the sublimest strains of my muse will not charm away the mischievous propensities of destroyers. I wrote you about the phenomena of a peach-tree casting its fruit, or retaining it merely to wither, rot, and come to nought. The roots had been guarded thoroughly with frequent deposits of ashes, as I thought, after exterminating borers: last fall, and in the spring, the tree was generously mulched with forest-leaves. But sad to say, after my disappointment, a reëxamination below my ashes brought to view a whole summer's work of several fat borers. "Eternal vigilance is the price," not only of "liberty," but of the safety and health of fruit-trees. I revoke the imputation of my poor slandered trees' failure to the blight of winds and cold storms.

I have bored into some apple-trees, and filled the orifice with tar, to ascertain whether the sap will not absorb something of the quality of the tar, and repel curculios, &c., next season. Agricultural philosophers may laugh at me and welcome; for I do not myself know of any assimilating power of fruit-tree sap of any kind to incorporate turpentine with itself, and carry it out to the extremities of the branches, and to the fruit-buds. Sifting the blows over with a mixture of sulphur and plaster, which a friend found was followed by a good sound crop of apples, seems more philosophical; but it is a more difficult operation. Yet there is good sense in the old adage, "There is nothing like trying." My tar has, however, trapped myriads of one species of insects, be they what they may. They cluster upon the extremities of the branches of peach-trees, in September, and with them congregate hordes of small ants. Some have wings, but most of them are without them; and they are quite minute, adhering to the top of the twigs, thoroughly dwarfing their growth, or else killing them. Having bored into the fork of a thrifty young apple-tree, where marks of decay appeared, and then thrust down tar with a stick, multitudes of ants rushed out of the fork, finding their camp invaded; and where the tar had smeared the tree and run down, I found multitudes of the foresaid insects stuck on. Apparently, they were on their way to their burrow, and were arrested in their march, the last of October, when the tar was applied. Perhaps they are aphides going to winter quarters.

Examining the loose scales of bark upon an apple-tree, I find, this morning, that under them these insects have taken refuge, in vast numbers, prepared to resume work on houselike scales next spring. I want a wire brush with a long handle, to curry my trees over thoroughly. Brush-makers, can you furnish the article?

My potatoes, dug early, and spread on my cellar bottom, keep well; and had I exhumed my chenangoes promptly after the first blight of the top, and served them thus, my belief is, I should have saved their lives also. Those potatoes which I found, upon digging, lying deepest in turf ground, were almost all sound and healthy; and those nearest the surface, and on rootlets shot out near the further edges of the hills, were most usually rotted. The air and change of temperature seem to have had something to do in producing the difference discovered. The potato's retentiveness of vegetating power I detect, strikingly, in some found in my cellar, under an inverted box, this fall, and which were raised last year. They had struggled in darkness to propagate themselves, and sent out long rambling vines, which would have borne leaves, in open air; but in lieu of these, many little potatoes were growing, sustained by the life of the parent root. It is my purpose to save parents and offspring, for experimenting upon next year, if spared to do so.

J. LEE.

SALISBURY, CONN., *Nov.* 1850.

For the New England Farmer.

ART *vs.* NATURE.

MR. COLE: I should be very sorry to monopolize a tenth of a tithe of your valuable space without a justification; but, instead of *one*, I have got *two*, to exonerate me from any charge of uncalled-for appropriation, (and these will appear in the sequels;) therefore I almost *demand* a right to be heard, *pro bono publico*.

Where the natural conditions of soil and circumstances favor experiment, effort to improve both is laudable; but, where each is separately averse to improvement, and that result happens to be attained, to great perfection, by dint of a purely practical, science-directed energy, the labor of improvement is praiseworthy correspondingly. I think you will concede the infallibility of my premises; and I am not at all prepared to realize that such a thorough-going pomologist as I know you to be, will deny my conclusion.

Well, sir, I have been "down east" recently; and one of my balmiest recollections is one including a visit to Colonel Moulton, in the town of Porter, Maine, whose reputation as a pomologist is well known. He has constituted a paradise where Pomona herself, I am sure, has a special pride to rusticate in. I saw her choice blessings on this spot in all the luxuriance of their autumnal plenitude; and such a noble sight I could hardly wish to see excelled.

I saw some fifteen hundred fruit-trees on Colonel Moulton's farm, in the full magnificence of their productive munificence; and such a scene was fitted to warm the conception of the most indifferent observer into a glow of pomological enthusiasm. I could talk of details, and profits too, but these are so obvious (by inference) as to require no elaborate mention.

The grand advantage I noted was that which had arisen from example. Such a sight as those barren hills and vales, you, sir, know full well, present now, contrasted with what they exhibited twenty years ago, repairs the vision of the present to the full discernment of the beauty, value, and pride of enlightened improvement. Such improvement is owing to the spirited practice of Colonel Moulton; and, as a benefactor of his kind, and the very palpable interests of humanity, he deserves the grateful recognition of the agricultural community.

Yours, very truly,

JOHN C. MOORE.

BOSTON, *Nov.* 14, 1850.

The Charleston Mercury states that a quantity of castor oil, manufactured from the seed grown in the vicinity of that city, has been shipped to this port. The article, which is represented as being of a superior quality, was prepared by Mr. C. Alis, who has gone extensively into the business. The seed from which the shipment under notice was made yielded thirty bushels to the acre, and sold at $2 per bushel. The Mercury thinks that quite a lucrative business, both to the planter and manufacturer, will spring up in this new article of export. — *Baltimore paper.*

WIRE FENCES.

Eds. Cultivator: Agreeably to your request, I write you on the subject of making wire fences.

In the fall of 1846, I commenced making wire fence, along a road running through a piece of wood. Five No. 9 wires, about ten inches apart, were stretched from tree to tree, and between each of these wires were stretched smaller ones. The wires were fastened to the trees by nails driven into the trees, one above and one below the wire, causing their heads to touch each other when they touched the wire. The five large wires, it was thought, would keep out cattle, and with the small ones keep out hogs, sheep, &c. This fence failed in the following points: —

1st. The nails opened. This evil was remedied by winding small annealed wire around the nails. This was expensive — has since failed — rusting and being easily broken.

2d. The small wire broke, and sheep and hogs passed through the fence.

3d. The wires became bent; after four years' use, this fence proved a failure, both in appearance and utility.

The next wire fence was along the line of a lot running east and west, through ground liable to heave with the frost, and from its situation exposed to the north-west winds. Good chestnut posts were well put into the ground, about twelve feet apart; some of them braced. Four wires were stretched along these posts, tightened, and fastened with staples made from the same kind of wire. This fence, when first put up, appeared well and strong; but it was a failure. The posts were loosened and heaved with the frosts; the wind from the south would incline some of the posts one way, and the north-west wind, in its fury, would incline some another way. The wire became bent, and in two years the fence was removed. It had failed.

The next fence was made along both sides of a public highway, running east and west, where the snow was liable to be drifted in. Along this road ran cattle, horses, sheep, hogs, &c. With post and board fence, they were often, after a storm, getting in from the road. On the south side is a meadow, on the north a meadow and two gardens, close to the fence.

I have been thus particular, for along this road a wire fence has been made that has now stood over two years: neither winds nor frosts affect it; no snow drifts in the road; no cattle, or horses, or hogs, or sheep pass through it, though grass, corn, potatoes, cabbages, beets, &c., are growing in full sight, almost to their very noses, and nothing but the thin and almost invisible wire presenting, as it were, an unseen, but as yet an impassable barrier.

This fence and others I now make as follows: —

Chestnut posts about eight inches thick, not less than nine feet long, are put into the ground not less than five feet deep, and from one hundred and fifty to three hundred feet apart. Great care is taken to have these posts beyond the reach of frost. The posts at the corners of the lots are *very firmly* braced. Then a board (or plank, or timber, or pole) is laid along between these posts, and small chestnut posts or strips about two and a half feet long, sharpened at each end, are driven into the ground at each end of the boards, so that two boards can be nailed to it; and a short post, or strip, is also driven near the centre of the board. The board is then nailed on to the strip, care being taken that the top of the strip will be a little lower than the top edge of the board when the board is nailed to the strips. Four inches above this board, a quarter inch hole is bored through the post; five inches above this, another hole is bored; seven inches above this, another; eight inches above, another; and ten inches above this, another; (this for a five wire fence.) The wires are now passed through these holes and fastened with staples. In tightening the wire, the weight of the wires is taken off, by rendering them through staples slightly driven into uprights, set up about every fifty feet for that purpose. Care is taken so to tighten the wire, that, in adding the pickets, hereinafter mentioned, the wires will, when the fence is finished, be sufficiently taut. Pickets, four feet long and one inch square, are now, about every four feet, nailed with two nails to the board, (or plank, &c.,) or passed through two staples, driven into the board, (or plank, &c.) The pickets are not necessarily driven into the ground, but stand upon it. Care is taken to have the wires the same distance apart on each picket, as they are at the posts. This is done by placing a picket near the post, and fastening the wires to this picket by large staples, so large that this picket can slide along the wires as you place the other pickets, and fasten them to the board and wires. The wires are fastened to the pickets by small staples either driven home, or so driven that the wires can render through them.

Another fence is made as follows: Five horizontal wires, nine inches apart; pickets four feet apart — no board or plank, &c., at the bottom. This fence is fastened, like a suspension bridge, at the two ends, and oscillates from one to three feet, according as the permanent fastenings are apart. The pickets in some of the stretches, as the ground is uneven, will not touch it; the wires suspending the pickets from the ground. Stones, as wanted, are buried under some of the pickets; strips of iron or wire being wound round them. A piece of wire is then wound round each piece of horizontal wire, close alongside of the picket, beneath which a stone is buried. The fence is thus brought down so that the pickets all touch the ground, and, these wires being then fastened to the stones, the fence will be held in its place, strongly and well, by this unseen fastening. In some cases I hold down the fence by means of the boards or planks nailed, at each end, to each other, by strips of boards about two feet long, nailed along the ends. I have a fence like this running along a common, and no cattle or sheep, &c., have broken through it. Instead of wooden pickets, iron ones can be used, to keep the wires separate and in place.

The following points should be preserved in a wire fence: —

1st. The fence, like a suspension bridge, must be *firmly* fastened at both ends, and *firmly* fastened nowhere else.

2d. The fence must be so constructed, that when cows, horses, hogs, &c., come in contact with it, it will be so loose that their contact will not be apt to bend the wire, and the oscillations of the fence will frighten them from it; yet so firmly fastened that the fence will return to its position when the disturbing cause is removed.

3d. You must have upright supports at proper distances to keep the wires apart, which supports must not be too firmly fastened.

4th. A wire fence should be so constructed that it will keep in and out what you intend to keep in and out; yet so constructed that men can climb over it, and small boys through it, without bending the wires.

The holes that are bored in the large posts are never plugged up with wood. Two men, at seventy-five cents each, exclusive of board, will put up 600 feet of this fence in one day. The cost of wire fence is as follows: say cost of 12 feet, or 1 panel, No. 9 wire, at 5½ cts. per lb., is ½ of a cent per foot: —

12 feet will cost	$0 20
1 board	0 8
3 pickets	0 3
12 nails	0 1

1 post cut up	0	7
Staples	0	3
	$0	42

The gate I use is as follows: A frame with a horizontal or diagonal bar across it. Holes are bored two inches apart through the three bars of the gate, large enough to receive the wires. The wires are placed vertical, and are cut of such a length that each wire runs from the bottom of the gate up through the top bar, curves about two inches above the top bar, returns down through one of the holes, and projects through the bottom bar from one to two inches. The stuff used for a gate twelve feet long is three by four; the stuff used for one of four feet is two by three. The cost of making the first mentioned gate, irrespective of materials, is fifty cents; that of the other is twenty-five cents.

BENJAMIN NOTT.

Rock Hill, Bethlehem, *Sept.* 20, 1850.

— *Albany Cultivator.*

TO COLOR PINE TO IMITATE BLACK WALNUT.

The pine should be perfectly free from knots, (as they will not color,) and a strong solution of hot logwood rubbed carefully all over the pine, and then it is allowed to dry. Another coat may be given, or a number, according to the shade wanted. After the logwood is dried, a solution of copperas should be applied in the same way as the logwood, which will make the color quite black.

It would be better to have a large vessel of strong logwood liquor, in which to steep the pine for a few days, such as an old molasses cask; after which the copperas should be applied, as before stated, with a sponge. The copperas is dissolved with warm water. The logwood must be boiled for three hours in a vessel. It requires to be very strong, but there is no rule that we know of for the quantity; any body, by the directions given, cannot fail in striking the mark. Ramrods for guns are dyed in this way, canes, &c. It is applied to all light-colored woods, as well as pine. If copperas cannot be got handily, a few scraps of iron steeped in vinegar for a few days will answer just as well. — *Scientific American.*

POWDER.

At periods too remote to be ascertained with precision, explosive mixtures were used. Of these gunpowder is best known. Others have passed away, while demands for this have been swelling at a fearful rate — fearful, since it has long been dedicated to destructive purposes, for which it is held of paramount necessity. The scourge of our race, it might have been a chief good; a precious gift of science, it has been prostituted to a purpose the most wicked that man could commit, or evil spirits suggest.

