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.

"There are but two possible modes in which the produce of the earth can be increased; one by rendering fresh land serviceable, the other by improving the fertility of that which is already cultivated."—HALLAM.

S. W. COLE AND SIMON BROWN,

EDITORS.

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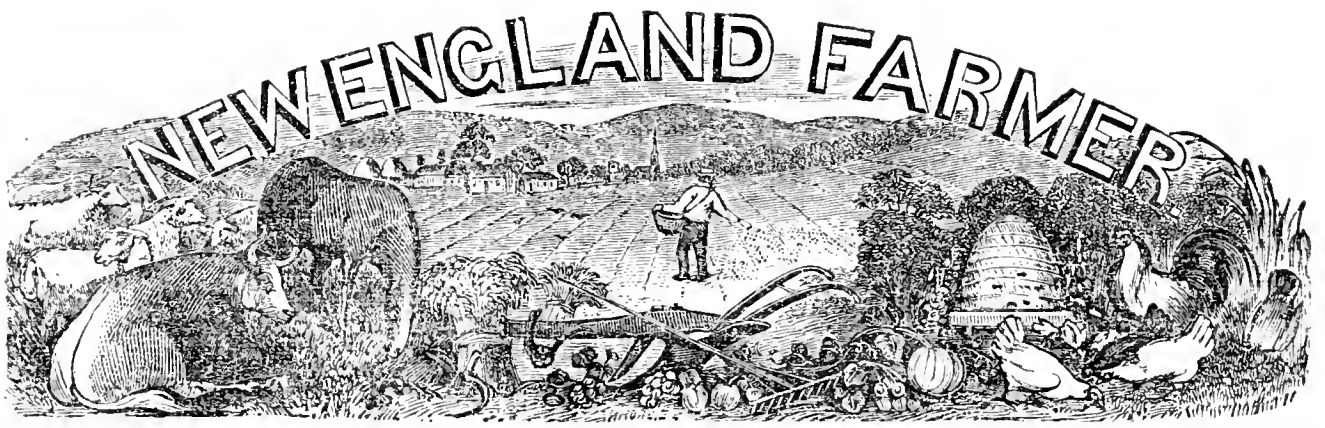


DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, JANUARY 4, 1851. NO. 1.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

NEW YEAR.

A happy New Year to all our readers. This is our ardent wish; and should we be blessed with life and health, we shall labor diligently and zealously to accomplish our purpose, and not deal in mere words, as custom and fashion may dictate. Among the great means of happiness are intelligence and benevolence. We should labor for our own advancement in useful knowledge, and at the same time endeavor to elevate also all others within the circle of our influence.

A good fund of knowledge on the practical purposes of life affords advantages in every branch of business, and it is a never-failing source of enjoyment at our leisure, and in the social circle. But to have the true enjoyment from a fund of useful knowledge, the fountain should overflow, and the possessor feel his expanding soul warmed up with the genial glow of benevolence. The man of intelligence, as he disseminates information to benefit his brother man, finds that his own stock is increasing by the operation. His mind becomes enlarged and capable of receiving and enjoying wisdom in proportion to his liberality in dispensing it. Those who put their light under a bushel, or hide their talent in the earth, act upon a narrow principle of misguided selfishness.

Of all classes, the cultivators of the soil are the most benevolent, in regard to valuable information which they gain by experience and observation. Instead of taking out a patent for it, in order to secure to themselves the sole advantage of their discovery, they most cheerfully disseminate it over the land, that others may also reap a profit from their improvement. This distinguishing characteristic of the farmer and gardener is what gives interest and value to agricultural journals.

For more than fifteen years we have conducted agricultural papers, and we have not yet seen a cultivator of the earth, who would not most cheerfully communicate his best modes of management, and allow them to be disseminated for the benefit of others. We never have seen at the most productive and beautiful fields, the repugnant words, "No Admittance!" On the contrary we have received a cheerful welcome, and every thing appertaining to superior practice has been at our disposal.

Yet we would say that too often we find farmers reluctant in reporting their doings from a diffidence in appearing before the public, and apparently dictating or suggesting to others what they should do. This responsibility they often evade, when with less modesty they might be more useful.

As we shall labor to make this a happy New Year to our patrons, we hope that they will make a cordial return, cheerfully aid us, and in mutual instruction, benefit themselves and others together. There are many of our best farmers who are sufficiently benevolent to freely communicate valuable information, but their large share of diffidence holds them back. This shows that one may have too much of one virtue to allow others full play. Let every one who can, freely furnish useful matter for the common good.

WOODLAND.

Wood, both for fuel and timber, is becoming an important subject throughout all parts of the country that have been long settled. Railroads have become common in many sections, and the shrill whistle of the steam engine reminds us of the vast amount of fuel, consumed by these voracious fiery steeds.

In many places, in farming regions, all the fuel as well as timber is brought from distant places, and at great expense. At the same time, in such places, there are waste lands sufficient to produce all the wood that is needed. A part of these lands would produce a good crop of wood before the other lands will be all improved, so that for the use of lands, in such way, there would be no outlay, but on the contrary, they would be greatly improved by raising a crop of trees on them.

This, at first view, may appear strange. That a piece of poor land should produce thirty cords of wood in twenty years, and the land become en-

riched meanwhile, is a fact not only well known, but it is easily accounted for. Take a large tree, root, trunk, branches, leaves and all, and consume it in a fire, and all that remains of it is a small quantity of ashes. All the rest has been scattered to the winds, and these elements that have been dissipated in the air, all came from the atmosphere. All that came from the earth is the small quantity of ashes that remains.

Now as a large crop of leaves are produced annually, which fall to the ground and enrich it, this constant addition of fertilizing matter renders the land very productive, in the course of fifteen or twenty years, while a good crop of wood is growing. Lands thus renovated, are better than old lands for almost every crop, particularly for fruit.

The subject of raising wood is one of great importance in most parts of the country, and owing to the value of land in regions where this would be a profitable business, every one who goes into it should examine the subject well, and determine on the best kind of trees adapted to his soil, and the best mode of propagation and management.

In regard to cutting trees on woodlands there is frequently a very injudicious course pursued. Many years ago, it was a common practice both in Europe and in this country, to cut out the decaying, and the largest trees, leaving the more vigorous and younger trees to grow from the more room that was allowed for their expansion. This plan seemed very plausible. But experience showed that the smaller trees grew but slowly, and that they shaded too much for new trees to start from the ground; so that after many years the old growth was cut away, and there was no new growth to take its place.

For sometime past a new course has generally obtained in Europe, and the same plan has been pursued by the most judicious managers in this country. This mode is to cut off all the trees, perfectly clean, as far as necessary for use, or for sale, where there is a good crop, and a good market. The consequence is that a new growth starts up suddenly, and all the trees have an equal chance, and a new and large growth, is produced in a short period.

The growth of wood, under this plan, is four times as great as it is under the old system. We now have in our view, a fine wood lot, where the large and decaying trees were cut away, and after this course had been pursued for twenty or twenty-five years, there was no growth left excepting a few scattering trees; but near by, where the old growth was all cut off at once, in the course of the time here named, a new, handsome, and heavy growth was produced.

The results of different modes of management have a great effect, even where statements as to the mode we have recommended, and reason therefor, may fail to have an influence. Some practices that have been long pursued, and that appear very reasonable, cannot be done away at once by statements, and a new course of reasoning, or by facts. Yet, examples would afford convincing proof. Arboriculture will become a great branch with the farming community.

OBITUARY.

Hon. Asa T. Newhall, of Lynnfield, has recently "gone the way of all the earth." As a farmer he was distinguished for his intelligence and correct practice. He was equally well known for his zeal in promoting agricultural improvement, and for many years was an active member, and frequently an efficient officer, of the Essex agricultural society. A few years since we had the pleasure of listening to an excellent address by him before that association. To a strong corps of such men, that society owes its great success and its powerful influence, not only in that county, but throughout the country, by its Transactions.

Agricultural Meetings.—Agreeable to adjournment, the first meeting at the State House will be held on the second Tuesday after the meeting of the Legislature, (Jan. 15th,) at seven o'clock in the evening. It is desirable that all the friends of agriculture, who can, should attend these meetings, and aid in making them interesting and instructive.

THAWING FROZEN VEGETABLES.

Frozen vegetables, fruits, &c., may be thawed in such a manner that they will receive but very little injury from freezing and thawing. If the frozen substance be immersed in cold water, whose temperature is but little above that of freezing, the frost will soon be extracted without injury.

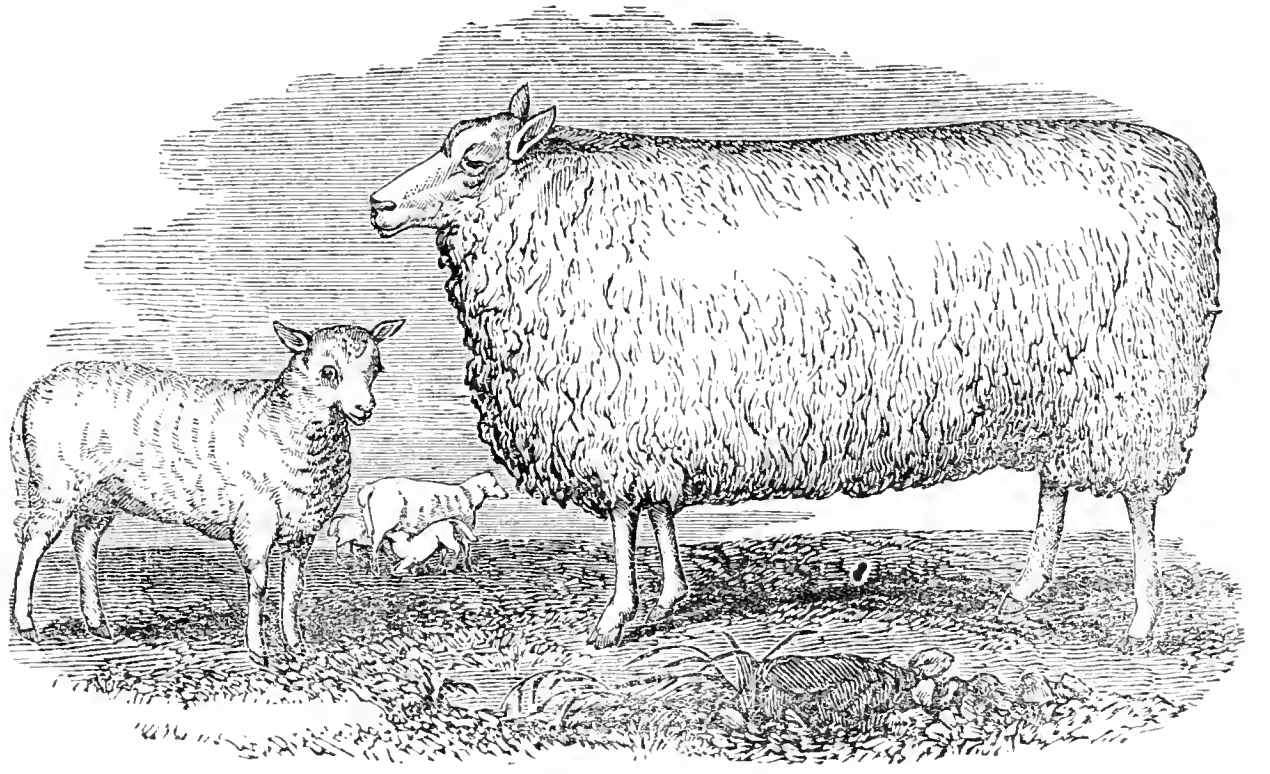
If frozen vegetables be covered up in the ground, or closely covered with moss, cloths, mats, &c., and laid in a dark cellar, the frost will be gradually extracted without material injury to the article.

By these modes of thawing, the change is gradual, hence it has but little effect. But if a frozen vegetable or fruit be put into warm or hot water, or carried into a warm room, or placed by a fire, the sudden change from a frozen to a thawed state, will destroy it as completely as though it had been baked or boiled. Thus it appears that the thawing, rather than the freezing, destroys the vegetable.

☞ It is said that Capt. Ericson is engaged in producing a steam carriage for use upon plank roads, by which immense loads may be transported at a good speed, with small cost.

☞ A farmer in Wilton, Me., has lately sent 40 barrels of Beachnuts to the Boston market.

☞One of the sublimest things in the world is plain truth.—*Bulwer.*



NEW LEICESTER SHEEP.

This valuable breed, in its improved condition, has been produced by the skill and perseverance of Robert Bakewell, Esquire, who ranks among the most distinguished of English breeders. He commenced his career as a breeder, about 100 years ago, and for a long course of years he pursued his design with that zeal and intelligence which is sure to lead to success.

Previous to his time this species of animals had been bred with a view to great size and large fleeces, without regard to symmetry, or the quality of fleece or flesh. Aptitude to fatten and early maturity were also minor considerations.

As Mr. Bakewell considered the careass the most valuable part of the sheep, this was made a leading object with him. Yet as this breed yields a large fleece, of tolerable fineness and of strong fibre, it is of considerable value; and we should recommend this breed where the fleece is a leading consideration. It is distinguished for compactness and symmetry of form; for early maturity; for its fattening propensities; and for the mixture of fat with the lean, having but little loose fat on the inside.

The following description of the new Leicester breed is from that excellent work by Morrell, the "American Shepherd."

The head should be hornless, long, small, tapering towards the muzzle, and projecting horizontally forwards. The eyes prominent, but with a quiet expression. The ears thin, rather long, and directed backwards. The neck full and broad at its base where it proceeds from the chest, but gradually tapering towards the head, and being particularly fine at the junction of the head and neck; the neck seeming to project straight from the chest, so that there is, with the slightest possible deviation, one continued horizontal line from the rump to the poll. The breast broad and full; the shoulders also broad and round, and no uneven or angular formation where the shoulders join either the neck or the back, particularly no rising of the withers, or hollow behind the situation of these bones. The arm fleshly through its whole extent, and even down to the knee. The bones of the leg small, standing wide apart, no looseness of skin about them, and comparatively bare of wool. The chest and barrel at once deep and round; the ribs forming a considerable arch from the spine, so, as in some cases, and especially when the animal is in good condition, to make the apparent width of the chest even greater than the depth. The barrel ribbed well home, no irregularity of line on the back or the belly, but, on the sides, the carcass very gradually diminishing in width towards the rump. The quarters long and full, and, as with the fore legs, the muscles extending down to the hock; the thighs also wide and full. The legs of moderate length, the pelt also moderately full, but soft and elastic, and covered with a good quantity of white wool, not so long as in some breeds, but considerably finer.

This valuable breed of sheep has been scattered over Great Britain, and they are found in various sections of the United States, and in the British provinces. They are adapted to lands tolerably fertile, though they do not require the luxuriant herbage of the Cotswold, and other larger breeds. And hilly lands with short pasturage, are better adapted to the South Down, Cheviot, and other smaller breeds, than to this race; for they are large and should not be compelled to travel far to gather their food.

In many sections of our country, the raising of new Leicester sheep for the market would be profitable, if particular attention should be paid to obtaining a good sized carcass and fat mutton, as such command high prices.

For the New England Farmer.

LAST DOCUMENT OF THE LATE HON. TIMOTHY PICKERING.

Mr. Editor:—Sir,—On looking over *old papers*, I find the following petition drafted by the late Timothy Pickering;—which is valuable, as containing *his views*, and interesting, as being the *last document* of a public nature, that he ever wrote. Having been present when it was written, I can bear testimony to the fact. If you think it worthy a place in your journal, it is at your service.

Very truly and respectfully yours,

J. W. Proctor.

Danvers, Dec. 20, 1850.

To the Honorable the Legislature of the Commonwealth of Massachusetts.

The Essex Agricultural Society respectfully represent,

That experience having convinced them of the utility of this, and similar institutions, in promoting improvements in husbandry, by the mutual communication of information, and the exhibition of successful results in practice;—and that premiums have materially contributed to produce those improvements, by exciting the desire to obtain the honors due to every kind of excellence;—while the pecuniary value of the premiums compensate, in some degree, the expense of time and money, in executing promising experiments;—and the pecuniary aid derived from the public treasury being a most important addition to their own funds;—the said society believing the public interest involved in the measure, have thought it to be their duty, to pray the legislature to renew, for such term as to its wisdom shall appear proper, the provisions heretofore made for this object; to encourage further improvements, in the most important of all arts, that on which human life, as well as human comfort, essentially depend.

Timothy Pickering, Benjamin Pickman, John W. Proctor, } *Committee of the Trustees.*

Salem, January 13, 1829.*

* Col. Pickering died at Salem, on the 29th of the same month of January, aged 83 years, 6 months, 12 days, having been sick about a fortnight, and this his first sickness; and the only occasion for using medicine for more than fifty years.

For the New England Farmer.

FATTENING SHEEP.

Mr. Editor:—Will you please to inform me from some practical feeder, the best mode of fattening sheep. Having on hand one hundred wethers of a superior quality, and never having fed any, I would respectfully inquire of you what kind of grain is best for them, what quantity to give them, and whether it is best to mix different kinds of grain or to keep them separate. Please inform me also whether water is important in feeding grain and hay. I make these requests in order to turn my feed to the best account. If you will insert in your next number an article from some practical man on this subject, or give me some information by mail, you will much oblige a practical farmer and one of your subscribers.

J. C. Sisson.

Hartford, Ct., Dec. 16, 1850.

Remarks.—Among the grains generally raised in this section of the country, Indian corn possesses the greatest fattening properties. This would doubtless be much more valuable for grinding, and cooking—making it into hasty-pudding—would also add much to its value. Sheep and cattle will fatten fast on ruta baga turnips, carrots, or parsnips.

If sheep are fed on cooked meal, in a moist state, or meal mixed with water, or on roots, they will need but little water, but if fed on dry fodder and grain or meal, they will need much water; under any course of feeding, we think they should have a good supply of pure water, and they should have constant access to it, to prevent their drinking to excess.

When animals are fed on oil meal, called also linseed oil cake, it should be soaked and diluted in water, and then it will create thirst, notwithstanding much water is taken with a small quantity. This substance possesses great fattening qualities, and, in small quantities, it keeps animals in good condition. It is only adapted to animals of hard fat, such as horses, cattle and sheep. It is not good for hogs, and probably not for fowls.

We copy the following articles on the fattening of sheep in cold weather, from a late work by Henry J. Canfield, Salem, Ohio:

In fattening sheep to the best advantage in winter, it is necessary that they should have good shelters, and that these shelters should often be supplied with fresh litter, so as to make them quiet and comfortable; and, also, that proper allowances of food, water, and condiments should be regularly supplied to them.

The observations of Mr. Spooner will illustrate this subject as follows: "Quietude and warmth contribute greatly to the fattening process. This is a fact which has not only been developed by science, but proved by actual practice. The manner in which these agents operate, is simple, and easily explained. Motion increases respiration, and the excess of oxygen thus taken, requires an increased quantity of carbon, which would otherwise be expended in producing fat. So, likewise, *cold robs the system of animal heat;* to supply which, more oxygen and more carbon must be employed in extra combustion, to restore the diminution of temperature. Nature enforces the restoration of warmth, by causing cold to produce both hunger and a disposition for motion, supplying carbon by the gratification of the former, and oxygen by the indulgence of the latter. The above facts are illustrated by Lord Ducie:

"One hundred sheep were placed in a shed, and ate twenty pounds of Swedish turnips each, per day; whilst another hundred, in the open air, ate twenty-five pounds each, and at the rate of a certain period, the former animals weighed each thirty pounds more than the latter; plainly showing that, to a certain extent, *warmth is a substitute for food.* This was also proved, by the same nobleman, in other experiments, which also illustrated the effect of exercise.

No. 1. Five sheep were fed in the open air, between the 21st of November, and the 1st of December. They consumed ninety pounds of food per day, the temperature being 44 deg.; at the end of this time, they weighed two pounds less, than when first exposed.

No. 2. Five sheep were placed under shelter, and allowed to run at a temperature of 49 deg.; they consumed at first eighty-two pounds, then seventy pounds per day, and increased in weight twenty-three pounds.

No. 3. Five sheep were placed in the same shed, but not allowed any exercise; they ate at first sixty-four pounds, then fifty-eight pounds, and increased in weight thirty pounds.

No. 4. Five sheep were kept in the dark, quiet and covered; they ate thirty-five pounds per day, and increased in weight eight pounds."

A similar experiment was tried by Mr. Childers. M. P. He states, that eighty Leicester sheep, in the open field, consumed fifty baskets of cut turnips per day, besides oil cake. On putting them in a shed, they were immediately able to consume only thirty baskets, and soon after but 25, being only one-half the quantity required before; and yet they fattened as rapidly, as when eating the largest quantity.

From these experiments, it appears, that the least quantity of food, which is required for fattening, is, when animals are kept closely confined in warm shelters; and the greatest quantity, when running at large exposed to all weather. But, although animals will fatten faster for a certain time, without exercise than with it, if they are closely confined for any considerable time, and are at the same time full fed, they become, in some measure, feverish; the proportion of fat becomes too large, and the meat is not so palateable and healthy, as when they are allowed moderate exercise, in yards or small fields.