So common and cheap as powder is, it is difficult to realize the value of a device that locks up the strength of giants in a few quiescent grains, and releases it at pleasure; a power that instantaneously dilates into a space two thousand times greater than it slept in. Instead of projecting missiles of death, it might, if properly employed, extend and refine every enjoyment of life. Had a tithe of the treasure and thought expended, during the last three or four centuries, on extending the rage and effect of firearms, been devoted to the application of powder as the mover of machinery, society would probably have been equally advanced as it is, if even steam had not been subdued. Strange as the opinion may appear, gunpowder and its affinities have in their elements that which is calculated to contribute as great good to man, as they have heretofore engendered evil. — *Ewbank.*

CORNS ON THE TOES.

These annoying excrescences are produced by long-continued pressure and friction on the parts upon which they occur. The skin is rubbed and irritated by the boot or shoe on one side, and is in immediate contact with the hard bone on the other side, and has no means of escape; and the consequence is, that the epidermis acquires an increased thickness and hardness. Sometimes corns are formed between the toes. Here a particular point of the skin presses against the head of an opposite bone, gets inflamed, and becomes the seat of a corn, which is usually small and soft, and occasionally secretes a minute quantity of fluid. Now and then an ulcer is produced, and the bone itself is diseased, and the case becomes a serious one. We will not, however, detain the reader with further description of a trouble with which he may be quite familiar, but will rather suggest the best means for its amelioration or removal. A very loose shoe or a very snug one is bad. Wear a boot or shoe moderately tight. Daily ablution with soft water and a liberal quantity of soap should be practised, and the parts affected should be kept covered with a piece of nice cotton wool. The above is the safest, neatest, and best way of treating the difficulty in question in all ordinary cases. This I know by experience. — *Canadian Agriculturist.*

SHOES.

The shoes of the horses should be of equal thickness throughout, with a flat ground surface, as those with high heels, which asinine smiths make in imitation of their own, are dangerously absurd. The toe, which ought to be raised, is thus lowered, and Nature's plan reversed, who elevates the point in order to avoid obstructions. The web should be wide, and of the same width throughout, instead of being pinched in, because Vulcan operator "likes to see the shoe well set off at the heels." This is both unphilosophical and detrimental; it deceives the eye of man, and injures the foot of the horse. "The *outer* edge of the foot rests on the inner edge of the shoe, and the remaining width of the web projects beyond the hoof;" so that the master who thinks his horse has a good open foot, only has to be proud of a bad, open shoe, which both conceals deformities underneath, and "invites with open arms a bad road to come and do its worst." The heels are made bare just where the navicular joint is most exposed; and if that be inflamed, what must the agony be when the unprotected foot treads on a sharp flint? The horse "falls suddenly lame," or "drops as if he had been shot," "phrases in much too common use to require explanation;" and small is the pity which the suffering animal meets with from man; who, having destroyed the use of his victim's feet, abuses him because he cannot go; and imputes "grogginess" to him as a crime, as if he were in liquor like a groom, and not in agony. — *Miles, Veterinary Surgeon.*

There are some people who do not appear to know how to think well of any human being.

HINTS TO SCHOOLMASTERS.

Under this head, a correspondent of the Advertiser has the following remarks, which are well worthy of attention : —

"Be not sarcastic. Some teachers have a natural tendency to say things which cut through a boy's heart like a knife. A scholar makes some mistakes; instead of a simple reproof comes a tone of ridicule. The boy feels wronged. One is stung into revengeful passion, another crushed with despair. I do not think a child should ever be mimicked, even for a drawling tone, without explaining beforehand that it is not for ridicule, but to show in what the fault consists; while the scorching sarcasm which some teachers use should be wholly abolished. It tends to call up bad passions, and to engender bad feelings in the child's mind towards the teacher and all that he does.

"A teacher, in order that he may exert a moral and spiritual influence, should be familiar and gentle. There is, no doubt, a dignity that is essential in the school-room, but it need not partake of *arrogance*. True dignity must always be connected with simplicity. Children are keen observers, and they either shrink from artificial austerity, or smile at it as absurd. A teacher who would walk about his school, with a *domineering* manner, might talk about moral and spiritual truth until he was weary, and do little good. To produce much good, a teacher must win the love and confidence of the children; and to do this, he should, in his manners, be natural and gentle.

"So with the tone of the voice. If a teacher is sharp and crabbed in his speech, if he calls out with *dogmatical authority*, he shuts up the hearts of the scholars, and the spell is broken; — they will not listen to the voice of the charmer, charm he never so wisely.

"A subdued manner, and a low, kind tone, will work wonders. Some always speak in the *imperative* mood. 'Fifth boy, second division, bring your book this way.' Another says, 'Master A——, will you bring me your book?'

"Now, both boys know they are to obey; but one does with some degree of scorn what the other does cheerfully. Who would not rather be asked than ordered?"

POULTRY EXHIBITION AT WATERVILLE.

The exhibition of poultry at Waterville, on the 20th inst., was, we are informed, on the whole, even more successful than those who planned it and carried it out had anticipated. The weather was favorable. The number of fowls exhibited was between five and six hundred, arranged in a little less than one hundred apartments. The most of the improved varieties were represented. The Waterville Mail, in speaking of this exhibition, says, "We have nearly forgotten the beautiful Bantam, the graceful Dorking, the pretty Top-knot, and the stately Spanish; and now we look for the Shanghae, the Cochin China, the Chittagong, the Great Malay, the Spangled Hamburg, the Silver Pheasant, and, lastly, the Wild Indian Game Fowl. We have here all the former, and who shall say how many of the latter? We believe all but the Chittagong and Wild Indian. We have all colors, from the pure white to the equally pure black; and all sizes, from one pound to ten. We have geese and ducks, turkeys and hens, enclosed in as great a variety of coops as can be found between Phœnix building and Ticonic bridge. The attendance is good, and the exhibition will do much, without doubt, to advance the interest so generally felt in improving the stock of fowls."

As we were not present on the occasion, we are unable to give an extended or particular notice of the various fowls exhibited. A correspondent, who was present, has furnished us with a very full and interesting account of this exhibition; but owing to a press of other matter, we are obliged to defer its publication until next week. — *Maine Farmer, Nov.* 28.

LABOR IS HONORABLE.

As the cultivation of the soil is the most ancient of all employments, so it is the most dignified and honorable; for it was ordained by the Almighty himself. Yet an idea appears to be common in our country that it is more respectable to live by one's wits than by the labor of his hands. How many fond parents do we hear expressing the hope that their smart sons may become something more than a "plough-jogger," or a mechanic! How many young men crowd the professions of law and medicine who might be more usefully employed in tilling the soil! How many, every year, repair to our towns and cities, anxious to exchange the manly labors of agriculture for the effeminate employment of measuring tape and calico! The idea that labor is not respectable has doubtless been handed down from the ages of feudal barbarism, when the only laborers were slaves, and labor was in consequence degraded; when the only honorable men were the soldiers and priests, and the only honorable employments those of cutting men's throats and emptying their pockets; and it is kept alive at the present day by the depressed condition of the laboring classes in other countries, and by the institution of slavery in our own. Some people appear to think that a man of talent and education is entirely out of his element in the business of farming. The idea that such persons have of the education of a farmer, is aptly illustrated by a remark I once heard from an old backwoodsman in this state. In reply to some one who was boasting of the money he had paid for the education of his children, the old man remarked that he had four sons, whose education had not cost him a dollar; "yet," said he, "they can shoot a bar and make as good a crop of corn as any boys that have been sent to school." A good education is as important in agricultural pursuits, as in the professions usually called learned; as though the skill necessary for the proper management of a farm, and a knowledge of the laws of vegetation, — laws which God himself has established, — do not better deserve the name of learning than an acquaintance with the antiquated forms of law, a hundred years behind the age; or the shuffling, evasion, and quibble that characterize a large portion of the law practice of our land; — as though the farmer who properly mixes a heap of compost manure does not exercise as much science and skill as the doctor who compounds his pills and his sirups; to say nothing of the superior utility of the article. An intelligent and well-educated farmer is as much entitled to the appellation of learned as the practitioner of any other profession. Let the working-men of our population receive the education that they ought to have, and which they would have if our civil and social institutions were what they ought to be, and they will command that respect to which the dignity and importance of their employments entitle them.

But it is not alone in a professional point of view that education is important to our laboring population. In our country they are the depositaries of political power; and upon their virtue and intelligence depends the prosperity of our republican institutions. Ignorance is a species of slavery, and a population wholly uneducated, though professing political rights, would be almost completely under

the control of political demagogues. That our working-men, generally, do not yet fully understand their own interests, is apparent from the political and social evils which exist in our country, and will continue to exist until the people shall demand a reform. — *Bryant's Address, Chicago, Ill.*

MANAGEMENT OF BEES.

Ed. Ohio Cultivator: Some of your correspondents occasionally mention the subject of raising bees; but I do not think that sufficient is said to excite that interest the importance of the business demands. To be successful, it requires promptness and diligence, and then, if it does not impart that peculiar relish and delight which is essential in any employment, a failure is almost inevitable. Aside from the profits of a good supply of honey, the apiarian should have a care for the comfort and welfare of his little laborers.

I offer the following hints to those who may not have experience in the management of bees: Make your boxes of good quarter inch lumber, well jointed, so the millers cannot deposit eggs at the top or corners; the tops should extend one inch over all round, and instead of nails for fastening down, use screws, so it can be taken off and put on without knocking the life almost out of the bees. The size should be about twenty-two inches high, and twelve by fifteen inches broad, (unless the swarm is small,) as it is more convenient to get the honey from large than small boxes. Robbing should be done immediately after the swarming season is over; there is no difficulty in this operation, if you first tie a sheet or table-cloth around the hive at the bottom, so as to keep the bees inside, and, as you raise the top, sprinkle the bees with water, which must be continued more or less until done. An expert hand can soon extract all that should be taken, which should be regulated by the size and strength of the swarm: fasten down the top as at first, and the bees will go willingly and rapidly to work to repair their loss. Place your boxes on a clean plank, under a shed, closed on one side. On the first day of May, raise your boxes on one-inch blocks, for the double purpose of ventilation, and to prevent the return of worms, that may be expelled or thrown down from the inside by the bees; then split a few elder joints, and place them under the boxes; the worms will go under them, and by removing the elders once a day, or every other day, and killing the worms, it will prevent any formidable injury. The above refers entirely to common boxes. There are many plans by which the honey can be taken much easier, and with less injury to the bees. Some adopt the old plan of using small boxes on top, which does very well; but the tops of these boxes should be screwed on. I have constructed a fancy improvement, (in which I find I was almost superseded by friend Mallory, of Bucyrus,) upon the last plan, by adding a second story to my boxes, with a door hung on small hinges, and fastened with a button, and putting in a box or boxes large enough to fill it up, with glass in front, so as to witness the depositing process, and to see when the box is full. I screw the lids on, and put a screw in the end for a knob to pull out by; and when I wish to take the box out, insert a sheet of tin under the box, closing the communication between the main box and little one, then set the box some distance off, and the bees will come out and return to their home. The honey can be cut out; or, if there is another box to fit, I set the box away, and cut it out when wanted for use, which is much the best way, as the honey will not candy.

We have Dugdale's and other patents in use in this neighborhood, and, when properly attended to, are successful; but I think, with the same attention given to destroy the worms, as shown above, that it will require in the miller-catching patents, an apiarian will be about as successful in accumulating swarms and gathering honey.

Bees did well in swarming this season, and in making honey, up to the 20th July, but since that, have done nothing; they have not worked on the buckwheat as usual.

Respectfully yours, JOS. C. BRAND.

Champaign Co., *Sept.* 21, 1850.

— *Ohio Cultivator.*

TO MEASURE CORN IN CRIB.

First find the solid contents of your crib in feet, so far as it is filled with good slip-shucked corn. This will show the number of solid feet of corn your crib contains. We suppose one third of these contents to be of cob, one third of shuck, and one third only of pure corn. Now, dividing the above ascertained solid contents by three, would give you the number of bushels of pure corn, provided a solid foot of shelled corn made a bushel, and three solid feet of slip-shucked corn made a bushel. But this is not correct, because it takes five solid feet to make four bushels. Then you must deduct one fifth from the number of solid feet, in order to ascertain the number of bushels which the house could hold, or does hold, of shelled corn. Remember, if the corn is only slip-shucked, then one third only of the number of bushels must be counted, for the rest is only of cob and shuck.

Suppose a crib is 14 feet wide and 20 feet long, and that the corn in it is ten feet deep. Then multiply the width by the length of the inside of the crib, and multiply that product by 10. This gives you the number of solid feet of corn, viz.: —

14 by 20=280 by 10=2,800 solid feet of corn.
2,800 divided by 5=560 to be subtracted.
2,800=560=2,240 bushels, if shelled corn.
2,240 divided by 3=746 bushels, if in the shuck.

Thus, if I was to measure a gentleman's crib, I would do it as follows: The crib 20 feet long, 14 feet wide, and 11 feet high, I would calculate thus: —

20 by 14=280 by 11=3,080 — 616=2,464 divided by 3=821⅓ bushels to be the contents of the body of his crib when filled with good slip-shucked corn.