As to the kinds of food which may be used most advantageously in fattening, this will generally depend upon what is raised upon the farm, it being preferable, in most cases, to use the produce of the farm. Sheep prefer beans to almost any other grain; but neither beans or peas are so fattening, as some other grains; and are used most advantageously along with them. Beans, peas, oats, barely, rye, buckwheat, &c., may be used along with Indian corn, or oil cake or succulent food, making various changes, and mixtures, in order to furnish the variety of food, which is so much relished by the sheep, and which should ever be attended to by the sheep fattener. This will prevent their being cloyed, and will hasten the fattening process. A variety of food, (says Mr. Spooner) operates like cookery in the human subject, enabling more sustenance to be taken.

The quantity of grain or succulent food, which it will be proper to feed, will depend upon the size, age and condition of the sheep, and judgment must be used, in ascertaining how much they can bear. Mr. Childers states that sheep (New Leicester) fed with the addition of half a pint of barley per sheep, per day; half a pound of linseed oil cake, with hay, and a constant supply of salt, became ready for the butcher in ten weeks; and gain of flesh and tallow, thirty-three pounds to forty pounds per head. (One sheep gained fifty-five pounds in twelve weeks.)

This experiment shows what is about the largest amount of grain which it is necessary or proper to feed to New Leicester sheep, at any time while fattening. The average weight of forty New Leicester wethers before fattening, was found by Mr. Childers to be one hundred and twenty-eight pounds each. By weighing an average lot of any other kind of sheep, which are to be fattened, and by reference to the table of comparative nutriment of the different kinds of food, a calculation may be readily made, as to the largest amount, which will be necessary for them, of any article of food whatever.

When sheep are first put up for fattening, they should be sorted, when convenient, so as to put those of the same age, size, and condition, each by themselves, so that each may have a fair chance to obtain its proportion of food, and may be fed the proper length of time.

They should be fed moderately at first, gradually increasing the quantity to the largest amount, and making the proper changes of food, so as not to cloy them, nor produce acute diseases of the head or intestines, and never feeding so much as to scour them.

Sheep, when fattening, should not be fed oftener than three times a day, viz: morning, noon, and evening. In the intervals between feeding, they may fill themselves well, and will have time sufficient for rumination and digestion; these processes are interrupted by too frequent feeding. But they should be fed with regularity, both as to the quantity of food, and the time when it is given. When convenient, they should have access to water at all times; otherwise a full supply of it should be furnished to them immediately after they have consumed each foddering.

When sheep become extremely fat, whether purposely or not, it is generally expedient to slaughter them. Permitting animals to become alternately very fat and lean is injurious to all stock. Therefore, if animals are too strongly inclined to fatten at an age when wanted for breeding, their condition as to flesh should be regulated by the quantity and quality of their food or pasture.

For the New England Farmer.

VENTILATION OF POULTRY HOUSES.

Mr. Cole:—At this season of the year when the domestic poultry is put into winter quarters a few remarks upon the importance of ventilation in poultry houses may not be out of place.

Many persons have, within the past year, erected poultry houses with the view of keeping their poultry so warm and *comfortable* that their hens *must* lay eggs during the coldest weather; but in the construction of their houses they have overlooked or forgotten that ventilation is quite as necessary as warmth, for the health and comfort of fowls.

A few weeks since a person residing in the vicinity of this city, who has erected an ornamental and commodious house for his poultry, complained to me, that for the last month his hens had not furnished him with any eggs, although he supplied them with all kinds of grain, animal food, gravel, lime, water, &c.

The poultry house was so constructed that the fowls had the benefit of the sun whenever it shone, the southern side of the house being of glass. The floor was laid in cement so that no vermin could enter it, and covered with gravel several inches thick, and to guard against the cold the house was made as tight as possible. Notwithstanding these cautions the fowls did not thrive, for the simple cause; their owner had neglected ventilation. He has since made two ventilators, one at each end of his building, the fowls have begun to lay and now furnish as many eggs as their owner needs for the use of his family.

With regard to the management of domestic fowls,

their food &c., I can do no better than state the method adopted by Mr. A. H. Gilman of Portland, Maine.

Mr. Gilman is a person possessing good taste and an enlightened and liberal mind, and by judicious selections, is in possession of superior specimens of the best kinds of fowls in the country. The fowls exhibited by him at the late show of the New England Society for the improvement of domestic poultry, give evidence of the skill and care bestowed upon them. There were but few, very few fowls at that exhibition which equalled those shown by Mr. Gilman, and there were none that excelled them. The system pursued by Mr. Gilman in the management of his fowls is most excellent. His poultry house is so constructed that each kind or breed of fowls have separate roosting places under the same roof, and a separate yard or walk, so that there is no chance of one breed being crossed by another.

The house is perfectly ventilated, having been built by Mr. Gilman, after a plan conceived by himself. The lower story is without floor, and in it are placed the nests, separated into wards for the different breeds, each ward opening to its respective walk or yard. A hen ladder extends from each ward to the corresponding roosting place in the second story. The floor of the second story does not extend to the ends and sides of the building, but the space of one foot is left uncovered for the purpose of securing good ventilation. The yards or walks are covered in part with gravel, and each yard has plat of grass growing in it.

Each yard is furnished with a constant supply of water and all kinds of grain, vegetable and animal food; lime and pulverized bones are always within the reach of the fowls. The house and yards are carefully swept, and every particle of excrement and filth is removed daily, and the building and fences are washed with a solution of lime every week.

Whenever the hens show an inclination to incubate, their desires are gratified, and when convenient each hen incubates her own eggs.

By pursuing this course Mr. Gilman has been amply repaid for the care and attention he has devoted to his fowls, and has the satisfaction of being more successful in rearing the different breeds in his possession, than most of the breeders and fanciers have been. I have been thus particular in describing the system adopted by Mr. Gilman, in the hope that others will pursue it, and find it as advantageous to them as it has been to him.

Yours, &c. S. Bradford Morse, Jr.

Remarks.—It is for want of ventilation, that fowls are so often affected with the roup, or catarrh, which is a very severe, and frequently a fatal disorder. We sometimes take the roost out of our poultry house in summer, and make the fowls roost out door, with some boards over them to keep off the storms. This gives them a free air, as the boards over them does not impede the circulation.

☞ One of the most remarkable facts in the diet of mankind, is the enormous consumption of tea and coffee. Upwards of 800,000,000 pounds of these articles are annually consumed by the inhabitants of the world.

For the New England Farmer.

CULTIVATION OF CRANBERRIES.

Mr. Editor:—Dear sir—Much has been said and written on the subject of raising that delicious fruit that is now considered an indispensable article in every family, the *cranberry*. Having taken particular notice of the plant and its fruit for the last three years, I will make some remarks, as they have occurred to me. It has been often said that it was advisable to flow the meadows or bogs to get a good crop. Now my experience has not proved it to be useful to flow the meadows. I have found that the fruit has been better, and less liable to be injured by frost, when it was not covered with water during the fall, winter and spring.

I have come to the conclusion that it only makes the vines tender, as the water is usually drawn off in April, or the first of May; and in such meadows the vines are put back, and if not injured in blossom, are likely to be injured when the fruit is green in September. I have never known the fruit injured on the upland or meadows where the water did not stand. But my fruit never escapes injury from the frost on my low meadows, especially when in wet and unfavorable seasons the water remains on the meadow late, and it is flowed in time of freshets. So I prefer not to have my cranberry plats covered with water any part of the season.

Since I have drained my meadows, I have more than doubled the quantity of fruit, and if I could prevent the water from coming on at all, I think I should have no cranberries injured by the frost. I have furthermore observed that when I spread sand or mud on the meadows, the vines grow much stouter and the berries larger; also on the edges and banks of ditches I find the best fruit, and more of it, without injury from heat or cold. I think the more cranberries are cared for by spreading mud, sand or gravel on the vines (I mean a slight coat so as to cover the old dead grass and stubble,) the greater and safer will be the yield. It appears to me that they want cultivating as much as corn or potatoes.

Yours most truly, S. A. Shurtleff.

Spring Grove, Dec. 2, 1850.

Remarks.—The subject presented by Dr. Shurtleff is very important. Some cranberry growers continue the water upon their vines till the first of May, in order to retard the season of blossoming until the weather has become permanently warm. The evil effects of their course is shown by the above interesting communication.

We now present to cranberry growers a very important subject for investigation. Will cranberries flourish as well without being covered with water in the winter? A few years ago, Dr. Brown, of Wilmington, showed to us his cranberry grounds, which were flowed by a mill pond in winter. He showed the line to which the water flowed in the winter, and there were cranberry vines above and below that line. Below the line there was an excellent crop of fruit, even on extremely poor, dry and gravelly soil; but above the line of water there was no fruit. We solicit facts on this subject. Ed.

For the New England Farmer.

HUSK BEDS.

No one who has not tried them, knows the value of husk beds. Straw and mattrasses would be entirely done away with, if husk beds were once tried. They are not only more pliable than mattrasses, but are more durable. The first cost is but trifling. To have husks nice they may be split after the manner of splitting straw for braiding. The finer they are split the softer will be the bed, although they will not be likely to last as long as when they are put in whole. Three barrels full, well stowed in, will fill a good sized tick, that is, after they have been split. The bed will always be light, the husks do not become matted down like feathers, and they are certainly more healthy to sleep on.

Feather beds ought to be done away with, especially in warm weather. For spring, summer and fall, husk beds ought to be "all the go," and such undoubtedly will be the case, when they are once brought into use. There is no better time to procure husks than when corn is being harvested, and the husks will be much nicer and cleaner when corn is cut up at the bottom, and put in stooks. They do not become so dry and weather-beaten. It is calculated that a good husk bed will last from twenty-five to thirty years. Every farmer's daughter can supply herself with beds (against time of need) at a trifling expense, which is quite an inducement now-a-days,

Smithfield, R. I. A. T.

Remarks.—As the article here recommended, is valuable, as attested by many who have tried it, the subject should receive more attention, particularly as it is abundant on every farm, and of trifling value for other purposes, compared to its value for beds. It is clean, wholesome, cheap, and excellent; much superior in many respects to foreign high-priced articles. Ed.

For the New England Farmer.

CARROTS FOR HORSES.

S. W. Cole, Esq. :—*Sir*—I observe an article in the N. E. Farmer of last week, on the nutritive qualities of carrots, as winter food for horses; a circumstance which does not appear to be generally understood among farmers and others keeping horses. In some districts of Scotland, especially Aberdeenshire, and the light sandy countries on the eastern coast, carrots are grown entirely as food for horses, and are a very abundant and profitable crop, producing from twenty-five to thirty tons per acre, and farmers can afford to keep their horses in excellent condition on carrots and hay, who could not afford to give them any thing else.

This species of food however, is not confined to farmers alone, as richer gentlemen's carriage and riding horses are similarly fed. And, as your article states, the horses fed in this way have a finer appearance, and better health, than those fed on oats or other kind of grain. And many gentlemen give their horses a daily supply of carrots, solely with the view of keeping the hide soft, and the hair glossy and smooth.

The way in which they are prepared for the horses is somewhat as follows : The carrots are topped, washed, and cut up with a turnip cutter, (when one is on the farm, if not they are cut up in pieces with the hand,) then mixed with equal portions of cut hay, and scalded, or what is better, on some farms they are steamed, a quantity of salt is mixed to season the food and when cool it is given to the horses in the requisite quantities. I have known many horses which were fed every winter on this kind of food, and healthier and better looking horses could not be found.

In some places on the eastern sea shores of Britain, large crops of carrots are grown in the drifted sand, and are the finest carrots that are met with in the markets, and though the drought may be greater here in summer, I still think that much more land could be profitably cropped with carrots, than is generally done. The light soils in many parts of New England are well suited to this crop, but there may be obstacles to their culture with which I am not acquainted.

Yours respectfully, R. B. Leuchars.

Remarks.—Carrots are not very liable to suffer from drought in this country. They will probably endure drought as well as any other crop, and much better than some crops. They may be cultivated to advantage on dry lands, even in dry summers, if the land be subsoiled. This process will enable the root to penetrate the soil deeply, so that there will be a constant supply of moisture.

For the New England Farmer.

FLOWERS, THEIR INFLUENCE, &C.

Mr. Editor :—It is a prevailing opinion among a certain class of farmers, that the cultivation of flowers is fit only for ladies, and beneath the notice of any man of business or enterprise. From this, I must beg leave to dissent. I am ready to admit the superior taste and skill of the ladies in this department of horticulture, but I am not willing to grant them exclusive jurisdiction; neither do I perceive wherein man lowers his dignity, in cultivating what it was not beneath a God to create in such infinite variety. While we have the sentiment of ideality implanted within us, I hold it to be as much our duty to afford the means for its gratification, as it is to furnish ourselves with food. Not that I undervalue the every day labor of the farmer, far from it; but every farmer has sufficient leisure to cultivate, and ample space for, a few flowers of easy culture, which may be obtained with little or no expense from the forests and meadows, or from the gardens of his neighbors; and by the way, those whose grounds are ornamented with flowers, are almost invariably not only willing, but happy to furnish plants and seeds to those who will take the trouble to cultivate them.

I have seldom known it fail, that those who consider floriculture beneath their notice, annually allow a space amply sufficient for a fine variety of the most beautiful flowers, to be occupied by the most worthless weeds, and sometimes even *plant* their gardens, in part, with that poisonous weed, tobacco, and employ an hour or two in a day in smoking or lounging about. Now is there any one who will deny that a well regulated patch of flowers is a greater ornament to a garden than this strange confusion of weeds, briars and tobacco? And permit me to ask, would it not be much more conducive to both physical and mental health, and ac-

tivity, besides being a much more agreeable employment to occupy half an hour in a day in planting and attending to these flowers, than to doze it away in your chair or in the shade?

The influence, too, which flowers exert on the character is not to be overlooked. The Grecians and Romans, it is said, attributed much of the greatness of their best orators to the influence of the sublime and beautiful scenery by which they were surrounded in youth; and to the mingling of the sublime and beautiful, in the scenery of the new world, some have ascribed much of the eloquence of our own land. Nature has certainly done enough for New England in her lofty mountains and deep valleys, and all that she requires to complete the scene, is the hand of taste to exhibit itself in the decorations of her gardens, and country residences.

But the influence of flowers, in refining and elevating the moral character, is more plainly visible, especially with children. Let parents surround their dwellings with flowers and shrubs, and arrange them in a neat and orderly manner, and my word for it their children will generally prefer watching their growth and admiring their beauty to mischievous pranks and quarreling with each other.

Another inducement to the farmer offered by floriculture, is the superior knowledge of the laws by which nature regulates the growth and perfection of plants, which he gains by a close observation of the various causes operating to increase or retard the growth of those of all varieties, from the most tender to the most hardy, which will necessarily attract his attention.

I might add much more of a similar nature, but I will not trespass further on your patience at this time. I may however in a future number give some directions for transplanting wild flowers and the selection of hardy varieties of cultivated plants to aid those whose experience is less than mine.

Ashfield, Dec. 23. W. F. B.

Remarks.—As nothing is made in vain, flowers are for some valuable purpose, and what can that purpose be but to be admired for their beauty, their fine colors and fine forms, their beautiful structure, order, regularity, and symmetry, affording delight and instruction to those who cultivate them and study their nature, and their numerous metamorphoses and novel productions under the plastic hand of skilful culture.

For the New England Farmer.

"EFFECTS OF FOOD ON MILK."

Mr. Editor:—Your correspondent, Mr. Weeks, (Vol. 2, p. 381,) wishes to know how to prevent milk tasting of turnips, &c., when cows are fed on them. That the food of cows has an influence on their milk and butter must be conceded. I have known oxen brought from the interior, and on eating freely of salt hay, and being slaughtered soon, the beef had a very disagreeable taste; while cattle kept near the sea, and fed on all kinds of fodder, and as much as they could eat of salt hay, made the very best of beef. A full and sudden change of food will affect both milk and beef, while a gradual change will have no effect on either.

I once fatted a young cow on cabbage. I was told that the beef would taste of the food. A few days previous to slaughtering her, I fed her on hay, potatoes, and a little Indian meal. The beef was excellent.

A cow or horse may eat any quantity of apples or potatoes, with other food, if gradually accustomed to them. But if freely fed on these articles at once, they would be ruinous.

Yours, &c. M. French.

East Salisbury, Dec., 1850.

Remarks.—By milking cows, and then feeding with turnips, &c., so that they may eat them as long as possible before milking, there will be less influence of the food on the milk. The free use of salt on roots fed to cows, will in some measure prevent unpleasant taste in the milk.

SHRINKAGE OF CORN.

Knowing that a great difference of opinion exists among farmers, as to the loss of corn by shrinking or drying, from the time it is cribbed in the fall, till spring—say the latter part of March, I determined to satisfy myself on this point—at least so far as a single experiment could determine.

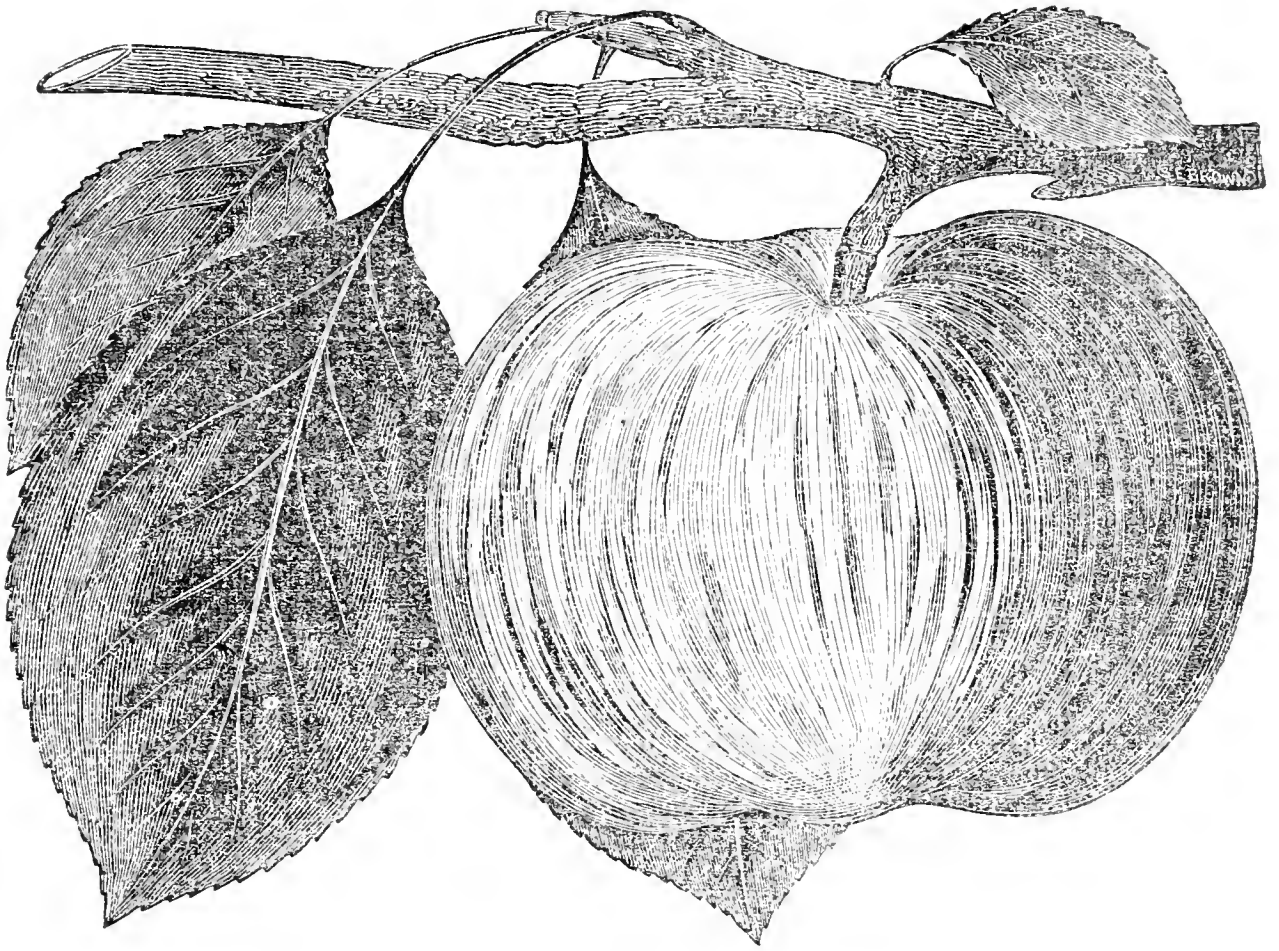
On the 23d of November last, the day on which we finished the husking, I measured two bushels of ears in a standard bushel, as accurately as I could. I then weighed each bushel, found the weights 43 1-2 lbs. respectively. The number of ears, 58 in one, and 50 in the other. I had one parcel shelled and got 33 1-2 lbs. by weight, and half a bushel and half a peek by measure, and 10 lbs. of cobs. The corn was spread in a dry, airy place, where it remained till a few days since when it had lost just half a peek or fifteen per cent. by measure, and a fraction over 3 lbs. or ten per cent. in weight.

This shows a difference of ten per cent., between the loss by weight. How is this difference to be accounted for? It was owing to the minute division of the water in the corn, that while we find a loss in weight that should occupy a space less than three pints, there is an actual loss of eight pints in bulk. The cobs of this parcel were accidentally destroyed; so that I was prevented from ascertaining the loss of cob.

The other bushel of ears was kept in a dry, airy place, and shelled a few days ago, and gave just a half a bushel of corn, weighing 30 1-4 lbs.