Proof. — One solid foot contains 1,728 solid inches, and one bushel contains 2,160¼ solid inches. Now,

1,728 multiplied by 5 is equal to 8,640.
2,150¼ " 4 " 8,601.

You see it is near enough, for measuring corn, to say that five solid feet make four bushels; and from this simple fact the rule is derived.

In measuring a roof that is full of corn, I multiply the length, breadth, and height together, the same as the body of a house, and then divide by 2, before making other calculations; for the roof contains only half as much as a pen having the same length, breadth, and height, but not tapering. — *Selected.*

Pickling. — Put fresh cucumbers, as soon as they are picked from the vine, into weak brine, boiling hot, and let them remain twenty-four hours. They should be taken out and put into the vessel in which they are to be kept, and vinegar, boiling hot, poured upon them, sufficient to cover them. In three days' time the pickles will be fit for use.





Male. *Female.* *Eggs.* *Worm.* *Pupa.*

CANKER-WORMS.

For the New England Farmer.

Dear Sir: I hardly know what to say in regard to the canker-worm. I am inclined to think the old mode of the application of tar around the body of the tree, on strips of cloth, canvas, or gunny-bags, six inches wide, and fastened around the trunk, is as good a mode to prevent the grub from ascending the tree, as any other that has as yet been found. My mode has been to use tarred cloth; the tar, when thick, I make thin with oil. I stuff hay, cotton, or sea-weed between the tree and the lower edge of the cloth, to catch the drip of the tar; this serves likewise to tire, perplex, and perhaps entangle the grub, before it gets to the tar on the cloth. I think, if the tar is properly and seasonably applied in the spring, it will prove effectual. But some, on the contrary, think that tar must be applied in autumn, say the first of November. From a close observation of the canker-worm, I am inclined to think but few of the eggs deposited in the autumn are hatched in the spring; as only a very few males ascend in the fall and winter, most of the eggs prove barren.

The cloth should be taken from the trees as soon as the grubs are done running, and the tar, should there be any, scraped from the trees.

I think you will find about all that can be said upon the canker-worm in Dr. Harris's Insects of Massachusetts, page 336. I will send you Köllar on Insects, a German work, and you can see what he says, page 219, on the winter moth. This insect somewhat resembles the canker-worm; and here, by the way, you see where you obtained your plate in the first edition of your Fruit-Book, and friend Thomas has the same error in his book. If this contrivance of what he calls the *boot* completely answers the purpose in arresting the ascent of the winter moth, why will it not our canker-worm? You can print what he says upon the subject, if you like it. It strikes me that it may answer a good purpose, and is cheap. Yours, S. P. FOWLER.

Danvers New Mills, *Nov.* 20, 1850.

Remarks. — In the former editions of the American Fruit-Book, the female of the canker-worm moth is represented with the rudiments of wings. But this is not correct, as appears by the figures at the head of this article, which we have had drawn from the insects. In a recent edition of our Fruit-Book, we have corrected the error.

We would give the mode of protecting trees, as recommended by Köllar; but the following contrivance is much less expensive, and more effectual: — Take two pieces of board, several inches longer, at each end, than the diameter of the tree, and the width half equal to the length, forming a square, or nearly so, when put together at the edges. Cut in each piece a semicircle corresponding with the size of the tree. Put these together around the tree, forming a collar, several feet from the ground. — Fasten them together by hasps at the top, or by cleats nailed to one piece of the board, and by screws through the cleats into the other board after it is properly adjusted. Or small nails may be used, leaving the heads out, so as to draw them when the collar is to be removed.

Stuff some soft substance between the collar and tree, to prevent the ascent of the grubs, where there may not be a good fit. Apply tar on the under side of this collar. It will be secure from rain, sun, and various falling substances, that tend to render tar ineffectual in a short time, unless often renewed. We think that it is a very cheap and efficient mode of tarring, and less liable to injure the tree than other modes usually practised.

As canker-worms are on the increase in this section, fruit-growers should turn their attention to the subject, and learn the best mode of destroying them, or protecting their fruit-trees against their depredations. — Ed.

JEFFERSON COUNTY DAIRY FARMING.

It would greatly surprise some of the western and southern stock farmers, who boast of their favored climate and rich pastures, to visit this rock-bound county upon the shores of Ontario and the St. Lawrence, to see how much more money is made by the produce of cows in a climate of six or seven winter months, than in regions where it is very mild, or frost quite unknown.

In my late flying trip to Watertown, N. Y., I had the pleasure of a visit to the farm of Mr. Moses Eames, about seven miles from the village, six hundred feet elevation above it, and twelve hundred feet above tide water, and north of latitude 44°. The surface is quite hilly and stony, with underlying rocks, and would be thought by strangers cold and unproductive. Now, August 21, is the season of harvest of wheat, oats, barley, and grass. Mr. E. keeps forty-three cows, and makes a cheese every day that will weigh, when ready for market, ninety pounds; worth six cents a pound at home, or $5 40, besides a liberal supply of milk and butter for a large family. And better butter and cheese I never tasted; nor did I ever sit at a better table than in this farm-house — this American farmer's home. Ah, "Home, sweet Home," indeed.

Milking the Cows. — These are driven from the pasture long enough before night to enable the laborers to finish by daylight, without haste. From the lower yard, about half are driven into a commodious stable, and fastened in a long line by "stanchions," composed of two upright pieces of wood about five feet long, one of which is fast in a sill, and in a girder at the top, and the other movable, so that the top falls back to give the cow convenience of putting her head and horns between, and is then closed with a catch, almost as fast as a man can walk along. Cows

soon learn to take their places without any confusion. As soon as all are fast, the milkers commence, each being seated upon a stool or chair, with a sort of back attached for the convenience of handling; and a great convenience it is. The milking is done with both hands, as rapidly as possible, as the owner has found that a dribbling milker will deteriorate the best cow in a very short time. As soon as all are done, the first section of the herd are turned out at another door, which opens into the upper yard, and then the second section is brought in, and when all are done, they are driven again to pasture. In the morning, the same course is repeated.

The Advantages of Stabling to Milk are, that all the cows are sure to be milked; all stand quiet while milking; and there is no hooking and running one after another, and upsetting milk and milkmaid. If it is rainy and muddy, all are sheltered and upon a clean floor, and men and beast are better tempered, and get and give more milk, and save a deal of scolding, much time, and more money; insomuch that a herd of forty cows will pay for a shelter in one season. Putting in one half at a time is an advantage; for twenty are easier managed, with less huddling in the stable, than forty, and are only confined half as long, make less droppings, and only require half as much stable room, and each section has an opportunity to drink in the yard while the other is in the stable.

Disposal of the Milk. — The milk-pails are carried, as fast as filled, to the milk-house, and emptied into a vat of suitable size, say seven by four feet, and two feet deep, made of wood, lined with tin, having a space between, into which cold spring water is drawn at night, to cool the milk and promote the raising of the cream. This vat is elevated upon legs for greater convenience, so that the top is some three and a half feet high. When the morning milk is added, the water is drawn off, and a conducting pipe from a small boiler fills the space with steam to scald the curd, which is made in the same vat. The steam is then turned into a barrel of water, and heats that ready for cleansing utensils without the least trouble.

Taking off the Whey. — Another vat, of a smaller size, with rollers in the legs, is placed along the side, and surface whey dipped off, and then it is rolled to a spot where a conductor, opening through the floor, receives the contents, and carries it down to the pig-pen. The curd is next dipped into a strainer in the small vat, and the whey drained off; and then it is rolled alongside of the press, and put into the hoop upon a sliding board; so the whole is done without any hard lifting. The press is one of Mr. Eames's own make, and, with a small weight, will give seven tons' pressure. In turning the cheese in press, a small wheel table is rolled alongside, upon which it is done with ease. Upon the same, it is conveyed into the cheese-room, where the cheese are kept upon long tables, and turned by rolling upon edge and over, which is generally done by Mr. E. himself, but without great exertion of strength.

The next process, after placing upon the table, is, to bandage with thin muslin, made on purpose, and costing only three cents a yard. The strips are cut two or three inches wider than the cheese is thick, and the edges turned over the corners and sewed, so that it is impossible for a cheese to spread or flatten down, as they did before bandaging came in fashion.

The Temperature of the Cheese-Room is kept cool and dry by using a stove to drive off dampness; and then it can be frequently washed with cold water.

The Average Product of Dairy Cows, in this county, is from $25 to $35 each, per annum, and the average value per head, from $20 to $28.

Wintering Cows. — Two tons of good hay is the amount estimated for each cow, besides straw and other coarse feed. If giving milk, grain or roots are added, as every thing extra fed is paid for in extra milk. The cows are generally of the common breed, but look remarkably fine, not only upon this well-conducted farm, but upon hundreds of others of the same sort in this rich farming county.

Buying Curd. — I was told of one man in this county, who buys the curd of five hundred cows, every day, and makes it into cheese. I understand that he pays five cents a pound, and takes it fresh as soon as well drained. Mr. E. says he can afford to pay that price. Cheese and butter are the staple exports of this county, and no grain-growing region, within my knowledge, can show so large a proportion of wealthy farmers, good farm-houses, good-looking and well-improved farms, and such a number of well-to-do-in-the-world people as Jefferson county. The women and children here take more interest in agricultural improvement, and know more about it, than a majority of the men in some places. When you know the farmers' wives there, you will not be surprised to find such pretty girls and noble boys. Would you know the reason? They read. Yes, sir, they read, and read agricultural papers, too. One handsome, intelligent boy, about fourteen years of age, came up to me just as I was leaving, and said, "Mr. Robinson, I should like to have you send me the Agriculturist for a year. Here is the money." That boy will make an intelligent, good man. The same boy had the sole management of a large family garden, the past summer. I need not tell you it was a good one.

Jefferson County Agricultural Society. — I will tell you what fosters and keeps alive this spirit of improvement in this county. They have one of the oldest and one of the most active and efficient agricultural societies in the state; and the society have a hall, or place of meeting, upwards of two hundred feet long, and fifty feet wide, capable of accommodating three thousand people. It was built by the funds of the society, and is emphatically "the people's meeting-house;" for there, all large public meetings are held, besides the agricultural annual fairs. What other county will look to this one of the north for an example, and go and do likewise?

In addition to the improved progress of agriculture, manufacturing of cotton, wool, paper, flour, axes, and other things, flourish here in an equal degree.

Plank Roads. — There are six of these valuable improvements leading out of Watertown, which is rising from the ashes of the great fire, like a phœnix in revivified plumage.

Thin Soil. — Much land in this county lies upon a flat surface of rock, so near that the plough sometimes runs quite down to it. When this is lime rock, the land is very productive, and does not suffer so much as I should expect by drought. It produces sweet grass, and is more valuable for dairy purposes than any other. A railroad, now building through this county, will soon open its treasures to the view of the world. I intend to see more of it myself.

Creating a Spring. — When fitting up his dairy, Mr. Eames was much at a loss about a supply of water, having no spring that would give him a constant running stream. But he got one; and the way he did it is worthy of notice and imitation. He examined the side hill, about one hundred rods above the house, and selected a favorable spot, where the land had a "spouty" appearance, and dug a reservoir, and wing ditches to form under-drains into it; and soon had the satisfaction to find the plan succeed, which gave him a living fountain, that runs summer and winter in the cow-yard, without fail from drought or frost. This is only one of the fruits of an intelligent mind devoted to agricultural improvement, and possessed by a self-made man. But he is a reading man as well as a working one.

SOLON ROBINSON

— *American Agriculturist.*

ARTESIAN WELLS.

Under this name is designated a cylindrical perforation, bored vertically down through one or more of the geological strata of the earth, till it passes into a porous gravel bed containing water, placed under such incumbent pressure as to make it mount up through the perforation, either to the surface, or to a height convenient for the operation of a pump. In the first case, these wells are called spouting or overflowing. This property is not directly proportional to the depth, as might at first sight be supposed, but to the subjacent pressure upon the water. We do not know exactly the period at which the borer or sound was applied to the investigation of subterranean fountains, but we believe the first overflowing wells were made in the ancient French province of Artois, whence the name of Artesian. These wells, of such importance to agriculture and manufactures, and which cost nothing to keep them in condition, have been in use, undoubtedly, for several centuries in the northern departments of France and the north of Italy; but it is not more than fifty or sixty years since they became known in England and Germany. There are now a great many such wells in London and its neighborhood, perforated through the immensely thick bed of the London clay, and even through some portions of the subjacent chalk. The boring of such wells has given much insight into the geological structure of many districts.

The formation of Artesian wells depends on two things, essentially distinct from each other: First, on an acquaintance with the physical constitution or nature of the mineral structure of each particular country; and, second, on the skilful direction of the processes by which we can reach the water level, and of those by which we can promote its ascent in the tube. We shall first treat of the best method of making the well, and then offer some general remarks on the other subjects.

The operations employed for penetrating the soil are entirely similar to those daily practised by the miner, in boring to find metallic veins; but the well excavator must resort to peculiar expedients to prevent the purer water, which comes from deep strata, mingling with the cruder waters of the alluvial beds near the surface of the ground, as also to prevent the small perforation getting eventually filled with rubbish.