These are the facts, as gathered from my small experiment. The corn was a variety of the white, between the Gourd seed and Flint—a mixed variety having from ten to twenty-six rows. The corn was in good condition for housing at the time we finished husking.—*Albany Cultivator.*

Consumption in Horses.—Mr. Percival, the English veterinarian, says, "*pulmonary disorders carry off more than all other diseases.*" Though this is probably an over-estimate of mortality from that source, when we consider how much sudden changes of temperature and checked perspiration injure man, why may we not suppose that many horses are killed by it, and hence we should perceive and act upon the propriety of attending more to the condition of the horse when turned out or otherwise exposed to sudden change from heat to cold. The Spaniards have a saying that a *draft* of air "that will blow out a candle will kill a man;" but we think nothing of putting a horse, however much heated, in a stable with a draught of cold air coming on him from without.



GRAVENSTEIN APPLE.

This is one of the handsomest and best apples cultivated in this country, and one of the very few foreign kinds that are worthy of general cultivation. The Gravenstein originated in Holstein, Germany, and it received its name from the castle in which it was found. It is regarded as the finest apple in its native country, it is also very popular in England. It flourishes well in nearly all parts of this country, where the apple is cultivated.

The Gravenstein is an early fall apple in this section, but in the North it is a late fall and early winter fruit, and it seems admirably adapted to the North. Colonel Henry Little, of Bangor, Me., well known for his zeal and intelligence as a pomologist, informed us, that he grafted a tree to this kind, and in ten years it produced twenty bushels of exeellent fruit, that kept till early winter.

This variety is a very good grower, and it forms a large handsome tree, it is also very productive. The fruit comes in at the same time as the Porter, a very popular apple in this market, and like that variety, it combines properties both for the dessert and kitchen. But it has some advantages over the Porter. It is a better grower, and although it ripens about as early, it keeps longer, and it is not likely to assume a bad appearance from bruising like the Porter.

The Gravenstein is large; flattish-round; the skin very smooth and fair, of a white yellow ground, mostly covered with brilliant red, generally in stripes; stem short, rather stout, in a deep, rather broad, and somewhat uneven cavity; calyx, large, open, in a wide, deep uneven basin; flesh whitish, very juicy, crisp, of a high sprightly, vinous flavor; rather acid early in the season, but when fully ripe and mellow, it becomes mild and pleasant. It is excellent both for the table and for cooking. In use during September and October, in this region.

CARE OF HORSES.

To go fully into this subject, would require a whole volume, yet a few hints may be useful to some of our readers. Those persons who are constantly taking care of horses, are generally faithful and intelligent, and manage well. The horse is most neglected by the farmer who, in the winter, has but little for him to do, and spends but little time—often too little—in taking care of him.

The standing of the horse is too much neglected, or this subject is not judiciously managed either by the professed groom or the farmer. The horse is often allowed to stand in the stable, on a hard floor, with his fore feet considerably higher than his hind ones, constantly straining his muscles. The floor on which horses stand, should only slant one or one and a half inches in eight or nine feet, barely enough to conduct off the liquid manure.

Some farmers turn their horses into a pen, and let them stand as they please. This is a good ar-

rangement, as they can move about, and stand at ease; and by standing on the manure which is moist and soft to their feet, they are much less liable to injuries in the feet than horses that stand on hard floors. By this arrangement a horse may eat from a trough by the barn floor, so as to breathe freely of pure air. But with this plan, it is necessary to level the manure frequently where the horse stands to eat, else it will accumulate under his hind feet and give him an uneasy position.

Horses should be curried and brushed down daily. This is as necessary as it is for a person to wash his face and hands daily. It is not only necessary to comfort, but to permanent health.

Horses should have a good supply of pure water. Farmers often consult their own convenience in supplying this, to the serious injury of their horses. The animal comes home rather late in the evening, warm, and perhaps sweaty, and in that condition he is supplied with cold water, as the hour for retiring for the night is at hand, and to water the horse, as the saying is, after he has become cool, would be very inconvenient. To avoid so great an evil as giving cold water to a warm horse in winter when his labor is over, give him water when he is about to return, if convenient; if not, wait till the horse has become cool, after returning home, and turn him to the water, or if more convenient carry some to the stable. If a little hot water can be added to the cold, he may have drink without waiting; or moistened food may be given to him, so that water will not be so necessary.

There is one thing in which many farmers are negligent in the care of their horses. They feed their whole stock early in the evening, and they do not go to the barn again for the night. When the horse has eaten his supper of dry fodder, he is very thirsty, but he has no drink, and suffers greatly for want of it. The next morning his thirst has abated, by an equalization of moisture in the system, and he has become hungry, and is looking for his breakfast, so he will not drink frequently, in the morning, though water is offered. It is but little trouble to turn the horse to water, about nine o'clock in the evening, and it should be attended to. If the food be cut and moistened, as now practised by many, it will be, in a great measure, a remedy for the evil.

When the horse is out keep him well covered, while standing in the cold, especially after hard driving, or when warm; and put a blanket on him on being put into the stable when sweating. Never wash a horse's legs in cold water when he is warm, not even in hot weather. Cold water may be used for inflammations, but only when the horse is still and cool.

American Axes are so much superior to the British that they are sent to Liverpool, and sold in competition with the English manufacturer.

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 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
Deducting for, picking one fourth	80 00	
All other expenses for setting, interest, &c.,	40 00	
	——	120 00
Net profit,		200 00

Edward Thatcher.

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, and 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 oversupply. 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.—*Berkshire Culturist.*

PROPER TIME FOR FELLING TIMBER.

Mr. William Painter, of Concordville, Pa., in a letter written for the Patent Office Report, says: "During an experience of more than forty years as a plain practical farmer, I have taken much interest in ascertaining the best season for felling timber; and I now state, with much confidence, that fencing timber, such as all kinds of oak, chesnut, red hickory, and walnut, cut from the middle of July to the last of August, will last more than twice as long as when cut in winter, or common barking time in spring. For instance cut a sapling, say five or six inches in diameter, for a lever, in the month of August, and another of a similar size and quality, in winter or spring, and I *know* that if the first is stripped of its bark (which at that time runs well, it will raise as a lever, at least *twice* the weight that can be raised by the latter."

Statements like the above, made by reputable men who can have no motive to misrepresent facts, are always entitled to a respectable consideration. Why should a green "sapling, six inches in diameter, cut in August," be any stronger after it is well seasoned, then it would be cut in winter or spring?

While we doubt the fact of the difference being so great as Mr. Painter thinks that he has good reason to believe it to be, we do not question that there is *some* difference. The woody fibres of the tree are the same in August and in winter and spring. the new layer of wood, *alburnum*, is thin and comparatively small, and most of this is deposited before August. The proportion of sap or water in a green tree, varies but little in different seasons of the year, as compared with its dry matter. What, then, is the exact difference in timber in autumn and in spring, after a tree has put forth its leaves, and its terminal branches are rapidly extending by the deposition of the new wood? When is the matter organized which flows as *sugar* dissolved in water, from the sugar-tree in the spring, before even the buds begin to swell? In what condition, and in what place does the saccharine substance spend the time from autumn till March? Mulder, in his valuable work on the "Chemistry of Vegetable and Animal Physiology," says that all sugar is first formed into starch from carbon and water; and that it is from this starch that both sugar and new wood, in spring, are produced. We are aware that other chemists have taken a different view of this subject, but we believe that Mulder is right. We know that fat in animals is a sort of store-house of fuel which the animal can burn when its food is lacking or deficient to maintain vital warmth. Potatoes, and many other plants possess unequal quantities of starch at different periods and under different circumstances. A green sapling in the spring, has all its starch and *albumen*, or the raw material for making a vast number of leaves, much new wood, and its tissues, in which nitrogen is consumed, taken out of its trunk and distributed in thousand of branches, and in terminal buds. That the trunk should be a little weaker when thus deprived of all its soluble solids, is no more than we might reasonably expect. To transform starch, which is insoluble, into soluble dextrine, sugar or gum, is the effect of the first warmth of spring, or winter, for in many States maple sugar is made in January and February.

If the above view of this interesting question is founded on true physiological principles, as we believe it is, then the best time to fell a tree is after it has ceased to grow in autumn, and prepared, like a fat bear in the fall, a good supply of starch and nitrogenous compounds, in all its sap-tissues, for use when it is ready to put forth a new covering of luxuriant foliage. There is strength in the elements of forest leaves, and these elements while deposited in the cells of sap-wood, if dried therein, increase its durability. Dry rot is a fungus which destroys a great deal of ship and other timber. Whatever operates to exclude atmospheric air, tends to prevent this malady. Several minerals, like copperas, corrosive sublimate and blue vitriol, will kill the fungus called "dry-rot." Exclude oxygen from wood and it cannot decay. Painting preserves it on this principle.—*Genesee Farmer.*

Remarks.—This is a subject on which we have had line upon line, and various opinions founded on experiments which have given different results; and yet, the subject is not definitely settled. We have often heard a very intelligent carpenter say that timber cut in June, when the bark runs freely, is better, and heavier for plain stocks, than that cut in any other season. He also observes, that he found such timber very durable. But the timber that he used was in small pieces, and it was thoroughly seasoned, so that it was not liable to dry-rot, like large timber that is not readily seasoned.—Ed.

DOMESTICATING FOWLS.

Mr. Freas:—To render poultry raising profitable, it is essential that great care and circumspection be exercised, not only in the selection of valuable "breeds," but in feeding and rearing the young. If the raiser is remiss in these points, no profit will result from the enterprise, and as a general thing he will, to adopt an old adage—"Have his labor for his pains."

There is a vast difference in fowls, and while some are hardy and profitable, others are weakly and scarcely pay their way under the most favorable circumstances, and the best management possible to bestow. It is always a judicious plan for the farmer to keep a number of fowls, of some kind, upon his premises, as there is always enough waste or refuse matter to feed them, and beside, they are serviceable in protecting the crops by destroying the numerous insectiverous depredators, which in the

spring and summer months prey so voraciously on the youthful and more tender plants.

A hen with a dozen chickens—the hen being confined in a coop, and the coop placed in the vicinity of the kitchen garden, will do more to secure the preservation of the vegetables than a man; they not only keep the insects from destroying the tissues of the plants, but they annihilate the insects themselves, and convert them into a source of profit instead of a loss by devouring them as food. When one is suitably located, the keeping of all kinds of fowls—hens, turkeys, ducks, geese, &c., will be found profitable. It will bring many dollars in the course of the season, and ensure a constant and liberal supply of eggs and poultry for domestic use. These products always command a ready sale and a high price in most of the markets of this country, and bring cash, where little can be obtained for the products of the field. In the New England States, and especially in Maine the egg and poultry business has attained a degree of consideration and importance to which, probably, it has not reached in any other State of the Union. Standing in the door-way of a shop in one of the interior villages of the latter State, a large load passed, and on inquiring the character of the lading, I was informed that it consisted of 26,000 dozen of hen's eggs. They were going to the Portland market, and thence probably, to the cities of the west.

A New Englander.

Near Claremont, N. H., Nov. 10, 1850.

Germantown Telegraph.

A PROFITABLE CROP OF CORN.

We often hear it said that Indian corn is not a profitable crop in this part of the United States. Undoubtedly there are many fields of corn not only in New England, but in every part of the Union, which if debt and credit were kept with them, it would be found that they run their owners in debt, but in most cases it is the fault of the owners rather than that of the corn.

In conversation, not long since, with Samuel Moody, Esq., of Lisbon, well known in his section of the State as a careful business man and successful farmer, he related the results of his labors this past summer in raising corn.

He had come into possession of a piece of land containing twenty acres—some part of which, say one-half, cost him thirty dollars per acre. It was a warm loamy soil; he ploughed it up and manured it well, and planted it to corn, last spring, or rather summer, for the season was so wet that he did not finish planting till June. He hoed it well twice. In the fall he gathered it, husking or picking the ears in the field, leaving the stalks and husks to be ploughed in again. From this field he gathered *nineteen hundred bushels* of good, sound ears of corn. There can be no doubt that each bushel of ears would make half a bushel of shelled corn. At any rate, it will be safe to say that there are eight hundred bushels of good, sound, shelled corn. Mr. Moody says that reckoning the price of the corn at its present market value in his neighborhood, it will pay him for what he gave for the land, pay him the interest on this cost—pay the taxes, pay for the manure and all the labor attending the crop, except the hauling of the manure. This, all will allow is a profitable crop of corn.

He is trying the experiment of burying the stalks and husks again in the soil, by the aid of the plough, and thinks he can convert them into suitable manure for his crop, at a cheaper rate than by the ordinary process of feeding them out to his cattle. We know of one or two farmers who pursue this mode, and think it a very good plan. Perhaps it may do better than the ordinary method, which is to toss them over to the cattle the first part of the winter, who eat a part, and tread the greater part under foot. Yet there is a good deal of nourishment in this kind of fodder, if one had time to pass it through a straw cutter, and then subject it to the softening process of steam or warm water. Corn has done extremely well during the past season, all over the State, and yet we hardly know when it grew. The spring was very wet, and it was consequently put in very late. The summer was, in the main, a wet and cool summer,—and yet the corn pushed along, and, as the autumn was mild with but little frost, corn ripened off well.—*Maine Farmer.*

PIPES FOR WATER.

Eds. Cultivator:—I noticed in the July number of the Cultivator the inquiries of a correspondent, desiring information on the subject of laying water-lime pipe to conduct water for common watering purposes, and asking what were the advantages and disadvantages of this kind of pipe as compared with lead pipe, I could say nothing from personal experience, never having used any; but should suppose from observation that water-lime pipe was superior to lead for all ordinary purposes, where it is practicable to make it,—having the advantage of cheapness in construction and durability, if nothing else.

I have had some experience in making water-lime pipes, and can recommend them to any one who wishes to lay them, as being both cheap and durable. I will give my plan for making this kind of pipe, which I think is as good as any, or at least I know of no better. The tools necessary for this purpose are a common brick trowel, and a mould, the size you want the bore of the pipe. This should be turned in a lathe perfectly smooth and round, and of equal diameter at each end. Its length should be about two feet and a half, with a handle turned on one end, smaller than the rest, to draw by. The materials necessary in making the pipe, are good water-lime and coarse sand—the coarser the better, if sifted from the coarser pebbles. Have your drain dug to eighteen inches wide at the bottom so that there may be room to work with ease. In the middle of this drain dig a trench about four inches deep and from three to five inches wide, according to the size of the bore of the pipe, with a rounded bottom, if you choose, to save mortar. The advantage this trench has over the ordinary way of laying the pipe on the level with the bottom of the main drain will be seen at once. By using the trench you save considerable mortar, and the necessity for waiting for the mortar to dry before drawing the mould. If it were laid on the level, it would be necessary to wait for it to stiffen before you drew the mould, or it would flatten out. Mix your mortar, one part lime and three parts sand; make it as stiff as you can and have it spread well.

When you are ready to lay your pipe, commence by spreading a layer of mortar an inch or an inch and a half thick, in the bottom of the trench. This should be spread only the length of the mould at a

time. Lay the mould on this spreading of mortar, and then spread the mortar on the top and sides of the mould; press it down tightly, so as to fit the mould, on all sides; smooth it off with the trowel on top, and lay down another spreading of mortar; then take hold of the handle of the mould and roll it around so as to start it loose, and draw it out to within three inches of the end,—spread on another layer of mortar, and smooth it as before. So keep doing, until you have your pipe the length required. Be careful that you don't press with your trowel on the pipe above the end of the mould, or it may cause it to cave in, especially if the bore of the pipe be large. Let the pipe remain three or four days, until it gets hard and dry; then cover it up with earth. Be careful and not let any large stones fall on the pipe,—they will be apt to crack it. A pipe properly made in this way, will remain perfect as long as it is kept from the frost. R. A. Hutchinson. *Geneva, July* 29, 1850.

Albany Cultivator.

TO PREVENT SMUT.

Messrs. Editors :—I will give you my experience in preventing smut. About twelve years ago, on my farm in Brighton, I raised a field of wheat of about five acres, which was so smutty that I thought it would not pay for threshing; so I fed it out. But, as a matter of experiment, I threshed enough to sow the same field again. I soaked it all night in water strong with salt, and stirred it up and skimmed off all the smut and shrunk wheat that rose to the top. In the morning I rolled it in fresh slaked lime, and sowed it on the same field where it had grown; and I did not discover a head of smut in the field. I was much troubled with smut before this, having to wash most of my wheat before grinding; but since I have pursued this course, I scarcely ever see a head of smut in my fields. My neighbor, Mathew Dryer, was troubled in the same way—pursued the same course for two or three years—and got rid of the smut. These are facts, and important facts for the farmer. The question whether smut is caused by a *bug*, or some other cause, although a very interesting subject of inquiry to the curious, is of very little practical consequence as long as we know an effectual remedy, easily applied, and within the reach of all. I should of course prefer to sow clean wheat, if I could procure it readily; but I should sow smutty wheat that had been limed and brined in the way I have mentioned, with perfect confidence that the vitality of the smut had been destroyed, and that its effects would not be seen in the next crop. This confidence has been gained by my own experience, and my observation of its success among my neighbors. I had tried various remedies previous to this.—*Genesee Farmer.*

Brighton, N. Y., Hiram Robbins.

IDIOCY.

Dr. Enos Stevens, examining agent for the Massachusetts commissioners for the prevention and cure of idiocy has a manuscript work wherein occurs the following:—

"At Cambridge poor house, there are three well-formed and strong brothers, whose names are Joseph Cox, 23 years old, George Cox, 20, and William Cox, 18. These are all the children their mother had,—their father was a respectable mechanic, and has a very intelligent child by a second wife. The mother of those idiotic boys was a devoted, benevolent woman, who often took narcotic drugs, and went out whole days and nights to visit and assist the sick among her neighbors: leaving her own children all put asleep by laudanum, which is wine and opium.) Every day when they cried, and every time she wished to go out, she put them all asleep with laudanum. At length their whole organization assimilated to such a state of body and mind, and they have grown up to the size of manhood, with the avenues of their brains practically closed by drugs; so that they have merely infantile powers of mind and strength of bodies.

ASHES AND LIME FOR PLUM TREES.

I have in my garden a plum tree, which for three or four years past, has not any portion of the plums been sound.

They are all bored or rotted, and fell from the tree before they were ripe. Two or three other plum trees of a different kind, which have borne less, shared the same fate. Last year, a young tree which stood near an ash-leach, and which had never borne before, produced a solitary plum that was sound. This suggested the idea that its preservation was owing to the ashes which had been scattered around the roots of the tree. Following out the hint thus given, I last spring spread ashes and lime, with manure and salt around all my trees. The result has been, that they have all borne this year more than usual, and most of the fruit has been sound. This result I ascribe in part to the ashes and lime. The same I find is recommended by "An Old Digger." And the conclusion is obvious, that alkali enough will destroy the young insects as they lie burrowed in the ground, or attempt to emerge from it in the spring. If in this way sound plums can be raised, it will be found a very easy way. Let some of our readers try the experiment and note the result.—*Horticulturist.*

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 or 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 recomend, 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.*

Mechanics' Department, Arts, &c.

IMPROVEMENT.

In many branches of mechanical business, great improvements are making. Thousands of ingenious persons are constantly at work, devising, executing, and bringing before the public various improvements, and every mechanic should examine into every thing that is new appertaining to his trade, else he will find others going ahead of him, and gaining advantages from recent inventions.

Some mechanics think that there is no material change in their line, and they settle down to pursue through life the same old mode to which they have long been accustomed. But many make a great mistake in this way, and after awhile they wake up by finding themselves in competition with those who are availing themselves of modern improvements; and they find in the market cheaper, and perhaps better articles than their own; and then they start anew in the race under disadvantages compared with their competitors.

In every branch of business there are not only improvements, but changes for "bettter or for worse" are constantly going on, and those who depend for their success in accommodating their customers, must learn, not only the best way of preparing every article, but they must also study the influence of fashion, "whose controlling will none disobeys."

THE ELEVATION OF MECHANICS.

There is no class of our citizens, of whatever grade or profession, that are really so valuable in society as our enterprising and skilful mechanics. As individuals and citizens, in point of intelligence, virtue and usefulness, they occupy a place as honorable and a station as dignified as the members of any profession in the land; and as a body they are indispensable in providing for our wants and necessities, and a very great portion of the comforts of the whole community.

In fact, our national greatness has been in a great measure achieved through the industry, enterprise, skill and *intelligence* of our mechanics. Thousands of individual instances may be adduced to sustain the position we have assumed, and hundreds more of the same class have, by their influence, example and talents, verified the truth of our assertion. Franklin, the printer, who worked many years at this honorable avocation, and, perhaps, contributed more than any other individual, to advance science and the arts in his early life, rose high in the scale of usefulness and honor—became one of the most distinguished statesmen and philosophers of his age and died lamented by the people of "two hemispheres." Roger Sherman, one of the signers of the Declaration of Independence, and who long afterwards was distinguished for his talents, it is well known, was a shoemaker. The late Hon. Andrew Kennedy, of Ohio, at the age of nineteen years, was a laboring blacksmith, unable to read or write. He dropped the sledge hammer and took to books, read law, and soon became a popular advocate. He removed to Indiana, was soon sent to the Legislature, and from the assembly was transferred to Congress, where he served three full terms. He was a member of the Indiana Legislature when he was cut down by death comparatively at the early age of 37 years. The late Judge Martin, while a lad, left his paternal roof at Marseilles and arrived in North Carolina friendless and nearly penniless, and to avoid starvation, became apprentice to a printer. At the expiration of his apprenticeship he worked as a journeyman three years—bought out his employer—afterwards removed to Louisiana—became a judge of the Supreme Court—and, during the thirty-seven years which he was retained in office, in all his important decisions, in which immense interests were involved, he ever maintained a character above the least suspicion of reproach—was remarkable as a man of the sternest integrity, and died honored by all, with a fortune of $400,000. Governor Briggs, of Massachusetts, it is well known, was the son of a blacksmith, and apprentice to a hatter, but manifesting a strong inclination for learning, subsequently studied law, and is now the chief executive of the commonwealth.