The cause of overflowing wells has been ascribed to a variety of circumstances. But, as it is now generally admitted that the numerous springs which issue from the ground proceed from the infiltration of the waters progressively condensed in rain, dew, snow, &c., upon the surface of our globe, the theory of these interior streamlets becomes by no means intricate; being analogous to that of siphons and water jets, as expounded in the treatises on physics. The waters are diffused, after condensation, upon the surface of the soil, and percolate downwards, through the various pores and fissures of the geological strata, to be again united subterraneously in veins, rills, streamlets, or expanded films, of greater or less magnitude or regularity. The beds traversed by numerous disjunctions will give occasion to numerous interior currents in all directions, which cannot be recovered and brought to the day; but when the ground is composed of strata of sand or gravel, very permeable to water, separated by other strata nearly impervious to it, reservoirs are formed to our hand, from which an abundant supply of water may be spontaneously raised. In this case, as soon as the upper stratum is perforated, the waters may rise, in consequence of the hydrostatic pressure upon the lower strata, and even overflow the surface in a constant stream, provided the level from which they proceed be proportionably higher.

The sheets of water occur principally at the separation of two contiguous formations; and if the succession of the geological strata be considered, this distribution of the water will be seen to be its necessary consequence. In fact, the lower beds are frequently composed of compact sandstone or limestone, and the upper beds of clay. In level countries, the formations being almost always in horizontal beds, the waters which feed the Artesian wells must come from districts somewhat remote, where the strata are more elevated, as towards the secondary or transition rocks. The copious streams condensed upon the sides of these colder lands may be, therefore, regarded as the proper reservoirs of our wells. — *Selected.*

PORTABLE STEAM ENGINES.

Horace Greeley thus describes a steam engine which he saw during a recent visit to Watertown, New York: —

"The best thing I saw in Watertown was the turnout of two thousand people on a wild, stormy night, to hear a dry talk on temperance; the next best was a new 'Portable Steam Engine,' invented and manufactured by Howard & Bradford, and sold (including boiler and all fixtures) at these rates: half a horse power, $75; one horse, $100; two horse power, $160; three horse, $225; four horse, $300. The two horse engine I examined was running a Napier power press briskly, while burning about as much fuel as a common kitchen range. Certainly, a ton of sea-coal would amply suffice to run it a fortnight, night and day; or a month, ten hours per day. The time must be at hand when every thrifty farmer, with nearly every mechanic, will have such an engine of his own; and chopping straw, turning grindstone, churning, chopping wood, threshing, &c., will have ceased to become a mechanical operation. Printing (press work) by hand must rapidly disappear before the approach of this engine, which will be running on wheels, and driving a scythe before it, or drawing a plough behind it, within five years. We have hardly begun to use steam as yet."

The following notice of this portable steam engine is from the Trans. N. Y. Ag. Soc.: —

"This engine is a beautiful piece of mechanism, of half horse power, working to a charm. It was operated in the hall, and attracted great attention. It propelled a grindstone, lathe, straw-cutter, &c., working with ease at from five hundred to eight hundred revolutions per minute. With it a farmer might saw his wood, cut his straw and hay, grind his tools, steam his potatoes and other feed with the surplus steam, and, while thus operating, save the labor and board of two or three men. It is well worthy of careful attention, and, if durable, of general encouragement. It requires from one to one and a half cents' worth of fuel per hour to propel it, and costs only $75." — *Ohio Cultivator.*

THE GREYHOUND.

The modern, smooth-haired greyhound is a very elegant dog; remarkable for its extreme velocity, in which it is, we believe, superior to the rough-haired dogs of the olden time, though not to some of the modern rough greyhounds, in which a cross of the old rough breed, or Scottish deerhound, prevails. No greyhounds used for the hare equal in speed and endurance those of our island; and none — so improved

of late years is the breed — equal them in symmetry; every action is light, easy, and elegant, yet firm and vigorous.

The greyhound is highly sensitive, and very good tempered; like the Irish wolf-dog, it is peaceable and affectionate, and fierce only in the chase of its quarry, or when excited to combat. On one occasion only have we ever seen a greyhound fight with another dog; and in that instance, the animal, a roguish brindle dog, was set upon by a large dog of a mongrel mastiff breed, and forced to self-defence. Short, indeed, was the combat; in a few seconds, the aggressor sunk severely torn, and was taken away. Slim as those dogs are, their muscular powers are very great; like the race-horse, they are compact, of iron muscle and ivory bone, with no superfluous fat nor loose cellular tissue, and are consequently deceptive to the eye, which is, in general, accustomed to see strength conjoined with massiveness. Yet we have but to consider the chest, loins, and limbs of a greyhound, and regard the "*tori*" of the arms and thighs, to feel assured of the possession of great power. The smooth greyhound, or glaze hound of the older writers, follows exclusively by the eye; whereas all the old rough breeds could recover the track of the game by the powers of smell; but in the modern dog, every quality is sacrificed to fleetness, and certainly, for sudden and violent bursts of exertion, the present breed has never been equalled.

Many trials for ascertaining the speed of the greyhound have been undertaken, and Daniel's opinion seems to be, on the whole, correct, viz., that, on flat ground, a first-rate race-horse would be superior to the greyhound; but that, in a hilly country, the greyhound would have the advantage. Much, however, in the latter case, would depend upon the dog being habituated to hilly districts; for a greyhound accustomed only to flat plains, though swifter on them than a Yorkshire greyhound, would yield to the latter in a hilly country. The hare and the greyhound seem to be well matched; the swiftness of both animals is astonishing, and a well-contested run is an animating sight. Daniel records the circumstance of a brace of greyhounds, in Lincolnshire, running a hare from her seat to where she was killed, a distance measuring, in a straight line, upwards of four miles, in twelve minutes; but as there were a great many turns during the course, the actual distance was considerably more. The hare ran herself to death before the greyhounds touched her. — *Knight's History of the Dog.*

NEIGHBOR WILKINS'S HINT.

A man, having purchased a worn out-farm, and invested all his money in his real estate, tried hard by his labor to make it produce a crop. After a laborious summer's work, he signally failed. His crops of corn, oats, and buckwheat were scarcely worth harvesting. Winter came on, and with it discouragement and despondency. He met his neighbor, and, in the language of Scripture, inquired, "What shall I do?" His neighbor, in reply, in true Yankee style, answered by asking another. "Neighbor Wilkins, have you ever kept a hired man on your farm?" "Always." "How can you gain the greatest amount of labor in a season from his efforts?" "In the first place, give him a plentiful supply of food, for a full stomach for a laborer is a jewel; next, begin the day early, and keep steady at it." "You have answered truly; manage your farm as you do your hired man. Feed it with nourishment for vegetation; feed it full and keep it fed. Clear out the barn-yard; dig up the muck from the swamp; sow on all the ashes you can get; cart sand from the drainage of the streets. When you begin upon a field, feed it, feed it full, and keep it fed. Then go to the next lot, and feed in the same style. Such recollect the kindness of the owner, and they pay him for it more than fifty fold. — Then plough and dig, and the reward is sure." Neighbor Wilkins opened his eyes in astonishment at his own ignorance, and said, "I see! I see! A feeble, starved man cannot bear much. A poor, starved field cannot bear much." Common sense might have taught him, but it had not. Thousands, like him, "scratch gravel" for nought all their days.

Neighbor Wilkins saw where he missed it. The next year he planted four acres of corn, after he had coated the field with all the fertilizing material he could gather in one short winter. He told me that "he had scraped all creation." November told a true story. Two hundred and sixty bushels of corn made him laugh; his wife made puddings without grumbling; and his children ate with pleasure. Thus friend Wilkins went from field to field, and fed it as he went. In its turn it fed him, his family, and cattle. His barren farm became productive; his naked field became clothed with herbage. He became rich; his farm was rich. Peace dwelt in his household, plenty filled his granaries, and fortune smiled upon him. If you are an unfortunate farmer, cursed with poor land and stinted crops, look at Mr. Wilkins, and, in the language of the Bible, "Go thou and do likewise." — *Dollar Newspaper.*

NORTHERN SPY APPLE.

We had hoped to be able to test the qualities of this apple ourselves during the present season, but our trees failed to produce fruit. It is yet undecided whether it is destined to take a place alongside of the Canada Red, Pryor's Red, Tewksbury Blush, and Roxbury Russet, as a late spring apple, in this vicinity.

The following remarks from the editor of the Genesee Farmer determine the point, that on rich limestone soils it is perhaps unequalled. His authority is unquestionable. On such soils which abound in the western and middle portions of Ohio, it should be introduced into extensive cultivation. — *Family Visitor.*

A few days ago we were invited to ride out to Mr. Hand's, of Mendon, in this county, to see his Northern Spy apple-trees before the crops were gathered; and we can safely say that we have never been more gratified with any thing in the way of bearing fruit-trees. A great deal has been said about the peculiar tendency of this variety to produce a large proportion of small, inferior, or unmarketable fruit; and we only wish that those who entertain such an opinion of it could have been with us, and seen Mr. Hand's trees. A more abundant, uniform, and *perfect* crop we have never seen, of *any* variety. Twenty-four trees, we believe, in one row, some sixteen years old, with straight trunks sixteen feet high and perhaps a foot in diameter, with lofty symmetrical heads loaded in every part, the boughs bending almost to the ground with large and beautiful crimson fruit, is surely a pleasing sight. Of small, unmarketable fruit we could see *none*. Mr. Hand has probably one hundred and fifty barrels, and has sold most of them at $2 50 per barrel, while other varieties sell for $1 25 to $1 50.

It has been said that the Northern Spy requires free pruning and high culture; and there is no doubt that it will be much better with such treatment than if neglected. So will all other varieties, and especially those that mature so late in the season. We

notice that Mr. Hand's trees are in excellent condition. He has pruned out the centre, so that it is quite open, thus giving the sunlight free access to all parts of the trees; but the trees stand too close; the lower branches of the adjoining trees are already meeting and coming in contact with each other, so that the fruit on them is considerably shaded, and consequently less highly colored than those on the top branches, and they will not be so finely flavored. Mr. Hand pointed out a tree that stood in an open space, and on this every specimen was highly colored. It is a false economy to plant apple-trees too closely. We allude to this fruit now, for the benefit of distant cultivators who remain in doubt as to its value as an orchard variety."

JERSEY COWS.

We copy from the Journal of the N. Y. State Agricultural Society the following communication from Col. Le Couteur, Bellevue, Island of Jersey, on this famous breed of cows: —

He writes that he has forwarded through His Excellency Abbott Lawrence, in answer to our request, lithographic impressions of the Jersey breed of cattle, and the scale of points of a perfect animal of the breed; and also two essays written by Col. Le Couteur, one on the Jersey cow, the other on the culture of the parsnip. The cost of a yearling bull of the pure Jersey breed would be from £10 to £12 sterling, ($48 to $58,) delivered at Southampton; and that a yearling prize heifer would be furnished at from £10 to £15.

The breed of cattle familiarly known in Great Britain as the Alderney, and correctly termed in the article Cattle, of the Library of Useful Knowledge, the "crumpled horned," was originally Norman, it is conceived, as cows very similar to them in form and color are to be seen in various parts of Normandy; but the difference in their milking and creaming qualities is really astonishing, the Jersey cow producing nearly double the quantity of butter.

The race is miscalled "Alderney," as far as Jersey is concerned; for about seventy years since, M. Dumas, Esq., of St. Peter's, afterwards the chief magistrate, sent some of the best Jersey cows to his father-in-law, the then proprietor of Alderney; so that the Jersey was already at that period an improved, and superior to the Alderney, race. It has since been vastly amended in form, and generally so in various qualities, though the best of those recorded at that period gave as much milk and butter as the best do now.

Ten years have elapsed since the attempt was first made by fixed rules to improve the form and quality of the Jersey cow. Two beautiful cows were selected, with the best qualities, as models. One of these was held to be perfect in her barrel and fore quarters; the other equally so in her hind quarters. From these two, points thirty-six in number were laid down to be the rule for governing the judges in all the cattle-shows of the Jersey Agricultural Society.

IMPORTANCE OF PURE WATER FOR CATTLE.

Lawrence, in his Farmers' and Graziers' Complete Guide, has the following: —

Dr. Jenner, who conferred that great blessing on mankind — the cow-pock inoculation, considered that giving pure water to cows was of more importance than persons are generally aware. There were farmers in his neighborhood, whose cows, while they drank the pond water, were rarely ever free from red-water or swelled udders; and the losses they sustained from these causes, together with the numerous abortions their cows suffered, increased to an alarming extent. One of them at length, supposing that the water they drank had something to do with producing their disorders, sunk three wells on different parts of the farm, and pumped the water into troughs for the cattle. His success was gratifying: the red-water soon ceased, and the swellings of the udder subsided; and the produce of the renovated animals increased both in quantity and quality. Other farmers followed the same practice, and in less than six months not a case of red-water, swollen udder, or abortion, was heard of in the neighborhood. — *Scientific American.*

TO COOK THE EGG-PLANT.