We will refer simply to one more of the numerous instances which might be mentioned of the distinguished mechanics of our country, viz., that of Elihu Burritt, of Worcester, who, without wealth or any peculiar facilities for study—while working at the anvil—aequired a knowledge of nearly *fifty* different languages; and posterity will long honor, as a Christian philanthropist of distinguished usefulness, "the learned blacksmith" of Massachusetts.

These examples are sufficient to prove the assertion of John Randolph, the eccentric orator of Roanoke, that "labor is necessary to excellence. This is an eternal truth, although vanity cannot be brought to believe, or indolence to heed it."

This truth is strikingly verified in a host of instances, and should impress upon every mind the deeply responsible relation which our mechanics hold in reference to the advancement of the arts, the promotion of science, and the true greatness of our country.

We have been indueed to make the above brief remarks, from having recently had the facilities and advantages offered by the Mechanics Institute of this city, to inventors, artisans and others, presented before us; and as introductory to some plan of operation for the mutual benefit of mechanics throughout the country, which we will present at some future opportunity.—*Farmer and Mechanic.*

NEW FUR FABRIC.

The New York *Mirror* says, we have examined, at the store of Messrs. Seaman and Muir, some specimens of a new fabric for winter garments, which appears to us likely to supercede every material now in use for keeping the body warm, and protecting it from the piercing cold winds and chilling damps of our variable climate. The fabric is composed of the fur of animals, and is lighter, softer, firmer and warmer than any other material ever worn as a covering to the human body. It is the perfected ideal of cloth; in beauty and comfort it is far superior to the finest fabrics of camel's hair. For the use of invalids, or for all whose occupations lead to exposure to the rigors of wintry weather, it must prove of the highest benefit. The softest satin is harsh to the touch, and the finest lamb's

wool coarse, compared with this beautiful fabric. It is made into cloth composed wholly of fur, and of part silk and part fur. As this elegant material is the product of an invention which has just been patented in England by unusual process of an act of parliament, and the manufacture of it is still in its ineipient stages, the price, although not by any means extravagant, must necessarily be higher than it will be by and by.

It is made into gloves and stockings, and may be made up for the most delicate garments used for ladies and children. The under-shirts made of this new material are appropriately called "Astoria Jackets."

IMPROVED GRATES.

Mr. A D. Spoor, N. Y., has invented and taken measures to secure a patent for an improvement in grates, which is applicable to stationary and locomotive engines, also stoves and furnaces. It consists in having a stationary or fixed grate cast in one or more pieces, with bars placed a little further apart in common grates, and combined with this there are a number of moveable grate bars united together by joints to axes underneath, which allow, by a lever, the said bars to lie on a line with the fixed bars, to move vertically between the above the fixed bars or fire box bottom, and to be elevated and depressed angularly at both ends. This improvement in grates allows the burning of very fine coal, answers the purpose of a poker or clearer to remove all scales and caking of the coals, and by having square shoulders on the moveable bars, they can be projected upwards to make the shoulders set snug to the bottom of the fixed bars, thus answering the damper also.—*Rural New Yorker.*

Ladies' Department.

YEAST.

The article in which yeast is kept must, when new yeast is made, or fresh yeast bought, be scalded and emptied, and then have a salt spoon full of saleratus put in, and be rinsed out again with warm water. If it is glass, rinsing twice with warm water will answer. Junk bottles are best for holding yeast, because they can be corked tight, and easily cleansed.

Potato Yeast.—By those who use potato yeast, it is regarded as much the best, as it raises bread quicker than common home-brewed yeast, and, best of all, never imparts the sharp, disagreeable yeast taste to bread or cake, often given by hop yeast. Mash half a dozen peeled boiled potatoes, and mix in a handful of wheat flour, and two teaspoons full of salt, and after putting it through a colander, add hot water till it is batter. When blood warm, put in a half tea cup of distillery yeast, or twice as much potato or other home-brewed. When raised, keep it corked tight, and make it new very often in hot weather. It can be easily made when potatoes are boiled for dinner.

Home-made Yeast, which will keep good a month.—Four quarts of water, two hands full of hops, eight peeled potatoes, sliced, all boiled soft, mixed and strained through a sieve. To this, add a batter, made one-third of Indian and two-thirds of rye in a pint of cold water, and then boil the whole ten minutes. When cool as new milk, add a tea cup of molasses, a table spoon full of ginger, and a tea cup of distillery yeast, or twice as much home-brewed.

Home-brewed Yeast more easily made.—Boil a hand full of hops half an hour in three pints of water. Pour half of it, boiling hot, through a sieve, on to nine spoons full of flour, mix, and then add the rest of the hop water. Add a spoon full of salt, half a cup of molasses, and when blood warm, a cup of yeast.

WHAT A PRUDENT WIFE DID.

A fact which I came in possession of years ago may illustrate the character of the New Englanders, and reveal the origin of some branches of their profitable business. S. W—— was the son of our country clergyman, and was accustomed to laboring on a farm in summer and keeping school in winter. He was moral, industrious and frugal, and took a wife possessing the same qualities, together with a shrewd propensity to calculate the cost of all articles of living. One day her husband brought home the cloth and trimmings for a coat. The wife inquired the price of the buttons, which she noticed were made of cloth "lasting," or, more fully, "everlasting," covered on wooden button moulds. She thought she could afford a good button, made by hand, for less money. The next day, like the true daughter of a Yankee, she tried the thing out. She bought the cloth by the yard, and the moulds by the dozen, and in a week she had better buttons, at a less price, in the market. The operation, it became evident, would pay. So the husband quit farming and school-teaching; bought the cloth, which the wife cut into button covers; he then purchased a lot of button-moulds, hired the women and girls of the neighborhood to make them at great profit. Soon another entered into partnership with him, and invented machinery to do the work. Then the plain "lasting" was changed to figured velvet, and satin, and twist. Improvement on improvement in machinery was made, till they equalled the best English, French, or German buttons. S—— W—— now owns one of the sweetest villages in the Connecticut valley, and almost supplies the United States with buttons for coats and overcoats. He has endowed an academy munificently; has contributed like a prince to the funds of a highly distinguished and useful female seminary, and has rescued a noble college from embarrasment. So much for the carefulness of a prudent wife, and so much for a disposition to earn an honest living in some way, rather than thriving in idleness on the hard and too often unrequited toil of others.—*National Era.*

To Whiten Linen.—Stains occasioned by fruit, iron rust, and other similar causes, may be removed by applying to the parts injured a weak solution of the chloride of lime—the cloths having been previously well washed, or of soda, oxalic acid or salts of lemon, in warm water; the parts subjected to this operation should be subsequently well rinsed in soft, clear water, without soap, and then immediately dried in the sun.

To take Stains out of Mahogany.—Mix six ounces of the spirits of salt, and half an ounce of rock salt of lemons (pulverized) together. Place a few drops on the spot, and rub it briskly until it is removed. Then wash off with cold water.

PRESERVING LARD.

Take lard in the leaf, excluding all bloody or lean pieces, then salt it down as you would pork; using about as much salt as for pork. When wanted for use, try out enough lard to last a few weeks. This mode is communicated by a gentleman who has had much experience in this business, and he prefers this mode as the lard keeps perfectly sweet through the year.

TEMPER.

No trait of character is more valuable in a female than the possession of a sweet temper. Home can never be made happy without it. It is like the flowers that spring up in our pathway, reviving and cheering us. Let a man go home at night, wearied and worn by the toils of the day, and how soothing is a word dictated by a good disposition. It is sunshine falling upon his heart. He is happy and the cares of life are forgotten. A sweet temper has a soothing influence over the minds of the whole family. Where it is found in the wife and mother, you observe kindness and love predominating over the bad feelings of the natural heart. Smiles, kind words and looks, characterize the children, and peace and love have their dwelling there. Study then to acquire and retain a sweet temper. It is more valuable than gold; it captivates more than beauty, and to the close of life retains all its freshness and power.

Barley Water for the Sick and Convalescent.—Take two table-spoonfulls of pearl barley, wash it very clean, and add to it a pint of boiling water; let it boil for five minutes, pour off this water, and add two quarts more boiling water, reduce it to two pints and a half, and strain. This is simple barely water; it may be made very pleasant by adding the following: one ounce of figs, two ounces of raisins, stoned, a quarter of an ounce of liquorice; boil it till reduced to a quart, and strain.

ACKNOWLEDGMENTS.

With the following communication, we have received the fruit therein named. The apples which we received of Gen. Newhall, strongly resemble the Oakes apple from Mr. Black, and they may be identical. It is difficult to decide with only a few specimens. They look and taste nearly the same. The Oakes apple is a very fair, handsome fruit, excellent for cooking, and it is a good dessert apple, but not of a high quality.

Hunt's Russett looks like the American golden Russett, and the quality is about the same. The Russet, to which Mr. Black refers is not the American Golden Russett, but probably the English Russett. The true American Golden Russett, called by Coxe, Sheepnose, and Bullock's Pippin, is a very late keeper, and is frequently in fine condition in April and May. It is one of the very best of apples, but owing to its small size, it may not be so profitable for the market as some other varieties. Some persons who have cultivated Hunt's Russett extensively, on being shown the American Golden Russett in this market, pronounced them to be identical, yet we should be pleased to have the subject investigated more thoroughly.

Mr. Cole:—I have forwarded to you a few specimens of my favorite Oakes apple, and also of Hunt's Russett, cultivated in this vicinity; if these specimens of the Oakes apple resemble those received from Gen. Newhall, it will support you in your judgment of the non-identity of this apple with the Fall Harvey. I am confident that, (although in some important particulars they resemble each other) the apple which I cultivate for the Oakes apple is in every respect superior, is not so likely to rot on the tree or fall prematurely, and is not in eating order until the Harvey is gone some weeks, and keeping well until January, while it is one of the very best flavored, that I am acquainted with, and in my judgment worthy of extensive cultivation.

Hunt's Russett, I think you erroneously judged a few years since to be the American Golden Russett. We have in this vicinity both apples, and consider the Hunt's superior in many respects, and mostly for its long keeping. It is a longer shaped apple, a very tender skin, grows fair, uniform bearer, pulp white, crispy and very spicy; and is a very great favorite.

I can furnish scions in the spring of the above apples if wanted.

Respectfully yours, James D. Black.

Danvers New Mills, Dec. 10th, 1850.

NOTICES OF PUBLICATIONS.

Boston Almanac for 1851, by Damrell & Moore and George Coolidge; published by B. B. Mussey & Co., 29 Cornhill, and Thomas Groom, 82 State Street. This little annual is well prepared, and it is executed in very neat style. It contains in a small space a large amount of excellent matter. Besides the city record, which as a directory is valuable to all, in town and country, it contains a State, New England, national, and universal record. This work is beautifully embellished. It is sold at the very low price of 25 cents.

Circular of the American Live Stock Insurance Company.—This company was established at Vincennes, Ia., in January, 1850, with a capital of $100,000. This company insures all kinds of stock against loss by disease, fire, accidents, &c. Marshall P. Wilder, Jr. 5 Scollay's Building, Tremont Row, general agent for Massachusetts and Vermont.

☞ The New England Farmer is published *every other* Saturday by John Reynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

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The Farmer is devoted exclusively to Agriculture, Horticulture, and their Kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCE.

VOL. III. SATURDAY, JANUARY 18, 1851. NO. 2.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

ICE HOUSES.

There are many modes of building ice houses.—Some make them below the ground, in the manner of a cellar; but the dealers in ice in this vicinity, who have large fabrics for this purpose, or many of moderate size, build them all above ground. A small ice house, to furnish one or two families with ice, may be made conveniently below ground. The walls may be made in a rude or nice manner, of course in a very cheap or more expensive way, as suits the taste of the owner.

Some lay the ice against the walls, but it will not melt so soon, if a row of poles or joists be placed along against them, and the ice laid against the poles. This mode of construction is very cheap, and the house will be durable, needing but little repairs.

The soil must be porous, so that the water from melted ice will readily disappear in the earth, else there must be a drain to conduct off the water. In the bottom, place small blocks of wood more than a foot deep, level them, and place a layer of shavings over them. Over these lay a plank floor. The layers of blocks and shavings retard the melting of the ice.

At the top of the ice room, lay across beams, on which place a floor. On this floor put a layer of tan or saw-dust, one or two feet thick; the latter is the better. Or make a layer of fine shavings or straw, two or three feet thick. Make a roof that is tolerably steep, then there will be less heat at the top from the sun. At the ends of the roof have ventilators to conduct off the heat, which will accumulate in it on a hot sunny day. In preparing an entrance for the purpose of filling the house within, and taking it out, when necessary, it is better to have two doors, in order to exclude the heat more effectually.

In making an ice house above-ground, there should be on all sides two rows of posts, set in the ground, of stout joists, or large poles, with one side hewed straight. These rows should be about two or two and a half feet apart, with the hewed sides facing the other row. On these fair sides of the post, boards should be nailed. Then the outer row of posts will be outside the building, and the inside row, on the inside, so that the filling between the two board walls, will press the boards against the posts. The space between the board walls should be filled with tan, saw dust, or charcoal dust. Fine shavings, straw, chaff, husks, leaves, and other light substances will answer, but they are not so good, and when they are used, they should be packed in close, and trodden down as firm as possible; and it would be well to make the space wider, if light materials are to be used.

Make the foundation, the upper floor, and roof, the same as when the house is under ground, and observe the same caution about double doors at the entrance. The beams at top will go on to the posts, and keep them in their place, at the sides; and at the ends, the posts must be fastened together, that they may not spread with the weight of materials between the boards.

The expense of an ice house is small, and the annual cost of filling it is but a trifle, yet the advantages from a good supply of ice are great. It is a luxury in hot weather, in rendering drinks more palatable, and if used judiciously it is not only free from injury, but actually conducive to health. Ice water, in time of drought, is far better for health than the low and often filthy drainings from springs and wells, that often cause various diseases, so common in hot, dry seasons.

In the preservation of transient fruits and fresh provisions, and in keeping various articles of food in a sweet and palatable condition, ice is very important—a necessary of life to those who have become accustomed to its use. In a dairy it is highly valuable both as a matter of convenience, and of decided profit. As we need heat in the severe cold of winter, so we need ice to temper the effects of the scorching heat of summer. Generally our cold winters furnish a large crop of ice, and the numerous natural ponds, the advantages for artificial ponds, and the rivers, afford great convienience for obtaining this article in a very cheap manner

HOMESTEAD EXEMPTION.

The subject of exempting the homestead, to a fixed amount in value, from attachment, is attracting much attention in most parts of the community; and a number of States have already passed laws to this effect. In some States provision is also made that the husband shall not transfer the homestead, of the same limited amount, without the consent of his wife.

We think that judicious laws upon this subject would have a salutary effect on the prosperity and general happiness of the community. The effect would not be generally to prevent the creditor from paying his debts, but to enable him finally to discharge them, by having a house for himself and family. By being protected legally as though he was a man, and his family regarded as beings worthy of the kind consideration of society and of law.

With the homestead exemption, a man and his family may and will work in order to procure a dear and sacred spot, which they may call "sweet home," around which the family circle may cluster, and live in harmony and comfort, sheltered from the rude blast and inclement skies, and the still ruder blasts of the law. Besides the exertions of the husband and father to embellish and render delightful that spot that is ever dear to the heart, his wife and children, also, lend their aid in the planting of trees, shrubs, and beautiful flowers to adorn that home which they may call their own, and which cannot be wrested from them by any adverse fortune. While the foxes have holes, and the birds of the air have nests, and our beasts of the stall have comfortable quarters, and are well fed, shall it be said that the man of misfortune, his wife and children, perhaps suffering also under the "ills that flesh is heir to," have not where to lay their heads, but in penury, and friendless, must be turned to "the pelting of the pittiless storm;" and perhaps exposed to the scorn of less worthy persons, who at that period may chance to be at the top of the revolutionary wheel of fortune.

What will be the effect of the homestead exemption? The man who is liable to be reduced to the necessity of claiming it, cannot get trusted so readily. Very well: let him endure this disadvantage rather than peril the dear home of his family. If he cannot live without trust when he has a good house and a few acres of land, how can he live when his house and credit, and as many vainly think, his reputation are gone. Better never be trusted, than make a debt that will as surely sweep away his happy home, as an avalanche or an impetuous stream from the mountains.

The person who trusts a man with a view of taking from him and his family that shelter to which they fondly cling as the only dear spot on earth, should never be indulged by putting the gripe of the law in his grasping hand. Let a man retain his home, and economise and live within his means, and not injudiciously, as is the case with many, contract debts unnecessarily, and as is sometimes the case for purposes worse than useless, and then his worthy family have to suffer, perhaps through life, the consequence of his indiscretion. The general welfare of the community requires that the unfortunate should not be "kicked still a peg lower," and the number of paupers increased.

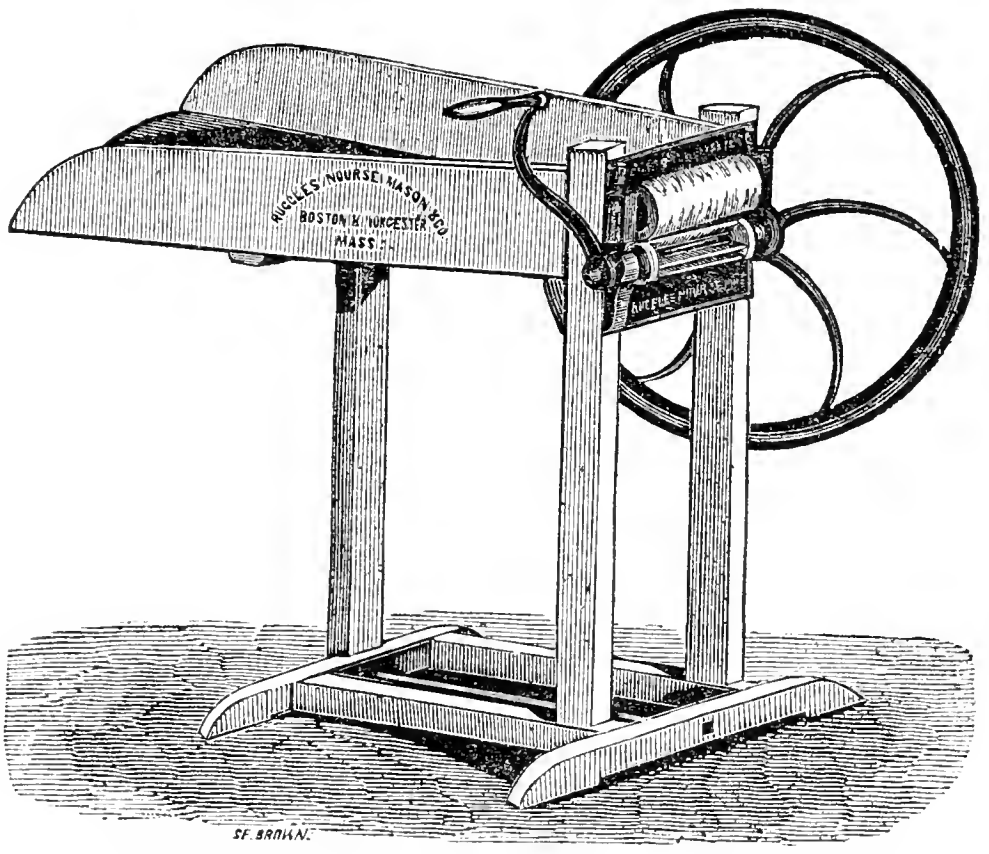
Agricultural Meetings.—On Friday evening a number of farmers met at the State House, Dr. Gardner of Seekonk, was called to the chair, and the meeting was organized by appointing the following gentlemen; Whittaker of Needham, French of Braintree, Newell of West Newbury, Earle of Worcester, and Fowler of Amherst, a committee of arrangement, to select subjects, procure speakers, appoint presiding officers, &c. S. W. Cole was appointed permanent Recording Secretary; and Mr. French, President. No subject was proposed for the next evening. A few desultory remarks were made by several gentlemen on the grand subject of agriculture. Adjourned to meet next Tuesday evening at seven o'clock.

BREEDING ANIMALS.

The principles of breeding animals have rather been illustrated than discovered by animal physiology—the very principles of that science having been taught before a single scientific axiom had been applied.