The following mode has given satisfaction, so far as we have known it tried: Cut the purple egg-plant into slices a third of an inch thick. Put the slices on a plate, one over the other, with a sprinkling of fine salt between each layer, and lay a weight of three or four pounds on the top; leave them in this situation four or five hours, or over night. The salt will form a liquid with the juice of the egg-plant, which will take out the bitter quality. The liquid should be drained off. Fry them brown in lard or butter.

The following is the mode of stewing the plant: Take the purple kind, stew till soft, take off the skin, mash it with butter and sweet herbs, grate bread over the top, and bake it till brown. — *Scientific American.*

Two carrier pigeons, taken out by Sir John Ross, who is in search of Sir John Franklin, have arrived at their homes in Scotland. They have flown 2000 miles.

IMPORTANCE OF LITTLE THINGS.

While Michael Angelo was employed in the completion of one of his famous statues, he received a visit from a friend, who expressed his admiration of the work, but who, on repeating his visit, was astonished at the apparently slow progress which had been made, and exclaimed, "You have been idle since I saw you last." "By no means," replied the artist. "I have retouched this part, and polished that; I have softened this feature, and brought out this muscle; I have given more expression to this lip, and more energy to this limb." "Well, well," interrupted his friend, "but all these are trifles." "It may be so," was the answer; "but recollect that trifles make perfection, and that perfection is no trifle." This little incident may, we think, be brought to bear upon the work of instruction. May it not teach us a lesson of encouragement? Week succeeds week; year after year passes away; and each revolving period of time finds us still engaged in the same labor, while, perhaps, were we to judge by appearances, most of us would arrive at the conclusion, that all our expenditure of time and strength has proved wholly in vain. But is it really so? Have we not been imparting new ideas, or dwelling on truths previously known? Have we not been explaining essential doctrines, or inculcating important duties? Have we not been seeking to develop the faculties of the children's minds, and have we not aimed at the right formation of their habits? True,

the result of each of these does not immediately strike the view; but has not each an important bearing upon the general character, upon the present happiness, and, perhaps more than we can at present think, upon the future condition of those who have been the objects of our watchful solicitude?

BEAUTIFYING THE HOMESTEAD.

We are pleased to learn that this interesting subject has attracted the notice of at least one agricultural society. The following is taken from the report of a committee appointed by the Rensselaer (N. Y.) Agricultural Society, on this subject: —

What should the farmer do in return for the artisan, whose life is wasted by anxious and ceaseless toil, and who is shut out from rural blessings? We answer, Do his duty to himself; it is all that is asked or required of him. We claim it to be the duty of every man who is a farmer, to plant fruit and ornamental trees, to cultivate and grow the vine, as well as all useful vegetables; to beautify and adorn his grounds and garden with flowers, plants, and shrubbery, and so arrange his yards and grounds as to give his habitation as Eden-like an appearance as possible. Should our farmers be thus true to themselves, and dutiful to nature, then with truth of our country it might be said, in the language of the poet, 'tis

"The land of the myrtle, the cypress, and vine,
Where all but the spirit of man is divine."

Nothing is so attractive to the traveller as the fine "country residences." They are something for the eye to feast upon. They please the imagination, cheer the heart, and bring with them all the associations of happiness and home. "Country seat" gives value to the farm upon which it is situated.

One blessing follows another. Sociality, refinement, and learning follow in the train of rural improvement. The mind keeps pace with the outer man, and the love of the beautiful in nature inspires the mind with the love of the useful and the good. It stops not then; — it teaches the mind "to look from nature up to nature's God."

Your committee would therefore recommend the adoption of the accompanying resolution by the society: —

Resolved, That the Rensselaer County Agricultural Society, for the purpose of giving encouragement to those who will "beautify and adorn" their "country seats," hereby establish an award on "country seats," including dwelling, grounds, gardens, trees, and shrubbery; and will, in the annual report of this society to the state society, recommend the publication, by the said state society, of the drawing and description of such "country seat" as the society shall by their committee deem advisable.

Resolved, That a committee, consisting of five members of this society, shall be appointed in the same manner as other committees of the society are, to be called "A Committee on Country Seats," whose duty it shall be, at each annual fair, to examine and report upon all such drawings and descriptions of "country seats" entered for competition. Said committee, in their award, shall designate the name of the "country seats" entitled to the honor of said recommendation to the state society, and shall likewise award said successful competitor each a diploma, and a copy of the Transactions of the state society and of the American Institute.

Resolved, That any person, a member of the "Rensselaer County Agricultural Society," owning or having an interest in any "country seat" in this county, who shall, on or previous to the first day of each annual fair, make, or cause to be made, an accurate drawing and description of such "country seat," and file the same with the recording secretary of this society, shall be entitled to compete for the honors above specified.

All of which is respectfully submitted.

JOHN FITCH,
HORACE HERRINGTON,
JOSHUA S. LEWIS.

Troy, *July* 9, 1850.

POTATOES.

A great diversity of opinion exists as to the best mode of cultivating this valuable culinary article. For the last ten years I have experimented with them, and I give the following as the result of my experience: —

1. The *soil* should be moderately rich; not very rich, for if so, they will "run to tops," and bear but a poor crop. This, with me, is no fancied notion. It is even so.

2. The seed should neither be the "potato balls," or small potatoes. I never could do much with either; the product is invariably small and watery. I cannot assign any reason, except the general one, that "like begets its like." I always select good-sized ones, and cut each one into several pieces; each piece so cut as to have an "eye."

3. *The Mode of Planting.* — Some contend for hills, from three to four feet apart; some for drills; and this mode I think preferable. Potatoes should be dropped in drills, three or four feet apart; each potato, or piece, three or four inches apart. When up cleverly, they should be hoed — more to rid them of weeds than any other purpose. Next, the plough should follow; and after a suitable time has elapsed, they should have another ploughing and a good hoeing, and then they can be "laid by." They ought not to be touched after they commence blossoming, for the reason that their roots begin to run and spread, and of course, if the ground is disturbed, they will be.

4. *Digging.* — This may now be done with a hoe or plough. Be careful not to cut or bruise them, as this makes them disposed to rot.

5. *Securing.* — Select a good dry spot, and with a hoe scrape up the dirt in a circular form, not deep. After your potatoes are thoroughly dried by the sun, put them in the hole thus previously prepared. Now cover them up with dry straw. Next, cover them, from three to five feet thick, with dirt, "spanking" your heap with your shovel, when done, so as to make it shed rain well. Thus put up, your potatoes will keep sound and good till spring.

M. H. A.

Pittsfield, Ill., 1850.
— *Dollar Newspaper.*

TO TOUGHEN NEW EARTHEN WARE.

It is a bad plan to put new earthen ware into boiling hot water; it should first be plunged into cold water, and placed over a fire, where it will heat moderately to the boiling point, and then be permitted to cool again. This process greatly promotes the toughness and durability of common earthen ware, which is generally objectionable for domestic uses, on account of its fragility. The glazing on this kind of ware will remain uninjured by the boiling if a handful of rye or wheat bran be added to the water, and prepare it to withstand successfully, and for a long time, the action of acid or salt. — *Selected.*

HOW COAL WAS MADE.

Geology has proved that, at one period, there existed an enormously abundant land vegetation, the ruins or rubbish of which, carried into seas, and there sunk to the bottom, and afterwards covered over by sand and mud beds, became the substance which we now recognize as coal. This was a natural transaction of vast consequence to us, seeing how much utility we find in coal, both for warming our dwellings, and for various manufactures, as well as the production of steam, by which so great a mechanical power is generated. It may naturally excite surprise, that the vegetable remains should have so completely changed their apparent character, and become black. But this can be explained by chemistry; and part of the marvel becomes clear to the simplest understanding when we recall the familiar fact, that damp hay, thrown closely into a heap, gives out heat, and becomes of a dark color. When a vegetable mass is excluded from the air, and subjected to great pressure, a bituminous fermentation is produced, and the result is the mineral coal, which is of various characters, according as the mass has been originally intermingled with sand, clay, or any other earthy impurities.

On account of the change effected by mineralization, it is difficult to detect in coal the traces of a vegetable structure; but these can be made clear in all except the highly bituminous coking coal, by cutting or polishing it down into thin, transparent slices, when the microscope shows the fibres and cells very plainly. From distinct isolated specimens found in the sandstones amidst the coal-beds, we discover the nature of the plants of this era. They are almost all of a simple cellular structure, and such as exist with us in small forms, (horse-tails, club-mosses, and fens,) but advanced to an enormous magnitude. The species are all long since extinct. The vegetation generally is such as now grows in clusters of tropical islands; but it must have been the result of high temperature, obtained otherwise than that of the tropical regions now is, for the coal strata are found in the temperate, and even the polar regions.

The conclusion, therefore, to which most geologists have arrived, is, that the earth, originally an incandescent or highly heated mass, was gradually cooled down, until, in the carboniferous period, it fostered a growth of terrestrial vegetation all over its surface, to which the existing jungles of tropics are mere barrenness in comparison. The high and uniform temperature, combined with a greater proportion of carbonic acid gas in the manufacture, could not only sustain a gigantic and prolific vegetation, but would also create dense vapors, showers, and rains; and these, again, gigantic rivers, periodical inundations, and deltas. Thus all the conditions for extensive deposits of wood in estuaries would arise from the high temperature; and every circumstance connected with the coal measures points to such conditions. — *Chambers's Miscellany.*

THE SHORT-HORNS.

In his Compend of American Agriculture, Mr. Allen says, —

"The short-horns, or Durhams, are decidedly the most showy and taking among the cattle species. They are of all colors, from a full deep red to a pure creamy white; but generally have both intermixed in larger or smaller patches, or intimately blended in a beautiful roan. Black, brown, or brindle are not recognized among pure bred short-horns. Their form is well spread, symmetrical, and imposing, and capable of sustaining a large weight of valuable carcass. The horn was originally branching, and turned upward, but now frequently has a downward tendency, with the tips pointing towards each other. They are light and comparatively short, clear, highly polished, and waxy. The head is finely formed, with a longer face, but not so fine a muzzle, as the Devon. The neck is delicately formed without any dewlap; the brisket projecting, and the great depth and width of the chest giving short, well-spread fore legs. The crops are good; back and loin broad and flat; ribs projecting; deep flank and twist; tail well set up, strong at the roots, and tapering. They have a thick covering of soft hair, and are mellow to the touch, technically termed *handling well.* They mature early and rapidly for the quantity of food consumed, yielding largely of good beef with little offal. As a breed, they are excellent milkers, though some families of short-horns surpass others in this quality. The short-horns are assigned a high antiquity by the oldest breeders in the counties of Durham and Yorkshire, England, the place of their origin, and, for a long time, of their almost exclusive breeding."

BEAUTIFUL EXTRACT.

One fountain there is, whose deep-lying vein has only just begun to throw up its silver drops among mankind — a fountain which will allay the thirst of millions, and will give to those who drink from it peace and joy. It is *knowledge;* fountain of intellectual cultivation, which gives health to mankind, makes clear the vision, brings joy to his life, and breathes over his soul's destiny a deep repose. Go, and drink therefrom, thou whom fortune has not favored, and thou wilt soon find thyself rich! Thou mayst go forth into the world, and find thyself every where at home; thou canst cultivate in thy own little chamber; thy friends are ever around thee, and carry on wise conversations with thee; nature, antiquity, heaven, are accessible to thee! The industrious kingdom of the ant, the works of man, and rainbow, and music records, offer to thy soul hospitality. — *Frederika Bremer.*

Simple Remedy. — The simple application for a horse's feet which are brittle, or hoof bound, I learned from an English shoer; and having tried it with good effect, and never having seen it fail, I send it to you to be used as you may deem proper.

Mix equal parts of tar and some soft grease, having the foot clean and dry; apply it hot, but not boiling, to all parts, letting it run under the shoe as much as possible. In bad cases, the application should be made every day for a week, and then two or three times a week, till the foot becomes strong and smooth.

Means to Ends. — It is a curious fact, that the constituent elements of several grains are varied to the wants which they supply in the different latitudes where they are cultivated. Indian corn, which at its northern limit abounds largely in oil and sugar, especially needed there to sustain the animal heat of its consumers, becomes near the tropics almost wholly composed of starch, and suited to the demands of the constitution for lighter nutriment.

NOTICES OF PUBLICATIONS.

Western Horticultural Review. — This is a monthly journal, in a neat pamphlet form, at $3 per annum. Dr. John A. Warden, editor and publisher. — It is a new work, very ably conducted. The number before us is well filled with valuable matter. We hail with pleasure a permanent work from the Great West, which will embody the many valuable facts in horticulture that are developed among the intelligent and enterprising cultivators of that fertile region. We want No. 1.

Hygiene and Hydropathy. — This work embraces three lectures on these subjects, by Dr. Roland S. Houghton. New York: Fowlers & Wells. Mail edition, price 25 cents. — Many a person that is lingering with illness, and taking medicines with no avail, would receive essential benefit by judicious treatment in regard to diet and the simple use of water.

Accidents and Emergencies; a Guide containing Directions for Treatment in Bleeding, Cuts, Stabs, Bruises, Sprains, Ruptures, Broken Bones, Dislocations, Burns, Scalds, Explosions, Inflammations, Cholera, Choking, Poisons, Fits, Sunstroke, Lightning, Drowning, &c., &c. By Alfred Smee, F. R. S. With Alterations and Corrections, by Dr. Trall. — New York: Fowlers & Wells. Mail edition, price 12½ cents. — This work contains much valuable matter in a small space.

ACKNOWLEDGMENTS.

From John S. Wells, Exeter, N. H., Calef Sweeting apple. This fruit is large; flat; yellow ground, with numerous large specks of a greenish brown, and a reddish brown blush; stem rather slender and short, in a very deep and very broad cavity; calyx small, closed, in a broad, shallow basin; flesh white, rather firm, of a sweet, rich, pleasant flavor, tolerably good for the dessert, and first rate for baking. Late fall and early winter. This is a noble, handsome fruit, and one of the best sweet apples baked that we ever tasted, and the texture is just right for this purpose, as it cooks soft, and yet preserves its form. If the habits of this apple, such as growth, bearing, general fairness, &c., are favorable, it is worthy of general culture.

Of Charles H. Pendleton, Pendleton Hill, Ct., several varieties of pleasant apples; but as they received hard usage on the way, and some of them are past their prime, we cannot judge of their quality.

THE BEES AND THE DRONES.

BY W. A. KENTISH.

Some Combs of Honey 'mid some trees,
Belonging to a swarm of Bees,
Were, by a swarm of many a Drone,
Laid claim to, absolutely, as their own!

The case 'foro Justice Wasp was laid,
Who was a magistrate by trade,
And so had seen much trick and quirk,
Chicanery, and dirty work!

E'en he was puzzled what to do;
The case was intricate and new;
For all the witnesses deposed,
That they'd seen little animals, with wings,
Buzzing busily about the things;
And they all further, too, disclosed
That they were shaped and brown, like Bees!
But then, the difficulty was,
That all the Drones, in the same cause,
Were similar, in all respects, to these!

The Wasp the difficulty fairly owned,
And his decision he postponed
Until more testimony could be heard,
Than what had hitherto appeared.

He was conscientious in a doubtful case,
The very Draco of his race!
And as he found the thing so nice,
He begged some neighboring Ant's advice.
For, as they are famed for wise foresight,
He knew that they'd direct him right.
But these were just as much in doubt
How they should make the matter out!

At length, a Bee, for wisdom famed,
The attention of th' assembly claimed,
Who said, "The case had occupied the court
Now several months;
And that, to every appearance,
It wouldn't to an end so soon be brought.
Day after day it had been toiling,
Whilst all the honey-combs were spoiling!
Let the disputants work, and soon
The truth will easily be known,
And then your worship too will see
Who made the honey, they or we!"

To this, 't may be supposed, of course,
The Drones were, every one, adverse!
The Justice saw the case, with ease,
And gave a judgment to the Bees!

Instead of codes, if common sense
Were to be consulted in each cause,
And not the quibbling on laws,
'Twould save much time and much expense
It is unjust to have to pay
For such prolonged chicanery!

"Justice is drawn with even scales:"
This, in reality, is all a fudge!
For what with Counsel, reference, and Judge,
One side so frequently prevails,
It often takes the whole estate,
Before the beam's brought really *straight!*

— *Journal of Commerce.*

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

The Postage

On this paper is only 1 cent, or 26 cents a year, within the state, or within 100 miles out of the state; and 1½ cents, or 39 cents a year, beyond those distances.

STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY.

DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, DECEMBER 21, 1850. NO. 26.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

CLOSE OF VOLUME SECOND.

ANOTHER volume of the Farmer closes with this number. As our readers cast their eyes over the index, or look over the volume, they will see that a large number of subjects have been presented for their consideration, during the year. Let us reflect on the past, and gather wisdom for future action.—We still find many doubtful subjects that require experiment, and further and more thorough investigation; for in many respects we are yet in our infancy. We must read, reflect, experiment, observe, and concentrate our energies upon the vast field of improvement that is spread out before us, inviting our attention. In this field, those of the humblest capacity can operate with success, and yet those of the highest attainments will find ample scope for their talents. Agriculture, like the heavenly manna, is adapted to all.

We are much obliged to our friends who have aided us in the circulation of the paper. Correspondents and others, who have contributed useful matter to our columns, and friends who have sent us specimens of new and valuable fruits, will please accept our grateful acknowledgments.

We respectfully solicit a continuance of favors. On our contributors we greatly rely to make the Farmer valuable and interesting. We think that a little more attention to this subject by some of our friends, would make this journal still more useful. Let every one contribute his mite, and aid in scattering useful knowledge broadcast over the land; and he may be assured that an abundant harvest will be the happy result of such combined effort.

In order to give greater efficiency to the publishing department, the proprietor has formed a copartnership with Mr. John Raynolds, of Concord, Mass., a gentleman who, for several years, has been extensively and favorably known to the business community, having been connected with several of the most prominent journals in this city. The business, hereafter, will be conducted under the firm of Raynolds & Nourse.

Another important arrangement in connection with this association, is, to publish a weekly agricultural and family newspaper. The agricultural department will contain nearly the same matter as this paper. The other department will be devoted to Domestic and Foreign Intelligence, Congressional and Legislative Proceedings, Literature, Education, Miscellaneous Reading, Temperance, Religious Intelligence, Marine News, Markets, Sales of Stocks, Bank Note Lists, &c., &c.

Since this plan was devised, the publishers, considering that there is a great advantage in the concentration of talent and the union of papers, have made an arrangement with Mr. William Simonds, of the Boston Saturday Rambler, to add that journal to their establishment; and the weekly paper will be called "New England Farmer and Boston Rambler." Excepting the agricultural department, the Weekly will be edited by Mr. Simonds, who has conducted the Rambler from its commencement. The character of that interesting and popular journal, and the extensive patronage it has received, are a sufficient guaranty that he will conduct his department with ability, candor, and faithfulness.

The semi-monthly New England Farmer will be continued in the same manner as heretofore, and at the same price; so that this new arrangement will not affect this paper otherwise than favorably, from an accession of strength in the publishing department, and a wider circulation, which will afford greater facilities and means for making, as we hope, a still more valuable journal.

Two numbers of the weekly paper will be sent to each subscriber to this paper, gratis, as specimens, (the first with this number;) and when they have perused them, if any choose to take the weekly instead of this paper, they will please give notice as early as possible.

All subscribers to the *Weekly* can have a bound volume of the semi-monthly, at the close of the year, for $1.

We would assure our readers that no pains or expense will be spared on the part of editors or publishers, to make both papers conducive to the interest and welfare of our readers, and we solicit their aid in extending our circulation, and in furnishing useful matter for the paper.

MORE THOUGHTS ABOUT BUILDINGS.

The intense heat of the present and passing season brings to mind more thoughts in reference to arrangement in the construction of dwellings. Any way by which we may temper the intense heat of summer would be worth a vast amount, as respects not only comfort, but health.

The first and most obvious reflection, in this connection, relates to ventilation. Houses are often so constructed that no air can find its way into any of the rooms. The whole remedy for this is a right location of windows and doors, which should be so placed, with reference to each other, that a draught of air may be had through the house with the wind in any direction. It is particularly needful to see to it, so as to secure the draught at all events when the wind is south or south-west. These winds bring a suffocating heat, which, with all the air we can get, is barely endurable, but which, without a drop of air, is like the air of a heated oven with the oven-lid closed. A north wind will find its way into the house at all events. The east wind should also be afforded a passage through the house, since it often blows while the sun is intensely hot, and serves to brace the system, so as to make the time of its prevalence, within doors, eminently pleasant. These remarks apply to this lake shore, but it is possible that elsewhere they may not hold; but they will serve to put the reader on the track of the truth in any locality.

Another observation is, that verandas eminently become our western country; as do wide overhanging roofs, keeping the sun off the wall of the building, and serving to temper the air of the rooms. — Venetian blinds are also a great luxury. A set of these will cool a room several degrees during the heat of the sun; at the same time they shade it to any desired degree of light. Houses in the country are destitute of these blinds very extensively from the impression that they are merely an ornament — a notion very far from truth.

Then, again, in the way of building materials. It is a truth, that a house warm in winter will be cool in summer, from the fact that its walls are poor conductors of heat, and will as readily impede its transit one way as the other. A thin, rickety wood wall, with one coat of plaster, will be hot in summer and cool in winter. It is to be wished that unburnt clay might be tried more fully than it has, even though it be covered outside with boards. It is a non-conductor, and might conduce to comfort most essentially.

Another matter is the *shape* of our windows. We make them too short and too wide. They thus serve to heat the house in the summer much more than they ought. A long, narrow window will let in as much light as is needed, and will admit far less heat than one of the opposite shape.

Much might be said about shading the house with trees and vines. This may be carried to excess; and yet our climate, where the soil is dry, will admit more shade than an English or New England one, without the risk of dampness and the diseases which result from it. — *Prairie Farmer.*

SCARCITY OF HOGS IN OHIO.

We perceive that the pork and hog dealers at Cincinnati are beginning to discover that the number of hogs to be sold in Ohio this year is far less than the past one; and in consequence, the price of hogs has advanced about $1 per hundred pounds, during the past two weeks.

In our paper of September 15, we gave the assessors' returns for thirty-six counties, which showed a falling off since last year of about 200,000 head. — Complete returns have been received by the auditor of state, for all the counties except Mahoning; and putting down that county with the same average ratio of decrease as the others, the deficiency for the whole state is, in round numbers, 275,000 head. This, though not as great as we had anticipated from the counties before given, will be found to affect the *surplus* to a very material degree — perhaps 50 per cent., as we notice that the greatest falling off is in those counties where the largest numbers are usually fed and sold. — *Ohio Cultivator.*

SCOURS IN SHEEP.

Will any of your numerous subscribers inform the readers of the Wool-Grower what will cure sheep or lambs of the scours, as that disease is very common at this season of the year, and as yet I have found no cure? Yours,

LUTHER BOYD.

The scours is a kind of ardent purging or diarrhœa, brought about by sudden changes of food, and exposure to rough weather. The best and surest remedy against the evil, under all circumstances, is known by the name of English "Sheep's Cordial," and is prepared as follows: Take of prepared chalk, one ounce; powdered catechu, half an ounce; powdered ginger, two drachms; and powdered opium, half a drachm: mix them with half a pint of peppermint water. Give two or three tablespoonfuls morning and night to a grown sheep, and half that quantity to a lamb.

Mr. Randall, in his excellent work on sheep husbandry, gives the following simple remedy: "If the purging is severe, and especially if any mucus is observed with the fæces, the feculent matter should be removed from the bowels by a gentle cathartic — as half a drachm of rhubarb, or an ounce of linseed oil, or half an ounce of Epsom salts to a lamb. This should always be followed by an astringent, and, in nine cases out of ten, the latter will serve in the first instance. I generally administer, say one quarter ounce of prepared chalk in half a pint of tepid milk, once a day for two or three days, at the end of which, and frequently after the first dose, the purging will have ordinarily abated or entirely ceased."

Another Remedy for the Scours. — We find in one of our exchanges the following remedy against that disease, which may be valuable to our correspondents: —

"In scours, the surface evaporates too little of the moisture, and should be relaxed by diffusible stimulants in the form of ginger tea. The treatment that I have found the most successful is as follows: — Take four ounces raw linseed oil; two ounces of lime water; mix. Let this quantity be given to a sheep on the first appearance of the above disease; half the quantity will suffice for a lamb. Give about a wine-glass full of ginger tea at intervals of four hours. Let the animal be fed on gruel, or mashes of ground meal. If the above treatment fails to arrest the disease, add half a teaspoonful of powdered bayberry bark to each wine-glass of tea. If the extremities are cold, rub them with the tincture of capsicum.

"The feeding of pine boughs we have formerly practised, and think to be useful. Pine has a revulsive action on the skin, is stimulant and diuretic, and, if used occasionally, might be the means of preventing many forms of disease in animals."— *Wool-Grower.*

For the New England Farmer.

THE CULTIVATION OF NATIVE TREES AND SHRUBS.

[Continued from p. 141.]

The Magnolias are beautiful trees and shrubs; the *M. glauca* is the only one as yet discovered growing naturally in Massachusetts.

The *M. acuminata*, or Cucumber-tree, with flowers five or six inches across, with its scarlet seeds depending from its cylindrical fruit, can be cultivated in the latitude of Boston in sheltered situations. — The *M. auriculata*, or Long-leaved Cucumber-tree, with its beautiful foliage, large and fragrant flowers, attains the height of forty or fifty feet. The *M. tripetala*, or Umbrella-tree, rises to the height of thirty or forty feet, with leaves six inches in diameter, and twenty inches in length, growing in a spreading form, from the extremity of its shoots, fancifully resembling an open umbrella; hence its name. The flowers open the last of May, and some of them are eight inches in diameter. The beautiful rose-colored seeds burst the cells of its conical fruit, and hang suspended, for a few days, by their slender filaments. We have cultivated the Umbrella-tree for several years, and find it perfectly hardy; and it would probably succeed farther north. It flourishes best in a sheltered garden, when growing with evergreen trees, and has a fine tropical appearance.