The watching of physiological tendencies, and availing themselves of those judiciously in practice, was long anterior to scientific research. Emulating the skill of the wily progenitor of the Jewish race, and intelligently perceiving what was required, a Culley and a Bakewell attempted and attained the production of sheep, and of cattle "ring-streaked, spotted and speckled," at pleasure. Seeing the necessity of economizing food, they set about producing those animals which came to maturity early, and so produced vastly more food for the same amount of vegetation. Knowing that fat was an element of favor in a northern clime, they endeavored to obtain animals with a tendency to secrete it in large quantities. In order to do this, they observed the qualities indicative of these propensities; and knowing that it is as true in physiology as in mathematics, that like produced like, they selected and bred from these until they stamped their qualities permanently and invariably and indelibly on the race. With these they managed to combine symmetry of form.—*M. M. M. in Far. Mag.*

A New Life Boat.—A life boat, quite rural in its design, has been invented in England. It has air-tight seats all round the side, but the bottom consists of open work of iron, so that the water passes freely through, and even wets the feet of the rowers. The advantage is, that the water inside and outside is on the same level, and the boat is ballasted and kept upright by the water itself.—*Scientific American.*



HAY, STRAW AND CORN-STALK CUTTER.

So great is the utility of cutting fodder for stock, that it can only be appreciated by those who have had experience in the business. We know of many who have seen such great advantages in this mode of preparing fodder, that they buy a cutter when they have only one animal, a horse or cows, for instance, to feed.

In cutting fodder there is great saving of food, for in most cases there is in hay, straw, and particularly in coarse fodder, some parts that are not palatable though they contain a good share of nutriment. When these are cut up and mixed with the rest, moistened with water, and meal or bran are mixed with them, and occasionally a little salt, or a very small quantity of salt daily, the animal eats the whole up clean. This saving of food is great when the fodder is of an ordinary quality, and liable to be wasted or rejected.

Another great advantage in the use of cut food, is the despatch with which the animal eats it, affording time to rest, or an opportunity to labor in due season. We have observed that some horses fed on moist hay and ground grain, would eat a meal nearly as quick as a man would eat his, instead of requiring two or three hours, as is often the case when horses are fed on fodder in its crude state.

Chopped and moistened food is more wholesome than dry. In hot weather a horse may be very hot, and at the same time very hungry and thirsty. But what is to be done, if he must be fed on dry hay? He is too hot to drink, and too thirsty to eat. But if prepared food be placed before him, he can eat, and satisfy his hunger, and allay his thirst with the moisture in his food: and he will gradually become cool so that he may drink without injury. In cold weather, too, a horse might suffer from drinking when warm, or eating dry food when suffering from thirst.

In some cases animals fail in their teeth, while otherwise they are sound and strong, and for many years would do good service, if their food was prepared so that they could eat it in due time, and without difficulty. The fodder cutter is a means of lengthening out the period of usefulness of many highly valuable animals.

Some horses that have been severely afflicted with the heaves while fed on dry fodder, have been so far relieved by being kept on cut, moistened food, that they have labored constantly, and have been regarded as wholly recovered from the disease. Oxen, as well as horses, need their fodder prepared that they may eat it in less time and with less labor in masticating it, in order to have an opportunity to chew the cud. As ruminants constantly practise this when they have time, they must suffer an inconvenience when compelled to labor immediately after eating. This operation, so important to their health and comfort, could be attended to much better by using cut food, and thus reducing the time for eating. Even cows, sheep, and other animals would find an advantage in cut food, as well as the owner, in the economy of this article, as they could soon eat their meals, and thus have time for rumination and rest. All animals require rest, as well as the human race.

In giving animals salt daily in their food, caution is necessary, lest it be fed too freely. From the experience of the best English farmers, who keep

a large number of horses, one ounce per day, or, half a pound per week, is sufficient for a horse. Some feed salt daily, but the general practice is to give it weekly, on Saturday night. For, as it is slightly physical, it is best for it to operate when the animal is at rest, and the operation of the salt tends to prevent any injurious effects from liberal feeding while the animals are at rest. In some cases, high feeding, for only one or two days, when horses are at rest, will have a bad effect.

As great improvements have been made by new inventions, and in the manufacture of hay cutters, they may now be had of excellent construction, and of durable materials, at moderate prices.

For the New England Farmer.

ON THE FORMATION OF LAWNS.

Mr. Cole: — The unaccountable disparity of opinions respecting the most suitable grasses for laying down fine lands, and the extraordinary difference in the quality of the grasses as well as in the quantity of seeds used by the various individuals for this purpose, has led me to give this matter particular attention.

We are accustomed to hear a great deal said in praise of the "velvet turf" of English gardens, and from the difficulty of securing a similar velvet turf in gardens here, many people look despairingly upon their coarse Brachypodeum and cat's tail meadows, and their rough cocks-foot lawns, and fancy it one of the impossibilities of nature to make them better than they are.

Now, if we will just consider how much pains is taken by the people in England in making their lawns and selecting the proper seeds, and how little the same matters are attended to here, a considerable portion of the cause which creates the difference becomes apparent. My attention was first directed to the ignorance or neglect of lawn making by some specimens of the general methods performed at New Haven, in Connecticut. A few years ago, a new square (I forget its name) was sown with the varieties of agrostis, commonly called red top, and the Trifolium Pratense or common red clover. The result of this mixture was precisely what any one would expect. The red clover usurped the ground the first season, and smothered the young Agrostis. The second year, nothing was to be seen but the Trifolium, with here and there a coarse tuft of grass; a form, I may remark, which all grasses will quickly assume when very thin, or the plants standing separately, on ground moderately fertile, as was probably the case with the ground in question.

Another instance came under my observation in the same neighborhood, and one probably more common than the one described. In this instance also the object was to form a lawn to be kept mown with the scythe, and here the ground was sown with Lolium Perenne (common rye grass,) Dactylis Glomerata (orchard grass) the red top, and white clover, a notable mixture, truly, to form a lawn, and a mixture which no man who knows the nature of these grasses would ever think of sowing for such a purpose. For meadows or pasture land perhaps this is the best mixture that can be procured, and a good mixture it is even if a better were at hand. But for a smooth lawn no mixture could be worse. The coarse roots of the orchard grass and the clover secures possession of the ground. The rye grass appears only the first season, and the red top never appears at all, and after three years nothing remains but the rough tufts of the cocks foot, and the other coarse, indigenous gsasses that chance to spring up amongst it.

While speaking of methods, I might as well mention another, which in the earlier days of ornamental gardening in America, was borrowed from the farmers, but which is still practised by some ignorant gardeners, and others, who do not know one grass from another, and consists in sowing the Phleum pratense, (Timothy or herds grass) along with the red top and clover, and sowing along with it a crop of rye, barley, or oats, under the pretext of shading it from the sun.

It requires very little skill or judgment to perceive that neither of these methods can succeed in forming a turf for lawn of shrubbery, or flower garden, and we sometimes find mixtures even more unsuitable than these, sown to form the velvet sward of a pleasure ground. So very little is this considered that a person who has got to sow a piece of lawn around a snug little villa, will go to a seed store, and buy a quantity of grass seeds, no matter what the sorts be, providing only they are *grass seeds*, without considering the nature and habits of the grasses—their periods of verdancy—or the nature of the soil on which they are to be sown.

There are various considerations to be kept in view in laying down a smooth lawn to be kept mown with the scythe.

1. Some grasses from their coarseness and luxuriance of growth, are inadmissible, as they not only rise up in coarse tufts after the lawn is mown, but also destroy the finer grasses, and rob them of nourishment—such as the Cocks foot or orchard grass (Dactylis Glomerata) and Timothy or herds grass (Phleum pratense.)

2. Some are objectionable on account of their inability to stand our dry summers, and the tendency with which they spring up after having been mown —such as the sweet vernal grass (Anthoxanthum Odoratum) and the common rye grass (Lolium perenne,) though both of these grasses in small quantities may be sown with the others.

3. Some are objectionable on account of their creeping roots, which soon exterminate the other grasses from the turf,—of these I might name the creeping couch grass (Holcus Mollis,) and the creeping dog's-tooth grass, (Cynodon Dactylon) which are common on land, and should be exterminated before the ground is sown down.

All the above mentioned grasses are common in our pastures and fields, and are to be distinguished from the following which are most suitable for lawns, and may be had of any respectable seedsman.

Cynosurus Cristatus—crested dog's-tail grass, is one of the best grasses for making lawns, its slow growth and its dislike of dry, sandy land render it unsuitable for our hot summers. It is also difficult to procure good seed. It should always form a concomitant of lawn grass.

Festuca duriuscula (hard fescue grass) and the Festuca Ovina (sheep's fescue) should always form a part of the mixture for a lawn, as they bear mowing well; they also withstand the drought, and maintain their verdure throughout the year.

The Agrostis Vulgaris (common bent grass, or

red top,) is the most common grass which is sold in the seed stores for making lawns. This seed is generally a mixture of various grasses—including different kinds of bent grass, Poa or meadow grass, and numerous others. I have picked up a dozen kinds of grasses from the product of one quart of what was sold for the common red top. I regard this circumstance, however, as beneficial rather than otherwise, providing it contains none of the coarser grasses. A fine sward cannot be produced with one or two kinds of grasses, but by a mixture of many kinds, providing they have the same habits of growth, as some grasses are late, some early some are green at one season, and some at another. Some will stand frost, as the Poa Nervata—a hardy variety of American meadow grass, but does not bear drought as well as many others. Others will bear the drought, as the Poa Nemoralis—Agrostis *Vars*—the Hard Fescue—Red Fescue—and Sheep Fescue—the Trifolium repens—and Filiforme or small yellow clover, which if sown on a gravel heap would soon cover it with verdure.

It is very absurd to fancy that a fine, permanent lawn can be made with any one or two kinds of grass, however good in themselves. If you will cut a turf one foot square from any peice of fine natural pasture, or grass land, you will find it composed of thirty or forty different kinds of plants, but none of the coarser grasses. They are nearly of one nature, habit, and one strength, and approximating to one general character, which is caused partly by the compactness of the sward, and partly by the continual cropping of the surface, both circumstances tending to exterminate the coarser herbage, and promote an equality of growth among the plants composing the sward. R. B. Leuchars.

Remarks.—We would call particulor attention to the preceding article. It comes from one who has had the advantages of experience and observation both in the old country and in this. The failure of lawns in our country is not owing to insurmountable obstacles in regard to climate and soil, or any other unfavorable circumstances naturally. but to the want of intelligence and adaptation of means to circumstances. As there is now a growing attention to ornamental culture, and rural embellishment, we trust that this subject will receive due consideration, and that we shall have some system of action that will insure success.

For the New England Farmer.

COLLECTING AND TRANSPLANTING WILD FLOWERS.

Mr. Editor:—In collecting materials for a flower garden, one of the most important requisites is to obtain such plants as combine a good degree of hardiness and ease of culture, with beauty of form and color.

A neglect, in this respect, has often proved the source of failure and disappointment, and caused the inexperienced florist to give up in despair, with the genuine Yankee conclusion that "it costs more than it comes to."

The best place to obtain hardy plants is in our own forests and meadows, as native plants require no acclimation, and a really beautiful flower is none the less so because it grows wild in our fields and woodlands. All that is necessary to insure success is a little care in transplanting, and to place them as near as practicable in a situation similar with respect to shade and moisture to that in which they were found in their wild state. The season for removing them, is, as far as my experience goes, of little consequence. I have succeeded as well with plants in full bloom as at any other time, and as this is the most favorable time to select the finest specimens, I prefer it to being confined to spring or fall.

The surest method is, first to ascertain the usual form and length of the roots, and then with a garden trowel, (an implement which every farmer should have,) remove the earth in such a manner as to leave the greater portion of the root with a quantity of soil attached. The place for its reception should be filled with water, and the root with the earth adhering, immersed and covered with soil, leaving a light depression to retain water on the surface. When the work is done in warm weather in summer, the plants should be shaded and frequently watered.

Those plants which blossom late in the season, should have their position indicated by a stake, as they frequently die down to the ground and do not re-appear till late in the spring.

Among the earliest wild flowers entitled to a place in the garden, is the Liverleaf or Hepatica Americana, the beautiful blossoms of which hardly wait for the snow to leave the ground before they exhibit themselves above the surface. The flowers are sweet scented, cup shaped, and the color varies from white to pink, blue and delicate purple. It is perfectly hardy, and in this section, is usually found growing on ledgy east side hills.

Following after this, comes the plant called Dutchman's Breeches, Dielytra, Formosa and D. eximea; the last of which is the finest; the leaf, as well as the flower, is quite ornamental, and the roots of the first named variety are bulbous, resembling small potatoes.

The *Trillium erectum*, False Wake-robin, is another spring flower whose white petals with pink centres present quite a delicate appearance; this plant usually grows in rather low or moist ground.

About the last of spring or first of summer, the singular looking blossoms of the Ladies' Slipper, Cypripedium, show their drooping heads peeping from beneath the hedgerow; and although the language of this flower is, "You are too wild for a domestic companion," yet, if placed in a shady situation, it is easily domesticated, and the oddity of its appearance gives it a claim to a place in the flower garden; there are two varieties, one yellow, the other pink.

But the most beautiful summer flower is the Cardinal Flower, *Lobelia Cardinalis*, which is found growing on the banks of streams and in moist places; it produces a long spike of brilliant red flowers which increase in size by cultivation, and the leaves are of a dark green, altogether, presenting as rich an appearance as any flower of its season.

Late in the fall, after the frost has destroyed almost everything in the floral kingdom, the Fringed Gentian, Gentiana Crinita, spreads its delicately feigned petals tinged the most beautiful blue and presenting an appearance excelled by few cultivated flowers.

In addition to these may be mentioned the Red

Columbine, Aquilegia Canadensis, and several varieties of the lily family, with their beautiful stellated leaves and drooping flowers which adorn our alluvial meadows.

There are also without doubt other plants equal to those already mentioned, growing in particular localities, and to those who have a taste for the beauties of nature it would afford a delightful relaxation from the toils and perplexities of every-day life, to take an occasional excursion for the purpose of discovering and collecting such as are worthy of cultivation.

I intended to add a few remarks on selecting hardy varieties from among the numerous flowers under general cultivation, but I have already carried this article to a sufficient length, and must defer it to another time. W. F. B.

Ashfield, Jan. 4th.

Remarks.—In our fields and forests are numerous wild flowers, easily procured and cultivated, that are far superior to the new and old flowers, the seeds of which are annually imported and sold in this country. It is astonishing that some persons will buy foreign seeds, and carefully cultivate the plants they produce, when they are in reality inferior to many worthless weeds that are trampled under our feet, or destroyed as cumberers of the ground, while our fine and splendid wild flowers are neglected. We hope that there will soon be an improvement in flouriculture as well as in other branches. If it is not worthy of more attention, it is worthy of more judicious attention than it has generally received in regard to native and exotic plants.

For the New England Farmer.

PROFITS OF POULTRY.

Mr. Cole :—As many of your readers are interested in poultrry, I send you my experience for the last ten months, hoping to add something to the common stock of knowledge, upon this subject. About the first of March, I bought forty hens. Some of these were soon killed for family use, and others were added to them as convenience required, during the spring and summer; so that the old flock did not vary much from forty at any time. They laid in March 425 eggs; April, 511; May, 330; June, 280; July, 246; Aug., 131; Sept., 159; Oct., 70; Nov., 75; Dec. 204.

On the 31st of Dec., the account stands thus:—

	Dr.
64 hens, $31,85; 10 doz. eggs, $3,76; 34 chicks $4,35. Total stock, . .	$39,96
29 bush. corn, 11 bush. meal, 10 do. oats, 10 do. potatoes, meat, $2,12. Total food.	39,81
Making the whole expense, . . .	$79,77
	Cr.
Eggs used and sold at market prices,	$31,92
91 chickens and fowls, " "	33,25
5 loads of manure, ...	5,00
28 blood fowls on hand, . . .	35,00
32 common and crosses, . .	15,00
	123,17
Deduct expense, ...	79,77
It leaves a profit of, . . .	$43,40

The fowls were principally of the common kind, and a cross between the common and the Dixon Shanghaes, perhaps 1-4 of the latter. During the summer, they were confined in a large yard, furnished with gravel oyster shells and fresh water. Their roost, in the colder months, was in a barn cellar, and common loam from the fields was kept under them to receive their droppings. These were also occasionally sprinkled with plaster of Paris, to absorb the gases, and perhaps once a month removed. Their place was supplied by a new layer of loam and the process of sprinkling with plaster repeated. Charcoal dust, or earth from coal pit hearths, is a much better article to keep under them where it can be had. With proper care and more earth, I think twice the quantity of manure could have been made, of equal value with that commonly carried from the barn-yard. The cellar is sufficiently open for ventilation, and I have in consequence lost but few fowls.

During the present month, which shows a large increase in the laying, notwithstanding the cold I have fed them freely with small fish, which as they were to be had by the use of a scoop net, in a salt water creek close at hand, I have not set down in the account. These not only furnish them with animal food but the bones must afford lime for the shells of the eggs. Where fish can be had conveniently, either from the water, or the offal from a fish market, it will prove a good article of food.

The poultry has paid tolerably well, though with better management it would have paid much better. I have learned something in egg and chicken culture, the past year, and expect to learn more the next. A hen, like every other creature of God, for which man has a use, pays its way, just as it is well cared for. If it don't pay it is a safe inference, either that you have no use for it, or that you do not manage it right. Find out the laws of its well being, and observe them in its management, and you will have a healthy and profitable animal. Farmers, and indeed all who have time and room to care for them, have a use for poultry. Keep them well and they will pay you. Try it and see.

Stonington, Ct., Dec. 31, 1850.

Remarks.—There is no stock kept in the country that will afford more profit on the food consumed than domestic fowls, if well managed; and with poor management, or neglect, there is no stock that produces so little. This should induce every one who keeps fowls to take the best care of them, for without such care, it is better to be without them.

CAPACITY OF SOILS FOR ABSORBING FERTILISING MATTER.

The property of earths for absorbing the pungent gasses and offensive matter in fœtid water, shows most conclusively their capacity for absorbing and retaining the fertilising ingredients mixed with them. Anything which is undergoing decomposition, or giving off putrid odors is immediately rendered innocuous by placing a thick covering of earth over it. The stench from a polecat, the smoke of brimstone, or a decaying carcass, is immediately absorbed and rendered imperceptible, when brought into close contact with the earth. It is, in fact, the grand deodoriser of nature; and in this capacity, it

is doubly beneficial to the human race, and to the herds and flocks subsisting upon its surface; first, by absorbing all these pestilential effluvia; and second, by turning them to the best account in her laboratory. In consequence of the addition of these, she gives increased luxuriance to vegetable, and fuller development and maturity to the seeds and crops that contribute to the support of innumerable races of animated creation. By the aid of these, she is enabled to lend a more unsullied white to the lily, and to add a deeper blush to the rose; and from them, too, she stores within the petals and calyx of every flower, the nectar that feeds the bee, the humming bird, and a countless throng besides. When, therefore, Abraham said to the sons of Heth, "give me a possession of a burying place, that I may bury my dead out of my sight;" and again, when the Israelites were required to carry a paddle when going without the camp, they acted only in accordance with the very best practices of modern agriculture.

But the earths possess this property in very different degrees. Silicious sands and gravels, have only the slightest hold upon foreign matter; while clays, and clayey loams seize upon them, almost with the avidity of charcoal, or animal black, and retain them with a still firmer hold, when they have once entered into a chemical union. If, however, alkaline substances, as lime, magnesia, soda, or ashes be added to the silicious earths, or if they become enriched by the addition of vegetable manures. their absorbing capacity is immediately and largely augmented. This is one of those beneficial results, always necessarily attached to good husbandry, which is fully exemplified, in the vantage ground, voluntarily conceded by his lord, in the gift of an additional pound, to the thrifty servant, whose "one pound has gained ten pounds." The soil that is in the best condition as to fertility and tilth, is in the very best possible state, also, to draw in and retain the floating elements of fertility, existing in the atmosphere.

To show some of the striking effects of the properties in soils, above alluded to, we subjoin some of the experiments and remarks of Professor Way on this subject. He passed through a filtering jar containing more than 9 inches depth of fine white sand, a quantity of cow's urine taken from a tank in the country. The liquid was so far altered by the filteration that the turbidity was removed, as it would be by filtration through paper, but the color and disgusting smell remained in all its intensity. Sand. therefore, obviously was not the active ingredient in soils in respect to the power under discussion. The other great ingredient of soils was clay, and to this Mr. Way attributed the power in question. As an experiment, comparative with the last, he would pass the same tank water through sand, mixed with one fourth of its weight of white clay, in powder, and they would observe the result was very striking. The liquid coming through was clear and free from smell; indeed, it was hardly to be distinguished by its external characteristics from ordinary water. There could be no doubt, then. that the property of soils to remove coloring matter, and organic matter yielding smell from solution. was due to the clay contained in them. Filtration was only a method of exposing the liquid in the most perfect form to the action of the clay, but it was not necessary to the success of the process. In proof of this, Mr. Way stirred up a quantity of soil with putrid human urine, the smell of which was entirely destroyed by the mixture, and upon the subsidence of the earth the liquid was left clear and colorless. It appeared, therefore, that the clay of soils had the property of separating certain animal and vegetable ingredients from solution, but was this property the only one exhibited? Mr. Way had found that soils had the power of stopping, also, the alkalies, ammonia, potash, soda, magnesia, &c. If a quantity of ammonia, highly pungent to the smell, was thrown upon a filter of soil, or clay made permeable by sand, the water first coming away was absolutely free from ammonia. Such was the case also with the caustic or carbonated alkalies, potash, or soda. A power, he remarked, is here found to reside in soils, by virtue of which not only is rain unable to wash out of them those soluble ingredients forming a necessary condition of vegetation, but even those compounds, when introduced artificially by manure, are laid hold of and fixed in the soils, to the absolute preclusion of any loss either by rain or evaporation.