The Sassafras is a tree of the second class, rarely reaching thirty feet in height, although we have several trees in Danvers with a trunk measuring four feet in circumference, and a height of forty feet. It belongs to the Cinnamon family of plants, and the only genera found in Massachusetts are the Sassafras and Feverbush. In the early history of New England, it formed an important article of export, and ships were sent home to England laden with dried codfish and sassafras. This tree has long been celebrated for its medicinal properties. Michaux considered it one of the most interesting trees of the American forest. It is easily cultivated in almost every variety of soil.

The Coffee-tree is distinguished for its fine appearance when clothed with its foliage, and for its dead and lifeless appearance when deprived of it. It has not as yet been found in Massachusetts, although it is seen as far north as Canada. The fruit consists of crooked pods, containing large seeds, used, in the early settlement of Kentucky, as a substitute for coffee, from whence it derived its name. We have found it sufficiently hardy to endure the severity of our winters.

The American Judas-tree, sometimes called the Red Bud, is an early flowering, small tree, and deserves a place in a large garden; it is conspicuous for its large heart-shaped leaves, and its handsome rose-colored flowers, which appear in bunches along its branches before the appearance of the leaves. It received the appellation of Judas-tree from the supposition that it was the one on which the traitor hung himself; but Genard, an old English botanist, says that it was the Elder on which Judas committed suicide!

The American Aspen is a small, graceful tree, with many poetical associations connected with it, and is proverbial for the quivering motion of its leaves. Its cultivation is desirable near dwelling-houses, from its neat appearance, and the pleasing rustling noise of its leaves when gently agitated by the summer breeze.

The River Poplar is found in this state, and is said by Mr. Emerson, in his work on the trees and shrubs of Massachusetts, to be a noble tree, rising often to the height of eighty feet or more, with a fine, long, open head. The River Poplar, he continues, deserves to be cultivated as an ornamental tree. It is much the tallest and most graceful of those which grow naturally in New England. Its foliage is equal to those of the Balm of Gilead in size, and superior to it in depth of color; and the abundance of its ornaments in spring, and the rich colors of its leaf-stocks and young branches when growing in somewhat dry situations, make it a beautiful object. By selecting cuttings from the sterile tree, the evil complained of in the cotton of the Balm of Gilead will be avoided; and the tree is of equally rapid growth, and taller and more shapely. It has been extensively introduced in England and France, where it is valued for its beauty and for its wood. Loudon says, that the fine poplar avenues in the lower part of the garden of Versailles are of this species. In England it is called the Canada Poplar; in France, Cotton-wood. This tree occurs on the banks of the Connecticut, above and below Springfield; on the Chicopee, at Chicopee Falls; and in various places on the Agawam or Westfield River.

The American Mountain Ash is abundantly found on the mountains of Massachusetts. It resembles the European Mountain Ash, but is smaller. The last-mentioned tree, in consequence of its larger size, is the one usually cultivated as an ornamental tree.

The Thorns are beautiful, round-headed, small trees, which deserve more attention than they usually receive. Four species are found in Massachusetts.

The American Larch, or Hackmatack, is occasionally cultivated as an ornamental tree; the European Larch, however, has very generally taken its place in cultivation.

The American Hornbeam is a small, round-headed tree, very widely disseminated, being found in all the states of the Union. It is one of those trees that seldom fail to attract the notice of the most careless observer. Its trunk is grooved like a pillar, its leaves are very thin and delicate, and its fruit is an eight-sided nut. It is very distinct in its appearance, usually found growing by itself, with many branches, and a crowded, leafy head. Mr. Emerson says, the crimson, scarlet, and orange of its autumnal colors, mingling into a rich purplish-red, as seen at a distance, make it rank in splendor almost with the Tupelo, and the Scarlet oak. It is easily cultivated, and should have a corner in every collection of trees. The European Hornbeam is used in England for hedges; ours, which it very much resembles, would probably answer for the same purpose.

S. P. FOWLER.

Danvers New Mills, *Dec.* 6, 1850.

[to be continued.]

For the New England Farmer.

FOOD OF PLANTS.

Mr. Editor: An adequate supply of proper food is essential to the growth and full development of every species of plants in the vegetable kingdom. Some subsist on air almost entirely, and will live and grow suspended in that element. Others thrive by being immersed in water, or they float about on its surface; even rocks and the trunks of trees are covered with luxuriant crops of mosses or lichens; but a large portion of vegetables require that their roots should be fixed in the earth, from which is extracted various substances suited to the wants of each particular species, and which substances they are found to contain on chemical analysis. In forests, where nearly all is returned to the soil by fallen leaves and decaying trees, a constant state of fertility is kept

up; but with cultivated lands the case is very different; the crops are removed from the soil, and unless some equivalent is returned, it will fail to produce a full amount, and in a few years will cease to repay the labor of cultivation.

Our first object should be to ascertain what kind of food is required for each variety we have under cultivation; secondly, the proper amount to be applied; and thirdly, to furnish that amount in some form or other.

Plants, as well as animals, sometimes die of starvation, as well as of surfeit. Instances are of common occurrence, where a large supply of highly concentrated manure has been applied with disastrous results; and who has not observed the effects which the want of the proper quantity produces? Fruit-trees frequently remain stationary for years, for the simple reason that they have consumed nearly all the food within their reach.

Many will condemn some of the substances used as fertilizers. It may be gypsum, for instance: having applied it, they see no good results. The reason is obvious: the soil contained enough of that substance before. It is so with potash, or phosphate of lime, or any other substance of which a sufficient quantity already exists in the soil. The best way to proceed is, to employ all the important substances essential to the growth of plants; and these are few: by so doing we can scarcely fail to reap a harvest worthy of our labors. Farm-yard manure is said to contain all these substances, and it seldom fails to produce a good crop when applied in the proper quantity. Chemistry has shed much light on the subject of manures within a few years, and every cultivator of the soil should make himself familiar with the different fertilizers, their effect on various kinds of land, and the proper amount to be applied. The subject presents a wide field for research and investigation, and upon it mainly depends the success of the husbandman in obtaining profitable returns for his labor. O. V. HILLS.

Leominster, *Dec.* 1860.

IMPORTANT DISCOVERY — LARD RENDERED FLUID BY MIXING WITH ROSIN.

Professor Olmsted, of New Haven, has lately made the important discovery, that, by adding one pound of powdered rosin to three pounds of lard, well stirred together, the mass becomes semi-fluid at 72° F., and on being melted, which it does at 90°, notwithstanding if melted alone the rosin requires 300° and the lard 97° of heat, the compound will remain transparent and limpid at that temperature. As it cools, a pellicle begins to form on the surface at 87°, and at 76° it remains a dense semi-fluid.

The discovery of the above-named fact will be of great importance to those who use lard lamps, as the lard is rendered more fluid by the rosin, and the power of illumination increased two fifths; yet, after two hours' burning, it loses its brilliancy on account of the wick becoming clogged. This will not be an important objection in families, while in point of economy the gain will be considerable; for lard is worth three or four times as much as rosin.

To machinists, the discovery is very important, as it enables them to make use of lard instead of oil, which is not only a saving in cost, but, what is of far more importance, the addition of the rosin completely neutralizes the quality of acidity in the lard, which corrodes metals, particularly brass and copper, to such a degree it is unfit to apply to any thing not in constant use. Professor Olmsted says, a thin coating of the compound laid upon a grate or sheet-iron stove with a brush, as thin as possible, will keep it free from rust all summer, although stored in a damp place.

To soap-makers, the discovery is also important. If one pound of the compound is added to two pounds of common Windsor soap, the quality is greatly improved, and the tendency that soap has to grow rancid, when in use or kept moist, is thus entirely prevented. A shaving cream, of an excellent quality, may be made by taking a cake of good shaving soap and steaming it soft in a close cup, and mixing half its weight of the compound, and working it well together; adding a little oil of almonds, or any other agreeable flavor.

The same compound, applied to boots and shoes, renders them nearly impervious to water, and, if applied to the soles, will not soil the floor. The uppers will be soft and pliable, and not prevented from receiving a blacking polish.

For oiling carriages, the mixture of lard and rosin will be valuable; and when wanted for heavy wheels, a proper consistency may be given to it by adding wheat flour, or, if greatly preferred, black lead.

No doubt the soap paste above described would be a good lubrication for carriage wheels. We hope this discovery will increase the consumption of lard, and thereby give an improved market to the farmer, and thus enable him to turn land into lard, and lard into light, and, in the mean time, enlighten his mind and improve his condition. — *Am. Agriculturist.*

CARROTS FOR HORSES.

It is admitted by every one who is at all acquainted with the great nutritive qualities of the carrot, that as a winter food for horses, to use in small quantities daily, — say half a peck to each horse, with their dry food, and especially in the absence of green provender, — it is of the utmost value. It not only possesses fattening properties equal to oats, — taking bushel for bushel, — but it secures to the horse, in the winter season, fine health, a loose skin, and a glossy coat of hair, which it is impossible to produce except by the use of the carrot.

To those keeping horses, who do not raise their own carrots, we would hint that now is the time to procure a supply, while they are being harvested. About twelve bushels to a horse, we think, would be sufficient. They should be buried in the usual way, and taken out, a bushel at a time, as they may be wanted. They will in this way keep plump and fresh as the day they were taken from the field. — *Germantown Telegraph.*

FARMERS' ICE HOUSES.

A correspondent of the Massachusetts Ploughman, in a communication to the editor, says, "At the first time I commenced using ice, it cost me more than thirty dollars a year; and I had not half the benefit in the use of it that I now do, at the cost of three or four dollars per annum. I have tried various ways to keep ice, and have come to the conclusion that in every neighborhood there should be an ice-house of sufficient capacity to contain and keep ice for the whole neighborhood: this should be built as near to where the ice is made as convenience will admit, and if there be no natural pond in the district, it will be very easy to make an artificial one, as a cake of ice four rods square, of usual thickness, if well secured, would supply a large neighborhood of farmers; and as soon as the ice is of sufficient thickness, it should be secured, for the first made ice is of twice the value that late made is; it keeps better, splits better, and is better in every respect."

CRAWFORD'S LATE MELOCOTON PEACH.

SYNONYMES — *Crawford's Late; Crawford's Superb.*

This peach originated in Middletown, New Jersey, a few years since, and it is now cultivated in most parts of the country where the peach flourishes. In some sections it is cultivated very extensively, and is among the finest late peaches for the market.

The fruit is very large; roundish-oval, with a shallow, but distinct suture; yellow surface, with a broad, dark-red cheek; flesh deep yellow, red at the stone, melting, juicy, rich vinous flavor. Freestone. In New England it ripens late in September, and early in October, and in cool locations and unfavorable seasons it is too late to come to perfection. The tree is hardy, vigorous, and productive. Globose glands. Small flowers.

This peach is sent in large quantities to this market from New Jersey. It ripens in that state about the time of the Early Crawford in this region. These two varieties are among the most valuable kinds cultivated in the country.

CORN FOR THE WORLD'S FAIR.

The State Board of Agriculture are making up a collection of samples of Indian corn for the World's Fair; and we invite farmers, who have handsome samples, to bring or send to our office, say half a dozen ears of each distinct kind, with the husk on, if convenient; also as many full-grown stalks with ears on, cut up before over-ripe. The names of the growers will be affixed to samples sent. — *Ohio Cultivator.*

It is said that a small piece of resin, dipped in the water which is placed in a vessel on the stove, will add a peculiar property to the atmosphere of the room, which will give great relief to persons troubled with a cough. The heat of the water is sufficient to throw off the aroma of the resin, and gives the same relief as is afforded by a combustion of the resin. It is preferable to combustion, because the evaporation is more durable. The same resin may be used for weeks.

IRRIGATION OF GARDENS.

This is a subject that receives but very little attention from cultivators; and yet from the nearness of gardens to buildings where there is often a good supply of water, they might frequently be irrigated with convenience and profit. We copy the following judicious article from J. J. Thomas, in the Albany Cultivator: —

From repeated experiments, we are induced to draw the conclusion, that next to manure, the great prime mover in successful culture, there is nothing more important to vegetable growth, in many cases, than irrigation. Practical gardeners, in countries far more moist than our own, regard it as indispensable, and a large share of their success depends on copious waterings.

Some interesting instances, which have recently occurred, may be worth stating. Two rows of raspberries stand on ground in every respect alike, except that one receives the drippings from a wood-house, and the other does not. The watered row is fully four times as large in growth as the other. Again: the berries on the bushes of the Fastolff and Franconia raspberries were at least twice as large when the soil was kept well moistened, as afterwards when allowed to become dry; a repetition of the watering again doubled their size. Again: a near neighbor, who cultivates strawberries for market, and who uses a water-cart for irrigating the rows, raised at the rate of one hundred and twenty bushels to the acre on common good soil by this means; and he noticed that where the cart was left standing over night, so that the water gradually dripped from it for some hours upon a portion of the plants, the fruit had grown to double the size of the rest, in twenty-four hours.