But he had found that this property of clay did not apply only to the alkalies and their carbonates, but to all the salts of these bases with whatever acid they were combined. Here again was a beautiful provision; sulphate of ammonia, when filtered through a soil, left its ammonia behind, but the sulphuric acid was found in the filtered liquid—not, however, in the free state, but combined with lime, thus sulphate of lime was produced, and brought away in the water. In the same way muriate of ammonia left its ammonia with the soil, its acid coming through in combination with lime, as muriate of that base. The same was true of all the salts of the different alkalies, so far as he had yet tried them. Thus lime, in the economy of nature, was destined to one other great office besides those which had already been found for it—it was the means by which the salts ministering to vegetation became localised and distributed though the soil, and retained there until they are required for vegetation. It was neeessary that when the alkali of a salt is laid hold of by a soil, some provision should exist for the neutralisation of the acid with which it was combined; for all other sorts, lime performed this usual office, but it had nothing to fall back upon for its own salts. Sulphate, muriate, or nitrate of lime, when passed through a soil, would come through unchanged. This, however, did not extend to lime, itself, nor to its carbonate, when dissolved in carbonic acid, as it is found in most waters. Quicklime, when dissolved in water, is removed by passing the water through mest soils containing clay; and carbonate of lime, in solution, is so effectually removed that hard water may be softened by the same process.

It was not to be supposed that we could go on filtering indefinitely with the separation of the salts contained in the liquid. On the contrary, the limit was soon reached; and although small in percentage quantity, the power was in reference to the soil enormously great. He had found that a pure clay would absorb, perhaps, two-tenths per cent. of its weight of ammonia—that is to say, 1,000 grains would separate 2 grains of ammonia; and from reasons which need not then be noticed, a loam, or a well-cultivated clay soil would absorb nearly twice as much. Now every inch in depth of soil over an acre of ground weighed about 100 tons, and would be adequate to combine with and retain 2 tons of ammonia, a quantity which would be fur-

nished by about 12 tons of guano. Now one sixtieth of this power would suffice for the preservation of the ammonia of an outside dose of guano, consequently he was justified in saying that the property was practically of immense activity.

Obviously, if there was a provision in the soil for the retention of the salts of manure, and for the ammonia and other products of the decomposition of animal and vegetable matter, the soil was the proper place for those decompositions to go on, and no matter how remote the period when the crop would be taken, it would be perfectly safe to get the manure into the land as soon as practicable after its production. Again, the equable distribution was a point, also, which seemed of considerable importance; for, if it was an absolute necessity that a new class of compounds was found in the soil so soon as the manure reached it, it seemed to follow that those compounds furnished the elements of nutrition to plants; consequently we should seek to produce them by every means in our power. Liquid manuring, wherever practicable, was an effectual way of securing this distribution. In the case of artificial manures, that is to say, manures composed of chemical salts, much simplicity was introduced by the new discovery. Henceforth we must regard the different salts, (those of ammonia, for instance,) as of value in relation to the price of ammonia, or other bases contained in them, since they are all alike when incorporated with the soil.

In liquid manuring it had been usual to think that the application must be made to grass, or to land bearing some crop; but now that it was known that the land, not the plant, retains the manure, no theoretical difficulty could arise in the use of liquid manure for arable land.—*American Agriculturist.*

WATER FOR IRRIGATION.

We have frequently heard it said that hard water was preferable to soft for the purpose of irrigation. But from a discussion of the subject at a late meeting of the Council of the Royal Agricultural Society, it appears that the question is not fully settled.

Mr. Pusey said he doubted whether, in the present state of our knowledge, it could be admitted as a general axiom that hard water was good for irrigation, and soft water on the contrary prejudicial. In Devonshire, the criterion by which practical workers in water meadows were guided in their judgment of the quality of the water most suitable for their operations, was that of a certain warm, soft, and oily sensation it communicated to the touch, when a portion of it was held and examined in the palm of the hand; the absence of such a quality indicating, in their opinion, a water unsuitable for irrigation. He knew, as a fact, that when lime existed in any water in such excess as to give it petrifying properties, such was considered by practical men as decidedly unfit for irrigating purposes. He accordingly much doubted whether hard water was the only water fit for irrigation. He thought water meadows would not be confined to limestone districts; for in those geological districts in the west of England, where irrigation had long been successfully practised, lime was absent; the water being consequently soft. He considered that water in general became softened by remaining sometime in ponds. In the hilly districts of Devonshire, the water of the small streams running down the declivities was found to improve its irrigating qualities.

Mr. Almack considered snow as the best exemplification of the beneficial action of water containing ammonia, and possessing chemical qualities from other impregnation. Mr. Fisher Hobbs said he could fully confirm the views of Mr. Pusey.

Prof. Way said, in regard to the questions affecting the action of water in irrigation, he had only to repeat his diffidence on the subject, although he thought the criterion by which the Devonshire workers of water meadows were guided, might be fallacious. He had himself formed the opinion that the effects resulting from irrigation were due more to the chemical qualities of the water, than to the circumstances of its high or low temperature; but he was sensible how ignorant we were on these difficult questions, and he should be most open to conviction, and glad to learn all he could on these interesting subjects.—*Albany Cultivator.*

Remarks.—We thought that the subject had been settled for some years, that soft water was best for irrigation. Rain water has been found by experiment to be much superior to hard well water for irrigation. It contains a large amount of ammonia, which constitutes important elements in plants.

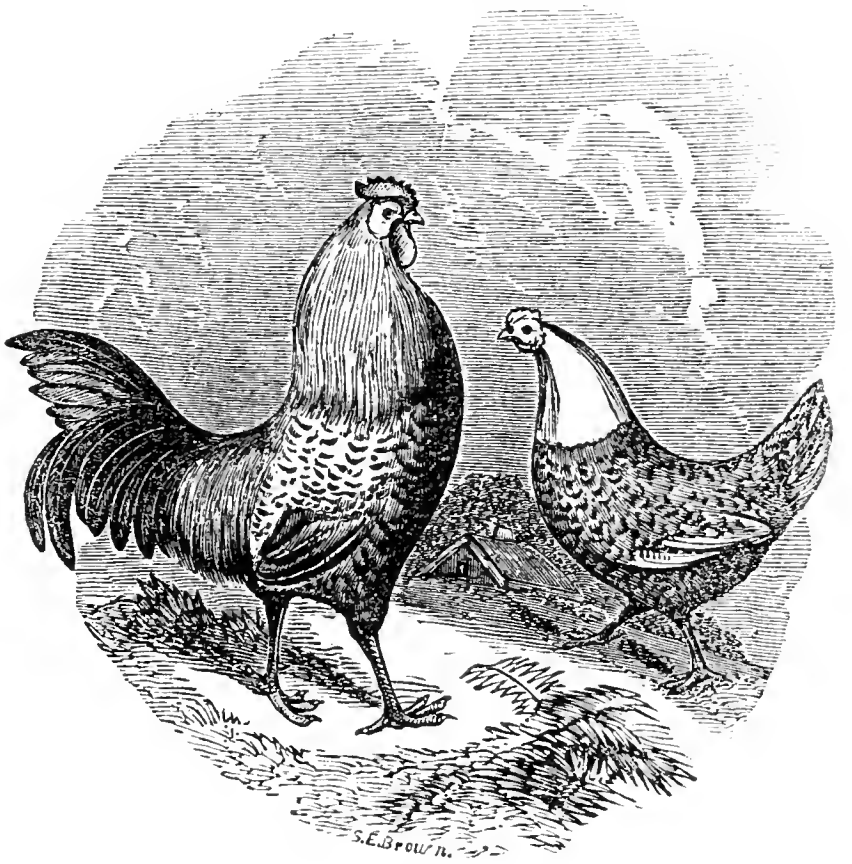
A WORD TO BOYS.

The learned blacksmith says,—"Boys, did you ever think that this great world, with all its wealth and woe, with all its mines and mountains, oceans, seas, rivers, with all its shipping, steamboats, railroads and magnetic telegraphs, with all its million of darkly grouping men, and all the science and progress of ages, will soon be given over to the boys of the present age—boys like you, assembled in your school-rooms or playing without them, on both sides of the Atlantic. Believe it, and look abroad on your inheritance, and get ready to enter upon your possession. The kings, presidents, governors, statesmen, philosophers, ministers, teachers, men of the future, are boys, whose feet, like yours, cannot reach the floor, when seated on the benches upon which they are learning to master the monosyllables of their respective languages."

THE COW TREE.

On the parched side of a rock on the mountain of Venezuela, grows a tree with a dry and leathery foliage, its large woody roots scarcely penetrating into the ground. For several months in the year, its leaves are not moistened by a shower, its branches look as if they were dead and withered; but when the trunk is bored, a bland and nourishing milk flows from it. It is at sunrise that the vegetable fountain flows most freely. At that time the blacks and natives are seen coming from parts provided with large bowls to receive the milk, which grows yellow and thickens at its surface. Some empty their vessels on the spot, while others carry them to their children. One imagines he sees the family of a shepherd who is distributing the milk of his flock It is named the *palo de vaca*, or cow tree.

☞ Owing to the length of the valuable article from the Albany Cultivator, we have postponed several communications, and notices of fruits.



For the New England Farmer.

THE BOLTON GREY FOWLS.

Mr. Cole:—The excitement which prevailed in this vicinity respecting the Cochin China, Shanghae and other large Asiatic fowls, and threw into the back-ground other breeds of fowls, less imposing in appearance but far more profitable, is passing away. Inquiries are made now, not for largest, but for the most useful breeds. Many persons *who* purchased at high prices the Shanghae and other large fowls, not being able to dispose of those raised by them at similar prices, have put them on their tables and have not found them to be any better than those of "the old sorts." The eggs produced by the Cochin China and Shanghaes, are proportionately smaller than those produced by other breeds, nor do the numbers make up for the deficiency in size.

Persons who have the means and proper places will do well to keep a few hens to furnish good and fresh eggs. This can be done with but little expense, as much house offal which will be consumed by hens would otherwise be lost. House-keepers well know that eggs from market are not always quite as good as the consumers desire.

To persons intending to keep a small number of hens, I recommend the Bolton Grey fowls as the breed best suited for their purpose, as they have no desire for incubation, being what is termed "everlasting layers."

The Bolton Gray is a small, handsome fowl, very hardy, active and industrious, requiring but little food, compared with other breeds. A dozen of Bolton Grey fowls can be kept, and well kept too, upon the same quantity of food on which four Shanghaes would barely exist. A Bolton Grey hen will annually produce in numbers and weight of eggs nearly double the amount produced by a Shanghae hen.

The Bolton Grey fowls weigh about six pound the pair, rarely exceeding six and a half pounds, when full grown and well fatted. The flesh is well flavored, tender and nutricious. The comb is generally double or rose comb, though single combs sometimes are thrown by the thorough bred fowls. The legs and feet are of a light blue or leaden color. The neck hackles are silvery white. The hackles and feathers of the body are of the same color, spotted or barred with dark brown, or rusty black; the spots or bars become more distinct as the fowl grows older. The tail in both sexes is darker than the body, and by its form, adds much to the beauty of the fowl.

The fancy breeders of England have, by crossing, introduced new "sub-varieties" of the Bolton Grey fowls, under different names, viz.: Golden and Silver Hamburgs, Bolton Bays, Chittepeats, Corals, Mooneys, Mosses or Spangled Hamburgs. A Mr. Smith has, by crossing the Bolton Grey with the game fowl, produced the "Prince Albert" fowls. The Prince Albert fowls resemble very closely the Mosses or Spangled Hamburg variety.

It is a well established fact that sub-varieties of fowls do not, when bred in line, produce their like, but revert to the breeds from which they were bred, and, after a few generations, become extinct or "run out," as for example, the colored or speckled Dorkings, which all writers and breeders admit cannot be bred in line. I cannot recommend these sub-varieties to the attention of breeders and amateurs, but advise them to procure thorough bred Bolton Grey fowls, and if they desire "Prince Albert," Golden, Silver or Spangled Hamburgs, Mooneys, Chittepeats or Mosses, to breed them at their leisure.

As a matter of information to your readers, I mention, that master George Dorr, of Dorchester, Mass., has Bolton Grey fowls, and, judging from the specimens exhibited by him at the different poultry shows, his fowls cannot be surpassed by those bred in this or any other country.

Yours, &c., S. Bradford Morse, Jr.

Remarks.—In regard to the large fowls, which, with their eggs, have been sold at high prices, people have not only made a great mistake, in our opinion, in running on large coarse birds, but they have been sadly disappointed is raising chickens; for, generally, they have not raised one-fifth so many chickens as they have bought eggs. Another serious evil, they have often, we are sorry to say it, bought eggs that have not produced chickens true to the mark. As an instance, a man who had only one pair of Shanghae fowls, sold one hundred dollars worth of eggs the past season, and it was supposed that the old hen had some assistance in laying them. Verily, there has been a great deal of humbuggery in the fowl business, and in our poultry shows; and men, whose reputation, some would suppose, would be a guarantee for fairness, have had a hand in it.—Ed.

MARKET GARDENING AND HIGH FARMING.

Editors of the Cultivator:—I have been taking a look at the market gardening and other modes of cultivating the soil in the vicinity of the city of Boston. The amount and profit per acre obtained by the systems of culture there practiced, is truly surprising.

I first visited the grounds of George Pierce, Esq., in West Cambridge. He cultivates twenty-six acres of land, all told. At the time of his purchase, his land was a light sandy loam, in a worn out condition, and would have been called the poorest kind of "plain land." He has spared no pains to redeem it from sterility. Manure has been largely purchased at the city stables, costing $7 per cord, when delivered on the farm. His whole annual purchases of manure amount to from $800 to $1000. In applying it to the soil, the principal rule observed is to put on all that can possibly do good.

Mr. Pierce considers that a light warm sandy loam is the most favorable soil for market gardening; and that although at first it may be comparatively unproductive, yet, when made fat by high cultivation, the crops are sure, and the land is more easily worked than heavier loam.

Seven acres are principally devoted to the raising of fruit. In the apple orchard, the trees stand 39 feet apart, each way. As they are mostly large trees, the ground is pretty much given up to them. A moderate coat of manure is spread over the surface each spring and plowed in, without particular reference to the roots of the trees, but with special care to prevent the barking of their trunks. All weeds are kept down, that the trees may have full possession of the soil. The apples are in consequence large and fair, the product is large, and the fruit brings top prices in the market. While the trees were young and growing, heavier dressings of manure were applied to the ground, and the open spaces between the rows were occupied with vegetables for the market. By means of this constant working of the land, the trees begin to bear some fruit in six years from the time they are set out; and in thirteen to fifteen years, they will produce, in favorable seasons, an average yield of five barrels per tree. From four trees of the Porter apple, Mr. Pierce last year sold twenty-four barrels of apples, so large, smooth, and fair as to command five dollars per barrel. Mr. Pierce is particular in so training the branches of his young trees as to prevent them from shading or otherwise interfering with each other; and the branches are encouraged to start out low on the trunk, to protect its sap from too high heat by the rays of the sun.

Four years ago, an apple orchard was planted out, embracing four acres, the trees standing in rows thirty-six feet apart, each way. At the same time, about 1000 peach trees were planted between the rows of apple trees, twelve feet apart each way. The land, for several years previous, had been devoted to market vegetables, under high cultivation. The growth of trees is very remarkable; and the peach trees are now bearing finely. Being short lived, they will soon be out of the way of the apple trees; and then, for a few years, vegetables will be grown in the open spaces.

Nineteen acres are devoted to the raising of vegetables for the Boston market. As before intimated, this land is highly manured; it is also deeply worked, as deep as the plows can be made to run. A great variety of vegetables is here raised, in order seasonably to supply the successive requirements of the market. For several weeks, in the height of the producing season, two and three wagon loads are daily sent to market, embracing 12 to 15 varieties of vegetables.

It is a leading and principal idea with Mr. Pierce, so to adapt different vegetables to the land and to each other, as to obtain at least two, and often four crops in a season, from one and the same piece of ground. For instance: on one plat of land, early radishes are sown broadcast, and early peas are sown in double drills, say five feet apart; at the proper time, either squashes, melons, or cucumbers are planted between the rows of peas: the radishes get out of the way of the peas, and the peas get out of the way of the vines; and thus three crops are successively matured. Enough manure is put on the ground in the spring to afford full sustenance to all the crops. On other ground, early potatoes are raised, and marketed in season to sow turnips and obtain a full crop. Or perhaps after the potatoes the land will be sown in August to onions. In the fall they are covered with swamp hay or other litter; they remain in the ground through the winter without injury; in May following they are ready for market, and in June the land is ready for any other crop. Or perhaps after the potatoes, spinage is sown for greens, and the next spring the land is clear.

It is also a leading idea to get all kinds of vegetables into the market at the earliest possible period; for any article appearing there a week or two before its usual time, commands a very high price, which richly rewards any extra labor or pains. Mr. Pierce has extensive hot beds for forwarding his various productions for an early market. He has 250 sashes, or some 1100 surface feet of glass, under which all sorts of vegetables are started.—Last spring he went largely into the production under glass of early dandelions for greens. The receipts from this source, in March and early April, amounted to $3 per sash, or one shilling per surface foot of ground. Tomatoes are sown under glass; and as it is important in early spring to economise the room in the hot beds, they are first

transplanted from the seed bed to a vacant space in the hot bed, 9 inches apart, and when too large to stand so closely, they are again transplanted twelve inches apart, and when the weather is right, they are taken up and placed in the open plat, where they are to mature. At one picking of tomatoes, this season, thirty-two bushels were obtained, which, from their earliness, sold at $1,75 per bushel. Pole beans are produced early by digging large deep holes for the hills and filling them partly with fresh hot horse manure; over that a suitable covering of earth is placed, and the beans are planted. For all *early* vegetables the ground is stoutly dressed with hot horse manure, which is plowed in, and which, by its fermentation, keeps the land warm and mellow, and brings the plants along very fast. Early potatoes are first started either on manure heaps undergoing fermentation, or in hot beds; and when the weather will admit, and the sprouts are six to eight inches long, they are carefully taken up by hand and transplanted in the drills in the open plats. This process forwards the crop from 15 to 20 days. On one quarter of an acre, managed in this way, this season, 81 bushels of marketable potatoes were dug, which, for their earliness, sold at $1,75 per bushel, or at the rate of $567 per acre.

In visiting Mr. Pierce's grounds, I was most interested in a field on the borders of Spy Pond.—Originally a high bank, shut down nearly to the water. This bank was dug away and tipped into the pond, until a long strip, or three acres of land was made, which was raised eighteen inches above the surface of the water. The earth taken to make this land was a sandy and fine gravelly subsoil, with the exception of two or three inches of the top, which was surface mould, placed there to form an immediately tillable soil. The waters of the pond will come into and stand in a hole dug anywhere on this land, more than eighteen inches deep; and the moist exhalations from below keep the surface so moderately moistened, that the growing crops do not suffer in the driest season, the land being of a sandy and fine gravelly nature, it admits of much moisture without becoming cold, heavy or baked; and as it has been abundantly enriched by manure, it produces the finest vegetables when, perhaps, other fields are suffering severely with drought. The crops are grown upon ridges or beds, formed by back furrowing with the plow, and varying from two to six feet in width. This is done to prevent any bad effects that might otherwise arise from heavy rains, falling upon a flat surface, already moist enough. In general 3 crops are taken from this land, each year. For instance, on the wide beds, a row of early beets grows on each border; a row of hills of summer squash in the centre, and celery in the dead furrows. The beets are first off, and then the squashes, and the soil composing the beds is used in earthing up and bleaching the celery. Mr. Pierce's average *weekly* sales of *vegetables* for nine months, in 1849, were as follows:—

In March,	$40 00
April,	50 00
May,	80 00
June,	90 00
July,	140 00
August,	139 00
September,	140 00
October,	180 00
November,	39 00

The total cash receipts for the sale of fruits and vegetables, for 1849, were as follows:—

Of Peaches,	$591 60
Porter Apples,	148 60
Bartlett Pears,	18 12
Bell do.	4 75
Greening Apples,	12 50
Baldwin do. (windfalls,)	36 00
39 bbls. do. picked,	185 50
	$997 07
Total vegetables of all kinds	2,629 72
	$3,626 79

These are certainly large receipts to derive from the products of 26 acres of land. It is true that Mr. Pierce has the advantage of a ready market and good prices; but after making every allowance that exists, or can be thought of, I think we must all conclude that high cultivation is the true system: that

> "*'Tis folly in the extreme* to till
> Extensive fields, and till them ill;
> For more one fertile acre yields
> Than the huge breadth of barren fields."

I next visited Leonard Stone, Esq., at his farm in Watertown. Mr. Stone's home farm consists of 15 acres of woodland and pasture, 25 acres of reclaimed meadow, and 80 acres devoted to fruit, market gardening, and a rotation of field crops.—The largest portion of his tillage land is a stiff, moist loam, resting on a substratum of clay; and although the surface is quite rolling, it requires a great deal of draining to fit the soil for profitable tillage. The balance of the tillage-land is a light, dry, warm loam, with some gravelly knolls, and the whole rests upon an open gravelly subsoil.