It should be observed that these advantages of a copious supply of water pertain chiefly to small or annual plants. The roots of fruit-trees, being larger and deeper, are to be supplied with moisture in a different way; that is, by a deep, rich, mellow soil, kept moist by cultivation, or by covering thickly with litter. Water applied to the surface rarely descends so low as the roots, and only hardens the soil to a crust.

HOW RUMINANTS CHEW THE CUD.

As no answer has ever been given to our question relative to the process of chewing the cud (we do not use the vulgar term *quid*) among ruminating animals, (see Leaf, vol. i. p. 176,) we have thought the following extract from Ruschenberger's Elements of Mammalogy might prove interesting to many of our readers. This subject has been the theme of much profitable discussion among the members of the class in physiology in our school here, during the past week. More especially does it seem entitled to consideration, since there exists some diversity of opinion among authors who have attempted to explain it. W.

— *Scholars' Leaf.*

"When these animals (ruminants) feed, they swallow their aliments at first without having chewed them. These substances then enter into the paunch, and there accumulate; thence they pass into the second stomach, (reticulum;) but after having remained there for a certain time, they are carried back again into the mouth to be chewed, and afterwards swallowed again; and when they descend again into the stomach, they no more enter the paunch or reticulum, but go directly to the *manyplies*, (third stomach,) from which they pass into the fourth stomach, or *rennet-bag*, where they are digested.

"At first, one is astonished to see food pass at one time into the paunch and reticulum, at another into the *manyplies*, (third stomach,) according as it had been swallowed for the first time, or after it has been regurgitated; and one is tempted to attribute this phenomenon to a sort of tact with which the openings of these different digestive pouches seem to be endowed. But there is nothing of the kind; this result being the necessary consequence of the anatomical arrangement of the parts. The œsophagus terminates below in a species of gutter, or longitudinal slit, which occupies the upper part of the reticulum (second stomach) and the paunch, and is continued to the *manyplies*. Ordinarily, the edges of the slit of which we have just spoken lie close together, and then this gutter constitutes a perfect tube, which leads from the œsophagus into the *manyplies*, (third stomach;) but if the alimentary ball swallowed by the animal is solid, and somewhat large, it distends this tube, and separates the edges of the opening through which the œsophagus communicates with the two first stomachs; the food falls into these pouches; but if the alimentary ball be soft and pulpy, as is the case when mastication has been completed, the matter swallowed enters into this same tube without separating the edges of the slit, and reaches the third stomach.

"It is by this mechanism that unchewed food, which the animal swallows for the first time, stops in the paunch and reticulum; while, after it has been chewed a second time, and well mixed with saliva, it penetrates directly into the *manyplies*.

"The mechanism by which aliment accumulated in the first stomach is carried back to the mouth, is also very simple. When regurgitation begins, the reticulum contracts, and presses the alimentary mass against the slit-like opening which terminates the œsophagus; then this opening enlarges, so as to seize a pinch or portion of the alimentary mass, compresses it, and forms it into a small pellet, which engages in the œsophagus, the fibres of which contract successively from below upwards, to push forward the new alimentary ball into the mouth."

THE GAIT OF THE HORSE.

Most people know when a horse walks, trots, or gallops; but very few can distinguish the philosophy of these movements, and the way they are done. There is, however, a method in these things, which is very plain when once found out. In walking, an animal lifts one foot at a time, and while the others are on the ground, so that the body is in no manner thrown even partly from the ground. A pace or rack is very similar, sometimes even precisely the same; but usually there *is* something like a side-at-a-time movement, very similar to the motion of a bear, or an elephant — a motion no way elegant, but for horseback riding very easy to the rider. In a word, it is probable, we may say, in the trot, the alternate fore and hind feet move together; in a pace, the feet on the same side; and in a gallop, the fore feet as well as the hind ones, move together. This may not be plain, but we think it very true, and it is at least the result of careful observation. For different uses, horses should be trained to different movements. A carriage horse, for instance, may be so trained as to have forgotten that he can gallop at all; and of this kind are our fast trotting horses, who never *break*. By proper management of a young horse, he may be taught a certain lofty movement, which very much, indeed, enhances his appearance in harness, and con-

sequently his value — an art well understood by few, yet very simple, plain, and easy. In this place it may be well to say, that heavy shoes on a horse will cause him to pick up his feet, raising them much higher than if he were barefooted, or if the shoes were light. This fact may suggest an idea in the management of stumbling horses, which do not lift the feet sufficiently high. Horses intended for carriages should not be ridden to spoil the pace, unless they are to be driven with breast collars, which is said to stiffen them. In the south, horses are always kept to one use, and consequently they are much better adapted, than in the north, to their various uses — a natural consequence, however, of increased wealth. In many parts of the world, the nature of the surface renders it unpleasant to ride in wheel carriages. This is the case in Kentucky. Here, horses for people not aged are ridden; and although in a very level part of the world this would be very tedious, among our hills, and rocks, and ridges, and beautiful scenery, it is fine riding, and one enjoys a ride more than any where else in the world, almost. Horses here are taught to pace, and are very fine for the saddle. A Yankee coming south, and trying to manage a trained horse, if it be a spirited one, is usually run away with, from trying to guide the horse with pulling one rein. Both reins should be drawn in the direction in which you would go, pressing the reins against the horse's neck; and the horses are the most tractable imaginable. Horses are made to pace by a twitching of the reins not easily described. Teaching the *pace* to them may be done by alternately jerking the reins, either with or without the half-pound lead weight strapped to the fetlocks. In riding or driving, the lines should always be held in one hand only. In the level southern country, horses are ridden on the gallop, or *lope*, as it is called, the roads being very even, but lying among plantations and through pastures with many gates to open. It has been said that a horse that can *walk* well can do every thing else well, and indeed, it is the most valuable gait a horse can have. In this, as in other movements, the rule may apply; get the horse to doing the thing, and then make him *keep doing it*. Horses and men do most things as a matter of habit, and habits are the result of practice; and almost any one may make a horse take the kind of action they desire. Many men, with great secrets in breaking horses, have travelled the country; and a revelation of the secrets shall form the subject of another article. G. M. L.

Elliston, Ky., 1850.

— *Dollar Newspaper.*

DOMESTICATING WILD FOWLS.

We have frequently called the attention of our readers to the subject of taming or domesticating wild fowls, especially water-fowls. There is no doubt that all the domestic fowls that we now have were obtained by taming them from a wild state. There may be many more domesticated in the same way, if pains were only taken to do it. Those who have tried the experiment, say that it requires them, or the species, to be tamed three generations, to bring them down to a thoroughly domesticated state. There are many splendid species of water-fowl, that, if tamed, would not only make useful additions to the flocks of the poultry-yard, but add greatly to the beauty of those flocks. For instance, that elegant and most beautiful of the duck tribe, known as the *wood duck*. We have known, occasionally, individuals of this species to be tamed in Maine, but have not heard of any systematic efforts being made to perpetuate them in a domestic state. The following, from the Family Visitor, gives the most authentic account that we have seen of any number being domesticated.

This account states that H. T. Kirtland, Esq., of Mahoning county, Ohio, succeeded, on several occasions, in domesticating that beautiful bird, and at one time had on hand a considerable flock.

He had trained a small dog so thoroughly that it would pass along the shores of the bayous in the vicinity, during the summer, where flocks of the old and young ducks were congregating, and before the latter were sufficiently fledged to take wing.

Alarmed at the approach of an enemy, the old ones would sound their peculiar notes and fly away, and the ducklings stealthily run on shore, and conceal themselves among the weeds and grass. The faithful dog would trace them out one by one, and as soon as he had detected one, would place it between his two forepaws, and retain it without injury. In this way he could take any desirable number. At one time he had a large flock that were full grown and in their full plumage, which in the males is more beautiful than the peacock, or any American bird.

They were restrained within the enclosures of his garden and door-yards, containing perhaps an acre of ground, and were apparently as tame as our common domestic Mallard, (the common tame duck.)

At a time when some of them were preparing their nests in hollow logs furnished them for that purpose, a mischievous polecat found his way into the premises, and destroyed several of the females. This interrupted them for that season. The survivors were neglected, and suffered to escape into a creek in the vicinity, and before the return of another season were destroyed by hunters.

We have been told that they have been domesticated by some farmers on Long Island.

There has recently been organized, in Boston, a society called the "New England Society for the Improvement of Domestic Fowls."

Would it not be a legitimate and praiseworthy object for this society to pay attention to this method of improving domestic fowls? They might offer inducements to those who are in convenient situations for taking and taming wild fowls, to do so. At any rate, their influence and scope of action would be greater than that of any single individual. We respectfully recommend it to their attention.

In the mean time, we should be happy to hear any facts bearing upon this subject, with which our readers could furnish us.

P. S. Since writing the above, the report of the committee of supervision of the first exhibition of Domestic Poultry has come to hand. We find by this, that E. S. Rand, of Dedham, Mass., exhibited specimens of the common or wood duck. Nothing more is said in regard to them. — *Maine Farmer.*

MAKE YOUR OWN CANDLES.

Take twelve ounces alum for every ten pounds of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum water, with frequent stirring, and it will clarify and harden the tallow, so as to make a most beautiful article, for either summer or winter use, almost as good as sperms.

If the wick be dipped in spirit of turpentine, the candles will reflect a much more brilliant light. — *American Farmer.*

One of the sublimest things in the world is plain truth. — *Bulwer.*

NOTICES OF PUBLICATIONS.

A Practical Treatise on the Construction, Heating, and Ventilation of Hothouses, including Conservatories, Greenhouses, Graperies, and other Kinds of Horticultural Structures, with practical Directions for their Management in regard to Light, Heat, and Air; illustrated with numerous Engravings, by Robert B. Leuchars, Garden Architect, Boston. John P. Jewett and Company, 17 and 19 Cornhill.

The design of this work is sufficiently indicated by its title. The author is distinguished for skill and thoroughness in his profession, and he has given to the public the result of much experience and extensive observation. It is a most excellent work, and we hail it with great pleasure, both on account of its high rank among the valuable productions of our country on cultivation, and as well adapted to fill a void, as we have no other work of this character before the community. The engravings, which amount to about seventy, are remarkably neat, both in design and execution. The whole work is very neatly executed, forming a beautiful volume, so that its execution is a credit to the publishers, as well as the matter to the author. The price is one dollar, and very cheap.

Hovey's Magazine of Horticulture is an excellent work, published monthly, at $2 per year, by Hovey & Co., Boston. A new volume commences with the year. Each number contains outlines and minute descriptions of several varieties of fruits.

Downing's Horticulturist is among the most interesting periodicals in our country. Published monthly, at $3 a year, by Luther Tucker, Albany, N. Y. J. Breck & Co., agents, Boston. Besides the general subjects of horticulture, this work embraces landscape gardening and rural architecture.

American Flora. — This beautiful and splendid work is published monthly by Green & Spencer, New York, at $3 a year. A new volume begins with the year. Dr. Strong, editor. This work has a large number of beautifully painted engravings. It ranks high in utility as well as in beauty.

Illustrated Natural History, by the same publishers and author, is issued once a month, at only $1 per year. The engravings are executed in so fine a style, that they look like *living* animals.

Water-Cure Journal. — The first number of this popular journal for 1851 has already made its appearance. It is much enlarged, without any addition to the price, which is only $1 per year. It contains a great variety of useful matter. The simple and abundant element, water, is, under judicious treatment, performing wonderful cures. Fowler & Wells, publishers, New York.

Farmers' Guide. — No. 13 of this valuable work is received of Fetridge & Co., Boston. The greater part of this number is devoted to the culture of the turnip and cabbage. It has numerous illustrations of seed drills, and insects that infest these plants. This is a valuable and cheap work.

The Illustrated Domestic Bible, by Rev. Ingram Collin, is a highly valuable work on account of its candid and able commentaries, references, and reflections. Hotchkiss & Co., Boston.

ACKNOWLEDGMENTS.

Of J. W. Noyes, Chester, N. H., Hunter apples, which are considerably cultivated in that section. — A good grower, and good bearer every year. The fruit usually fair, and in use in November and December. This fruit, in size, form, and color, is nearly the same as the Hubbardston Nonsuch, and the flavor is nearly the same. As fruits vary from many circumstances, we cannot determine whether they are identical. We raised the Hubbardston Nonsuch this year in Maine, and when we received them we thought there was a mistake in the mark, as they varied from the usual form and color, and were generally russetty. But the flavor was true, and the finest that we have tasted for the season.

Of Henry Vandyne, Cambridgeport, a pear of medial size, very tender, and middle quality. He had it under the name of New Long Rosewater. He observes that some call it the Long Green of Autumn; but it differs in time and in form from that variety. Also, a good-sized Ladies' Sweeting apple, from scions set a year ago last June, which indicates that it is an early bearer from scions.

Of P. L. Converse, Woburn Centre, cooking pears, rather less than medial size. They keep through the winter. A great bearer. He found this tree on his place, and it is probably a native. We have cooked them, and they are of the finest quality.

Of James Baker, Newport, N. H., apples that are sweet and sour. Fruit having these qualities combined are generally very uneven on the surface, having ribs or prominences; and these projections differ slightly from the hollows between them. Yet we have never seen much difference, though we have tried many of this character. In these, the prominences are hollow, and are acid and sweet. The reverse of this is generally the case.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

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