The owner has for several years been clearing his tillage-fields of stones, which were formerly so numerous as to be much in the way of the plow. They have been sunk in the construction of drains, and thus the surface of about every acre of the stiff land has been relieved of both stones and surplus moisture. The ditches for drains are dug about three feet deep, and of convenient width to work in; in them, drains are first laid, six inches wide and ten inches high, of small cobble stones, and covered with larger sizes of the same; the ditches are then filled with small stones, to within a foot of the surface of the ground; a layer of shavings or tough sods is then put on, and the work leveled up with loose earth. The drains thus constructed have stood from 8 to 12 years, and still work well.

There are two reclaimed swamps on this farm of about 12 acres each; they are underlaid at suitable distances with stone drains, wherever there is sufficient fall to the land to produce a good draught through them; and where the land is nearly level, open ditches are made. The open drains used frequently to become inoperative by the washing and caving in of their banks—occasioned by high freshets in the spring. After various experiments, the following plan for their protection was adopted: as early in the summer as the water had fallen away, so as to admit of working, a commencement was made at the lower end or outlet of the ditch, by throwing a temporary dam across it, a few rods above or up the ditch; the portion thus freed of water was then cleared out; the sides were made of a uniform and proper slant; narrow trenches were dug, four inches lower than the natural level of the bottom of the ditch; sods were cut from the

swamp six inches wide, eighteen inches long, and four inches thick; then, commencing in the narrow trench, four inches lower than the bottom of the ditch in order to prevent the undermining of the work; and following up the slanted sides with one course thick of sods, and breaking joints in the upward course the same as is done in laying brick, and laying the sods grass side down, the wall or sodding was carried up nearly to the surface of the swamp; a sufficient portion of the surface was pared down to a level with the wall to admit of a sod on top, laid grass side up, and level with the surrounding swamp, and resting on the sod wall and on the natural ground; the face of the banks was then trimmed smooth with a spade, the temporary dam moved further up the ditch, and so on, till the whole line was completed. The grass immediately started from the edges of the sods, and before winter, the whole surface of the banks was well covered with grass. These banks have stood perfectly for 9 years.

In draining the bog meadows, a ditch has been dug three feet deep and four feet wide, the whole length of the border between the uplands and the meadows. In this a stone drain was first made, then the ditch filled with stones, and a stone wall built on top for a fence, by which three purposes have been accomplished; the stones from the uplands have found a resting place, out of the way of the operations of tillage; the springs flowing into the swamps from the uplands have been cut off; and the earth taken from the ditch is just the thing for a covering for the meadows. When the drainage is completed, those parts of the meadow that have dried off enough to bear up a team are plowed, and those that are still too wet and miry are turned over with a bog-hoe. When the surface of the meadow is frozen, clay, loam or gravel, whichever is handiest, is carted on and spread one and a half inch thick, or at the rate of about an ox-cart load to each square rod of ground. On the top of that a good coat of compost made of loam and manure is spread, and then a half bushel each per acre of herds-grass and red-top seeds sown. After this, most of the land can be plowed; and as often as the cultivated grasses need renewing, the sod is turned in September with the plow, manure applied on top, and grass-seed sown.—Forty tons of hay have been cut in a season, on 12 acres of reclaimed meadow.

Mr. Stone plows and manures about twenty-five acres of his upland, yearly. A part of this, however, is not cropped at all, but is kept open for the benefit of the trees growing thereon. The balance is devoted to the growing of vegetables for market, the raising of carrots and other roots for the stock, and the cultivation of field crops. For the land that grows vegetables, he purchases horse manure from the city stables and mixes it with compost made by the hogs, in order to start the crops early. For all other crops, the manure used is wholly made on the farm, and is applied at the rate of thirty loads, of twenty-five bushels each, per acre. Mr. Stone is in favor of deep tillage. He plows his land as deep as the soil will admit, gradually increasing the depth, until, on some of the fields, his largest sod plow will go no deeper. He thinks that any land may be advantageously deepened by turning small portions at a time of the subsoil to the surface, to be converted by sun, air, frost, and manure, to productive loam. Under this system of deep ploughing and high manuring, his crops are all luxuriant, and when those portions of the land devoted to a rotation of crops are laid to grass, he thinks they give him an average of two tons of hay to the acre, at a first cutting. Two hundred loads of first crop hay have been put into the barns this season, 50 of which, with the rowen crop, the corn, fodder, roots, &c., will keep his own stock, and leave the balance for market.

A good deal has been done with excellent effect in the admixture of the different soils upon the farm. Four horses and four oxen are kept for farm work, and at leisure times they are employed in exchanging soils. The muck from the low meadows is drawn to the yards for compost, and from thence to the upland fields. As before remarked, the lowland meadows receive a coating of clay, loam, or fine gravelly subsoil, the latter of which is found to be the best, for it supples, in greatest quantity, those matters that give strength of stem to the cultivated grasses, and which are deficient in the peaty soils. In various places on the upland stiff soil, the underlying clay comes through to the surface, and the land retains too much moisture, in some seasons. On all such places, from one to three inches of sandy or gravelly loam are spread, with an effect upon the crops that is apparent to the observer in a moment. So, too, on the dry, gravelly knolls, an application of two or three inches of clay from the stiff lands changes the whole aspect of the vegetation growing there.

The most important production of the farm is fruit; the average annual yield of Baldwin and Russet apples being about 1,000 barrels. Other varieties are raised, but these two are the principal. The old orchards are manured and plowed each year, but no crop is taken except that afforded by the trees. In younger orchards, the open space between the rows of trees are devoted to vegetables for market. The apples are carefully, picked from the trees by hand, packed in barrels and stored in a dry, airy fruit cellar under one of the barns. The farm produces a variety and abundance of other fruits, such as pears, peaches, plums, cherries, quinces, and summer and fall apples.

About ten acres are devoted to market vegetables, in all the varieties. The details of their cultivation would be a repetition of those already given in the account of Mr. Pierce's cultivation. While at Mr. Stone's I saw a market wagon loaded, and had the curiosity to take an account of the various articles sent off. They were as follows: tomatoes, onions, beets, summer squashes, cucumbers and mangos, and string beans for pickling, potatoes, green corn, pole beans, apples, peaches, and pears.

Mr. Stone has a farm of 66 acres a mile or two from home, which he rents for $600 per annum. He remarked to me that his tenant paid his whole rent last year from the sale of the cucumbers raised on five acres—leaving the proceeds of the remaining 55 acres at his own disposal.

Mr S. keeps about 20 head of cattle and horses, and from 40 to 50 hogs Shoats weighing from 100 to 120 pounds each, are purchased at Brighton market, spring and fall, fed six months, then slaughtered and taken immediately to market.—At killing time, they average from 275 to 300 lbs. each, dressed. All the refuse fruits and vegetables of the farm are fed to them. A kettle or

cauldon holding six-hundred gallons and set in an arch, is mostly filled with vegetable products, to which is added six bushels of meal, and the whole is then boiled. The contents when cooked are taken out, and to the mass is added an equal measure of *slimes*, purchased at a starch factory. These *slimes* are the best part of the washings in the process of making starch from flour. For the last six weeks the meal is increased in order to get the hogs in a high state of fatness. The yard in which the hogs run is well supplied with muck, turf, weeds, and all sorts of refuse litter, and these materials are mingled and enriched by the swine. When not at work, the horses are stabled all, and the oxen most of the year. The other cattle of the farm are stabled most of the time in the winter, and the cows nights through the summer. Their stables are directly over the barn cellar, into which the manure goes; suitable quantities of muck, loam, turf, &c., are frequently added to the manure, the hogs have free access, and the materials are well mixed. In these ways some 600 loads of compost, of 25 bushels each, are annually made.

Mr. Stone showed me a statement made by him, at the request of the Commissioners of Patents, of the whole amount of receipts and expenditures for three years. Here it is:—

Whole amount for hay sold,		$4,257 00
do. do. pork,		4,552 00
Fruits, vegetables, stock, &c.		10,025 00
		$18,834 00
Amount paid for labor,	$3,521 00	
grain and feed for hogs,	2,058 00	
shoats,	1,575 00	
manure,	373 00	
provisions	260 00	
goods,	707 00	
taxes $310, stock $209,	619 00	
miscellaneous items,	1,025 00	
		10,138 00
		$8,696 00

I think these results quite naturally remind us that too many of our farmers, by scattering very limited labor and means over unlimited acres, mostly dissipate the former, and at the same time wear out the latter; and fertility having been once sapped, the further application of the old system, becomes emphatically, a lengthening wearisome chase after lean and scattering crops. In the older and settled districts of our country, we need to commence a severe condensation in our farming, to learn a juster adaptation of capital, labor and land to each other. Our farmers can only realize substantial profits, and maintain indepedence and true dignity, by good cultivation.

Scanty crops offering no cheer to labor, it becomes laggard and faint; large crops stimulating labor, it easily surmounts obstacles, burdens lighten, it becomes pleasure. F. Holbrook.

Brattleboro', Vt., Sept. 5, 1850.

Albany Cultivator.

Something New.—A new article of boots and shoes has just come up in England. It is called the Pannas-Corium, or leather cloth, and was invented by a person named Hall. The material is cotton, but has the mass and general appearance of leather, and receives a polish from ordinary blacking and in the same way. It is used only for the upper, the sole being leather. It is said to be as durable as leather, never cracks or splits, and possesses the advantage of not drawing the foot.

TO RAISE WATER BY THE SYPHON.

Messrs. Editors:—Seeing in my "Farmer" for November, your letter of inquiry from Joseph Briggs, of Willet, N. Y., respecting syphons, together with the answer of the editor, I take the liberty of offering Mr. B. the result of my experience in the syphon line.

I have one in successful operation under the following circumstances. Water is conveyed to the house, a distance of sixty-six rods, over a ridge of land sixteen feet high, in half inch lead pipe, No. 1. It is discharged four feet lower than the surface of the water in the spring, and at the rate of eighteen gallons per hour. The pipe is thin, and had to be soldered in seven or eight places. I had a vast deal of trouble and tribulation with it before I got it tight, but it now works so beautifully, that I am satisfied. The whole question turns on this point. Syphons will continue to work, provided they are perfectly tight, and that there is a moderate amount of fall from the surface of the water in the well to the place of delivery. Water is raised in a syphon on the same principle that it is in the suction pump, and may be elevated to the same height, to wit, thirty-two feet. The *objection* to raising it very high in a syphon is that air separates from water when thus raised, and the higher it is drawn the more. It is essential that there should be sufficient current to carry out this air as fast as it is evolved, otherwise it would accumulate and stop the water. Four feet of fall answers the purpose in my case, but I do not believe that much less than that would do. The amount of fall required depends, of course, on the length of the syphon.

Small beads of air issue from my pipe along with the water every minute or two, to ascertain the quantity of which, I collected them by means of a bottle of water and funnel inverted over the mouth of the pipe in the tub, and found the quantity to be one-half pint in twenty-four hours, or the bulk of one ounce of water to every fifty-four gallons.

I at first constructed, at a cost of some money and a great deal of labor, an apparatus similar to that described in Ewbank's Hydraulics, for taking out the air at the summit, but I found it entirely unnecessary, nay worse than useless, and I have taken it out and have now only a plain pipe.

At one time despairing of getting the syphon to work, I procured a *ram* and applied it, but the supply of water not being sufficient to keep it going, I made another examination of the places where the pipe was joined together, and fortunately discovered the cause of all the trouble I had had, which was an imperfection in the soldering; as soon as that was reconciled, I had no further use for the ram.

With your permission I will make the following suggestions. If you do not wish to convey the water more than thirty rods, and if you have six feet or more of fall, I would recommend to use heavy three-eighths pipe, and if possible have it all in one piece. I think you can procure it so by ordering it from the manufacturer. It will deliver an abundant supply of water for any farm, will cost less and be less liable to get out of order than pipe of larger calibre. You are probably aware that the longer a tube is, the less water will pass through it in a given time and with the same amount of fall. In my case, half inch pipe is not too large. To avoid raising the water, I would dig the ditch four feet deep, or more, at the summit, if the nature of

the ground will permit. Then to start it, it would doubtless be a good way to fill it before putting it down as suggested by the editor of the Farmer, of you can change it at any time with a common beer pump, which may be obtained at the hardware stores, without the counter fixings, for about twenty shillings. To adapt it to your purpose, you have only to attach about three feet of lead pipe to each end of it, and fasten the wooden frame to a piece of plank large enough to stand on. It may be worked either as a suction or force pump, but I prefer the latter. To couple it to the syphon, make a quill of hard wood, say locust, five inches long, and introduce one end of it into the syphon and the other into the force pipe; then tie a piece of strong twine from one pipe to the other, leaving it slack in the middle, and then take a large nail and make it taut by twisting it after the manner of an old fashioned saw-strain. I charge my pipe in this way and the operation requires about twenty minutes of hard work. To do it by suction takes longer, and requires that the valves, couplings, &c., should be in perfect order.

As to *testing* the pipe, it must be borne in mind that when a syphon leaks, water does not escape from it, but air sucks in; it is therefore not easy to detect an imperfection. I would recommend to start it and see if it continues to work. If it does not you may be certain that it is not sound. A leak, if tolerably large, may be discovered by forcing water in *hard*, but air will enter through a crevice when water cannot readily be forced out. The pipe might be tested with an air-pump; if a perfect vacuum can be formed, you can rely upon it that it is all right. Do not on any account cover up the pipe till it is proven.—*Genesee Farmer.*

O. P. Laird.

Oneida Castle, N. Y., Nov., 1850.

APPLICATION OF CHLOROFORM TO ANIMALS.

Dr. Dadd, veterinary surgeon, of this city, makes the following statement in the Chronotype, showing the great utility in giving chloroform to animals when painful operations are to be performed on them.

Dec. 9th, 1850, I was called to see a gray mare, of the nervous temperament, about nine years of age, owned by Mr. Webb, of Haverhill Street, in this city. The animal had just received a severe injury in consequence of running away and coming in contact with the shaft of a vehicle. The animal appeared to labor under considerable excitement, pulse quick and wiry; respiration hurried; and incipient violent twitchings of the humoral and pectoral muscles. On an examination of the wound I found a laceration of the skin and fascia, commencing four inches below the point of the olecranon (or point of the elbow) on the outside of the off fore leg, continuing down to the centre of the carpus, (knee.) The upper portion of integument being also lacerated crosswise, the flap presented a triangular appearance. The muscle known as the *extensori metacarpi oblique* was divided. Two small tendons, which operate in the extension of the leg and foot, were also severed. The periosteum, covering the bone, was also lacerated in several places.

Taking into consideration the great pain the animal suffered in consequence of the large surface exposed, and the extra pain the animal must necessarily suffer in sewing up the wound, I thought it an act of humanity to administer chloroform. The animal was accordingly cast—in the usual manner—having previously strewed the ground with straw to break the fall and prevent concussion. A bundle of straw was then placed under the head of the animal, and that firmly held down by an assistant. The wound having been carefully washed, and all extraneous matter removed, a sponge, saturated with two ounces of chloroform, was then applied by Dr. Hogan to the nostrils. In a few seconds, the pupils became dilated, difficult respiration set in, which soon subsided, the pulse became soft, and the animal appeared perfectly insensible. Knowing it to be a matter of impossibility to unite the divided tendons, the principal one having been torn from its attachment at the carpus (knee,) I secured the ragged and pendulous portions, and proceeded to bring the skin in apposition, where it was confined by interrupted sutures. Twelve stitches were taken, in all, about one inch apart, leaving an orifice of half an inch at the lower part of the wound for the escape of fluids. A pledget of linen, moistened with tincture of myrrh, was then applied, and over the whole a bandage. The casting apparatus was then unlocked, and in a short time the animal got up and walked to its stall. The animal showed no signs of pain, except once, during the operation, and this was owing to the evaporation of the chloroform; on another ounce being applied, the animal quickly relapsed into its former state of insensibility.

Present state of the animal, 24 hours after the accident:—Nervous excitement entirely abated; pulse and respiration natural; appetite good;—the wound (as far as I am able to judge without removing the bandage) is doing well.

ADVANTAGES OF LARGE WHEELS TO HORSE CARTS.

The advantages of large wheels to horse carts are obvious, as they greatly increase the facility of draught, and tend to lessen the number of accidents to which all two-wheeled carriages are liable, from the shaft horse falling down.

By adopting large wheels and a bent axle, the cart becomes less liable to such accidents, as the centre of gravity, (the fore end of the cart body,) and the centre of suspension, (the axle,) are brought much nearer together, the former being placed nearly over the latter, at a small distance only from it. A horse falling with a loaded cart so constructed, will experience but little increase of weight upon him while down. The centre of gravity will be thrown forward, but in a very trifling degree. In carts, &c., it will almost always happen that the centre of gravity will be above the point of suspension (the axle;) but in gigs, &c., the body may be placed below that point when the body will always maintain the erect, (that is a horizontal) position, and should the horse fall down, will operate to lift him up again. A gig so constructed will be almost beyond the possibility of those serious, and frequently fatal accidents, which occur from the falling of the horse.

☞ Sheridan celebrates the felicity of army husbands—a man who "may wed you to-day, and be sent the Lord knows where before night; then in a twelvemonth, perhaps, come home like a Colossus, with one leg at New York, and the other at Chelsea Hospital."

Mechanics' Department, Arts, &c.

OXIDATION OR RUSTING OF IRON.

"There are many mysteries about iron," said a machinist to us, one day, "and one of them is the difference which different pieces or parcels of iron exhibit in regard to rusting or oxidizing. Some pieces will rust very easily and rapidly, while others will resist rust a long time." We agreed with him, that there were many mysteries in regard to the nature and action or changes in iron, but thought we had better change the expression "mystery," and refer it to our ignoranae. Indeed mystery is only another word for ignorance, for what we know and fully understand is no mystery. It would be a better expression, therefore, to say that we are yet ignorant of many of the properties of iron, and the causes of the changes which it undergoes.

The mystery of iron rusting, we all know, is caused by its combining with oxygen. This is a chemical, or, as some would call it, an *electro-chemical* action, but all the circumstances which vary this action are not yet understood, nor all the laws which are necessary to produce, increase, retard, or stop the action, fully known. Cast iron resists the action of sea water, it is said, much better than wrought iron, and yet when this kind of iron has been immersed a long time in sea water, on being exposed to the air it will become hot and fall to pieces.

In 1545 the ship Mary Rose was sunk during a naval engagement. Not long ago some of the cannon balls were raised from the vessel, where they had been buried in the water 300 years. They became red hot, on being exposed to the atmosphere, and fell to pieces. This phenomenon cannot be fully explained without knowing the exact ingredients of the mass of which they were composed. They might not have been made of perfectly pure iron, or some circumstances connected with their position might have brought about a change, during that long period, with which we are not acquainted in our limited operations.

Some chemical experiments go to prove that there are processes in nature, which, if we knew how to apply them, would render iron proof against rust, and, on the other hand, there are processes which would make it one of the most easily rusted of any metal known.

It is stated by Faraday that if iron be placed in nitric acid, which will dissolve it readily, and be touched or put in contact with a piece of platina, the strongest acid will have not the least action upon it. It has been stated by Stephenson, the celebrated engineer, that iron which is worked will not rust so readily as that in a state of rest, and he cites as authority that in railroad iron the rails which are worked do not rust, while rails which lay alongside, and are not worked, will rust in a short time. He tried to explain it by supposing that electricity was developed, during the passage of the cars, and that this prevented rust. How far this theory is correct is not certain. The study of nature and properties of this invaluable metal is one of great importance. It already enters into almost every manufacture. Without it civilization could not continue. As new facts, in regard to its nature and capacities for new uses, are developed, it becomes more extensively used, and we have no doubt by future researches it will be found capable of entering still further into compositions and structures for which it is now thought totally unfit. Those who are "cunning workmen" in metals have in this single one a study of great importance and usefulness.—*Maine Farmer.*

A New Watch.—A great improvement in the manufacture of watches has just been made in Geneva, by which keys are rendered unnecessary. By simply turning a screw in the handle, the watch is wound up, and another movement regulates the hands. The first watch manufactured with this improvement is intended for America, and its case is said to be a rich and curious specimen of art, and historically interesting, the ornamented border containing a view of the famous "Charter Oak," of Connecticut. It is a good action thus to make a watch case teem with historic associations without destroying its ornamental beauty."—*Farmer and Mechanic.*

MERITS OF FOWLS.

The breeding of fowls, with many, is more a matter of fancy than of the intrinsic value of the different kinds. The safest way of giving advice on this subject is to say,—let each individual select that variety which he likes best—breed and compare the merits and demerits of each until his judgment is well founded upon actual experience—holding rigidly to the principle of not crossing different breeds for permanent use, but keeping them, if possible, entirely distinct, for in no other way will the test be a fair one.

The Cochin China, Shanghae, Great Malay, and other monstrous breeds produced by crossing with one another, in my humble opinion, are not the most desirable kinds for general use, as their legs are very long and large, which are bad points in a fowl—their flesh coarse, and they are great eaters—besides, they lay comparatively, but few eggs, which are very liable to be trodden upon and broken at the time of sitting.

The dorking is a fowl, all things considered, much to be preferred to all others for profit. They are larger and longer bodied, and of better proportions, according to their size, than any other variety—their bodies being long, plump and well fleshed—short legs, full, broad breasts, little waste in offal.

That there is a difference in the number and quality of eggs laid by different hens, is conceded by all.

Of these, the Polands stand first in public estimation—but to say or believe, that they are everlasting layers, is a great mistake. If I wanted eggs only, and not chickens, I would keep this variety.

Mr. Doland, of your city, showed some very fine specimens of this breed at the State fair. The black Polands are *useful* as well as *ornamental.*

"An egg is an egg in the market"—and "a pint is a pound,"—and the buyer seldom stops to think of the weight, although there may be three times the difference in the bulk of those in the same basket. 'Tis not the largest eggs that are the most profitable to the buyer, as the flavor differs not only in the different breeds, but with the kind of food on which the hens are fed, and the season of the year in which they are laid.—*Granite Farmer.*

A Lover of Poultry.

☞ A white gunpowder, said to be more powerful than the black, has been manufactured in England.

Ladies' Department.

FALSE PRIDE A BANE OF SOCIETY.

A young lady of high accomplishments (and no PRIDE) in the absence of the servant stepped to the door on the ringing which announced a visit from one of her admirers. On entering, the beau, glancing at the harp and piano which stood in the apartment, exclaimed, "I THOUGHT I heard music! on which instrument were you performing, Miss?" "On the gridiron, sir, with an accompaniment of the frying pan!" replied she; "my mother is without HELP, and she says that I must learn to FINGER these instruments sooner or later, and I have this day commenced taking a course of lessons."

The present system of domestic education has less of common sense in it than any other arrangement in social life. The false idea that it is ungenteel to labor—especially for a lady—prevents thousands from taking that kind and amount of bodily exercise on which sound health and a firm constitution so much depend. Those who are brought up to work in the country, and go to the city and make a fortune, indulge the false pride of training their children to despise labor, which was the birthright of their parents, and make it a point to decry honest toil, in which they were themselves reared, and to which all their relatives are still devoted. This is mushroom aristocracy, and the most contemptible of all. Young men will willingly become clerks, and roll and lift boxes, and so long as they are CLERKS and in a mercantile house, and can wear a standing dicky, they despise an apprentice to a business perhaps far less humiliating and subservient—all because they are MERCHANTS, or intend to be.

The successful merchant is a laborious man, but so long as his efforts are not regarded as labor, it does not wound his pride. He toils for thirty years as vigorously as a mechanic, but not exactly understanding that his work is really labor, he feels that he has just as good a right to despise it as does the man who is born to fortune; and he teaches his wife and daughters to despise every useful occupation, and goes to his store daily to sweat and toil, not doubting the respectability of his efforts, however onerous, so long as the world does not brand it with the disgraceful name of LABOR. For such men—for ANY man to despise the ennobling subsistence, is making war on the natural institutions and best interests of society, and treading sacrilegiously and contemptuously on the ashes of his father or grandfather who tilled the soil. Young men! you are fostering a false pride which will ultimately rankle at the core of your happiness and make you slaves indeed. Off with your coats and in the name of reason and liberty rush with manly strength into architecture, or the manufacture of works of utility, and leave the measuring of tape to those whose souls are as "short as the yardstick and as narrow as the tape." Be men! cease to crowd into clerkships and starve your way through life in the vain hope of being the fortunate ONE who shall become rich out of the five thousand who remain poor. Ladies, if you would be worthy of your age, of the genius of a noble country, and of an exalted civilization, set an example of wisdom by employing your time on something useful to the world. Are you rich? thank God, then, that you may have your time at your command to bless and benefit your less fortunate sisters of want, and their helpless offspring. You can thus become angels of mercy, almoners of good, and merit the benedictions of God's poor while you live, and their tears when you die.—*Phrenological Journal.*

HINTS FOR YOUNG LADIES.

If any young woman waste in trivial amusements, the prime season for improvement, which is between the ages of sixteen and twenty, they regret bitterly the loss, when they come to feel themselves inferior in knowledge to almost every one they converse with; and above all if they should ever be mothers, when they feel their inability to direct and assist the pursuits of their children, they find ignorance severe mortification and a real evil. Let this animate their industry, and let a modest opinion of their capacities be an encouragement to them in their endeavors after knowledge. A moderate understanding, with diligent and well-directed application, will go much farther than a more lively genius, if attended with that impatience and inattention which too often accompany quick parts. It is not for want of capacity that so many women are such trifling, insipid companions, so ill qualified for the friendship and conversation of a sensible man or for the task of governing and instructing a family; it is often from the neglect of exercising the talents which they really have, and from omitting to cultivate a taste for intellectual improvement; by this neglect they lose the sincerest pleasures, which would remain when almost every other forsakes them, of which neither fortune nor age can deprive them, and which would be a comfort and resource in almost every possible situation in life.—*Mrs. Chapone.*

EXCELLENT COLD STEW.

Take a nice fresh white cabbage, wash and drain it, and cut off the stalk. Shave down the head evenly and nicely into very small shreds, with a cabbage cutter or a sharp knife. Put it into a deep dish, and prepare it for the following dressing. Take a gill or a half tumbler of the best vinegar, and mix with it a quarter of a pound of fresh butter, divided into four bits, and rolled in flour; a small salt-spoon of salt, and the same quantity of cayenne. Stir all this well together, and boil it in a small saucepan. Have ready the yolks of three eggs well beaten. As soon as the mixture has come to a hard boil, take it off the fire, and stir in the beaten eggs. Then pour it boiling hot over the shred cabbage, and mix it well all through with a spoon. Set it to cool on ice or snow, or in the open air. It must be quite cold before it goes to table.

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☞ Also published at the same office *every* Saturday, on a large handsome folio sheet, the NEW ENGLAND FARMER AND BOSTON RAMBLER, an independent Journal, devoted to Agriculture, Domestic and Foreign Intelligence, Congressional and Legislative proceedings, Education, Miscellaneous matter, Temperance and Religious intelligence, Marine News, Markets, Sales of Stocks, &c. Making the largest and cheapest Agricultural family Newspaper published in New England. Terms, $2,00 per annum in advance. At the close of the year, the publishers will bind the semi-monthly FARMER gratis for any person who subscribes for both publications, paying one year in advance for each.

NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

TESTING FRUITS.

Testing fruits fairly and thoroughly is a business of great importance to the community, and it requires nice and varied experiments, with the advantages of long experience and extensive observation. For a person to judge truly of the value of a fruit, he must be well acquainted with all other kinds cultivated in that region, or particularly with those of the same season.

Besides the quality and general appearance of the fruit, it is necessary to know its growth, bearing, and various other habits. Some varieties may be good growers and good bearers, and yet only a small part of the fruit may be fair and fit for the market. Some fruits are very tender and are liable to decay even from slight bruising, or they become discolored from bruising and will not sell well in the market.

Some persons seem to think that one well acquainted with fruits can judge from testing a single specimen, whether it is a valuable kind. In some cases a single apple has been handed to us, which may have been carried in the pocket a day or two, and perhaps kept in a warm room one or two weeks, without any information as to the habits of the tree, and our opinion is wanted as to its being worthy of extensive cultivation.

We often have inquiries whether the Northern Spy, Ladies, Sweeting, and other new and promising varieties of apples, have borne in this region, evidently with a view of forming an opinion of their worth, from the productions of a few specimens when the tree first begins to bear.

Now we will show our views of the subject, that it may be seen how widely we differ from those who would come to hasty conclusions from partial examinations. When we get specimens of a new fruit that promises to be highly valuable as a leading variety, we collect all the information we can as to its history, and its habits: and if we can, we procure a barrel of the fruit, in order to try it during its season, and compare it with other standard kinds. We also procure scions, and try them in the nursery, and on standard trees. And if we can, we visit the orchards where the variety is cultivated. After all these advantages of judging of a fruit, we find it necessary to procure a barrel of fruit year after year, and distribute specimens among good judges, and learn their opinions.

Sometimes we have seen a tree producing fair fruit of excellent quality, but we could learn nothing of it, excepting from the original tree. In such cases we have obtained scions for trial on old trees, and for their growth in the nursery, and we have also sent them to our friends in different sections of the country, that they might be tested in various locations and climates.

When we are asked whether the Northern Spy, and other new fruits, have been tested in New England, we sometimes reply that they have not, nor will they be for ten years. When a new fruit begins to bear on very thrifty branches, and especially on young trees, it is often small and knurly, even though it be a good variety under favorable circumstances.

Some fifteen years ago, the Minister apple was introduced, and the greatest pomologist pronounced it the finest of American apples. Several other able writers on fruit have recommended it very highly; yet the North American Pomological Convention pronounced it second rate, and some cultivators say it is not worth cultivating. Most persons in speaking of this fruit have run into extremes. The amateur who has taken excellent care of his fruit, so that it has grown large and has not ripened till late in winter, or early in spring, when it loses its acidity, and acquires a high aromatic flavor, has a high opinion of the Minister apple; while the cultivator, who thought he should lose by thinning his fruit, and allowed the tree to bear too much, so that it is small and inferior, and then by rough handling, and exposure to air and sun, the fruit soon decays, or grows ripe and becomes dry, while yet too acid, and inferior even for cooking, pronounces it unprof-

itable, and condemns it at once. Thus after being introduced and highly recommended for fifteen years, this fruit is not well tested, and we doubt that it will ever be well tested, so that the generality of fruit growers will know its true merits and demerits.

Notwithstanding what we have said, we may, in many cases, get valuable information on new fruits with only a few year's experience, though a longer time may be requisite to make a thorough test.

ACKNOWLEDGMENTS.

From B. A. Rockwood, Holliston, apples for a name. They are a variety not generally known in this region. They are of a good size and fine appearance. Quality fine and pleasant.

From Perez Fisher, Franklin, apples of medial size, mostly red, tolerably fair and handsome, remarkably tender, and of a fine aromatic flavor. It is one of the finest varieties that we have tasted at this season. In use in December and January. It originated in Franklin.

From W. M. Spear, Braintree, Vt., apples called Pippin, excellent for cooking. We think this is identical with the Winter Pippin, cultivated in some parts of Vermont, great grower and bearer. Also Wilder Greening, a pretty good table apple, fair and handsome, good grower and constant bearer.

NOTICES OF PUBLICATIONS.

Dr. Lee's Address before the Hampshire, Hampden and Franklin Agricultural Society, at Northampton, Oct. 10, 1850. Dr. Daniel Lee, of New York, and now at the head of the Agricultural Department of the Patent Office, Washington, has done much to enlighten farming. His writings are distinguished for their scientific and practical bearing upon agriculture.

Transactions of Worcester Agricultural Society for the year 1850. It contains a short address by Rev. Mr. Stacy, Reports of Committees, and statements of applicants for premiums, embracing a variety of useful matter, published in a neat and compact form.

Large Hogs.—Mr. J. D. Fisk, of Waltham, raised two hogs, age 19 months, which weighed, dressed, 650 and 617 lbs., kept in the usual manner. They were to be seen last week at Stanley & Whittier's market, at Waltham, where specimens of pork, as cut up, (7 inches in thickness, clear,) can be seen at any time within a few days.

☞ We are indebted to Col. J. W. Lincoln for a list of Premiums offered by the Worcester Agricultural Society for 1851, to which we shall give attention in due time. The Cattle Show will be Sept. 18.

For the New England Farmer.

HEALTH.

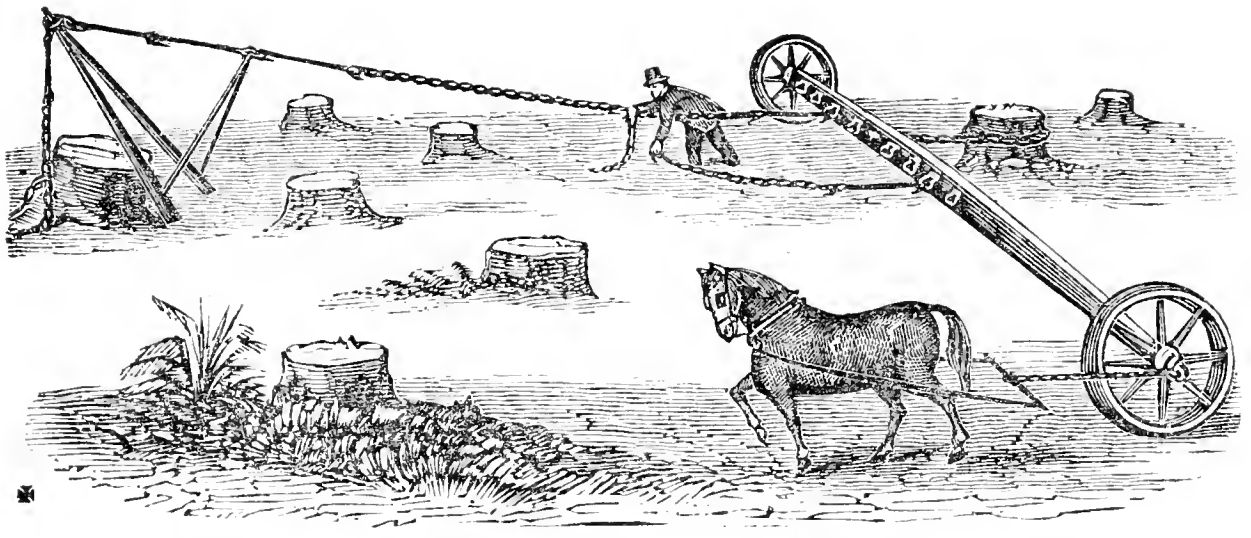
How few know how to prize this blessing, the most grateful and best gift of God to man. Little do we think that without it, we should be indeed miserable, and that life's pleasures would be turned to pain, that no enjoyment remains for him who has parted with this precious boon. Let us look around us, and how few do we find enjoying perfect health. One has the dyspepsia and another the scrofula, and so on. These, with ten thousand other maladies which afflict mankind, we have brought upon ourselves by our own imprudence and neglect to the laws of our being. Then let us study the laws of health and live according to their precepts. Diet exerts a most powerful influence upon the body, modifying its powers and even exercising an effect upon the mind. In reference to diet, quantity is of as much importance as quality; if, therefore, we wish to live temperate lives, we should especially have a care not to overload the stomach, even if it be with *plain* food.

But little need be said upon the quality of the food; it should be plain and easy of digestion, that the stomach may not be taxed and its digestive powers impaired. All greasy, fatty substances should be avoided, for they invariably tend to fill the blood with humors. Some contend that animal food is pernicious and was never intended for food; they advance many strong arguments in support of this theory and have found many followers. Suffice it to say, that animal food can never injure the most delicate stomach; that is, we intend to say more than the same quantity of vegetable food. It is certain, therefore, that an animal diet is not so hurtful as some of these supporters of Graham have imagined. The Grahamite will probably reply that he knows of persons with whom animal food actually disagrees; but we can assert there are people with whom vegetable food disagrees.

But we are no supporters of an entire animal diet, but believe that the food should consist of a proper admixture of both. Bread has been styled the staff of life, and so it most certainly is; it has constituted a part of the food of the human family for many ages, and thus it continues to the present day. Flour bread is admitted on all hands to be the most injurious to the digestive organs, and its use should be avoided. It actually destroys more than any one thing not directly, but through the fatal power of dyspepsia and consumption, which it produces. We are apt to swallow our food too quickly, and it therefore can but be imperfectly masticated, so that the stomach cannot perform its functions with perfection. We also eat too much, thereby overloading the stomach, and hindering digestion in that way, beside filling the blood with humors, which, if suffered to remain, would cause a legion of diseases. Thus we see that diseases of various kinds are brought into existence through our imprudence in eating, alone; then is it not our duty to avoid such practices as are laying the foundation for our dissolution? A duty which we owe to the great and benificent Creator of our bodies, who has formed them with such consummate skill, and created us the lords of the earth, stamped us in his own divine form and competent to discharge the active duties of life.

"Health alone can give us zest;"
All who feel its power are blest;
'Tis itself the heart's one treasure.

D W. C. P.



STEWART'S PATENT STUMP MACHINE.

STEWART'S PATENT STUMP MACHINE.

This machine is not only used for pulling stumps, but it is applicable to moving buildings, rocks, &c. It possesses great power and may be worked with ease and convenience. A few words by way of explanation may be acceptable to some of our readers.

A strong chain is put around the root of the stump to be removed, as represented in the engraving on the left. This chain passes over *shears*, or strong timbers so placed as to give the power at the stump an upward direction. In many cases this part may be dispensed with, and the chain pass up over the stump. The chain continues onward to the lever, on wheels, to which the horse is attached. This lever is fastened to a stationary stump When the horse has passed on, according to his present position, the length of the lever, he is turned in the other direction, and at the same time, the outer chain is dropped and the inner chain is hooked into the leading chain, and the horse passes on to the extent of the lever in the other direction.

A pair of oxen may be used, if more convenient. When stumps are thick, a large number may be pulled without removing the lever from the stationary stump. It is said that the largest stumps may be easily extracted with this machine. A pair of horses or oxen is a sufficient team to take it from place to place, and three men are sufficient to manage it in the heaviest work. The removal of 100 stumps is considered a day's work.

Machines and patent rights are offered for sale. Address, William W. Willis, or James Kilburn, Orange, Mass. Reference is made to the following gentlemen:—Alvah Crocker, Esq., Fitchburg, formerly President of Vermont & Mass. Railroad; S. F. Johnson, engineer of Troy & Greenfield Railroad; Gilmore & Carpenter, Boston, railroad contractors; Boody, Dillon & Co., Springfield, railroad contractors.

SECOND AGRICULTURAL MEETING

At the State House, Jan. 21.

Gov. Boutwell in the Chair,—Subject, "The Potato Disease."

The President made a few appropriate remarks on the importance of agriculture, and he expressed the deep interest he felt in the cause, and his desire to promote it. As he was not practically acquainted with the subject under discussion, he declined making any remarks on it.

Hon. Marshall P. Wilder, of Dorchester, was called on to open the discussion. He remarked that he was called on unexpectedly, and was not prepared for the occasion. He said that this disease baffles the wisdom of the most scientific in the the world. England and other countries of Europe had appointed able commissioners to investigate this subject, but without effect. But he believed that in the progress of science, a remedy for this disease would be discovered. He had some experience in this subject. The past season was one of uncommon moisture, and the potatoes were most injured on wet land. On the farm of Daniel Webster, they rotted on wet land, while they succeeded well at a short distance on high land. Governor Hill raised good crops of potatoes free from rot, by planting on dry land, and manuring with guano and plaster. Col. Wilder remarked that the cause of the disease had been discovered by a gentleman of this country, Mr. Teschemacher. It is a fungus, the seeds of which float in the atmosphere, and attach themselves to the leaves of the plant when it is wet and warm; when we have what is called dog-day weather. We have a fungus on rose leaves, and we destroy it by fumigation with sulphur. Dr. Hayes has recommended this mode to save potatoes after they are dug. Barn-yard manure promotes potato rot; saline substances tend to prevent it.

Rev. Mr. Sanger, of Dover, said that his views on this subject corresponded with those of the gentleman who had just spoken. His potatoes did not rot on dry land, but they did on wet. He used peat exposed to frost, and made into compost. In preserving potatoes, they should be kept in a dry, cool place, separated from each other, or well spread out.

Hon. Caleb Cushing, of Newbury, on being called on, said that his views were crude. As to the cause of this disease all was uncertain. He doubted that fungus was the cause, as it may be an effect instead of a cause; for it usually fastens itself on decaying plants. One finds fumigation a cure, another does not. One finds saline substance a remedy, another rot. What is the rot? The tuber is decomposed. What is the origin? We understand the decay of a variety, but not of a species. The St. Michael Pear and other fruits have declined and run out; and a whole species or genus may decline. The potato is not indigenous to the United States; but its native region is the whole range of the Andes. In its native climate it is free from the extremes of heat, and it has its native cool soil, without high culture and manuring. Plants have a natural adaptation to climate or soil. You may, by a change of circumstances, such as high culture, make what is called an improvement in some respects, but you may by this change destroy the plant. There is now a new field of exploration open before us. The native region of the potato should be examined to ascertain whether the disease prevails there, and if not, roots and seeds should be procured for experiment in this country. Mr. Cushing suggested that this society present a memorial to the President of the United States to instruct our Ministers and Consuls to procure the potato from its native regions.

Hon. J. W. Proctor, of Danvers, President of the Essex Agricultural Society, was called up, and he remarked that he was not prepared to enter upon the discussion of the subject; but he would relate the result of his observations. The farmers in Essex County lost nearly all their crops of potatoes the last season. Various experiments had been made to find out a remedy for the disease; but without success. A farmer in Salem ploughed dry sandy land, and applied as manure leached ashes, lime, and plaster. Early in the season, the potatoes looked very promising, but in autumn there was an entire failure. In some hills there were no potatoes, in others, there were a few, and they were rotten. In Methuen a farmer that thought all depended on the soil, selected a piece of rather dry yellow loam, and made it moderately rich by manuring broadcast. His crop was better than his neighbors. He had another piece on reclaimed meadows, planted on ridges. The crop was blighted, and the owner attributed the blight to insects, as slugs were found about the roots of the plants and on the vines. The subject is highly important, as some farmers lose as much as the usual profit of their farms.

Hon. Mr. French, of Braintree, said that he should be happy to throw some light on the subject, if he could; but no mode of culture can be named that has invariably succeeded. The kind of potato first diseased on his place, was the Abington Blue or Veto. The dark colored potatoes were most affected at first, and then the white; but this season the white varieties were mostly destroyed, while the Long Johns (Long Reds, Rep.) had done the best. As to wet seasons being the cause, we had as wet seasons years ago, before this disease prevailed. He thought if the tops were cut off just before the disease came on, it would save the potatoes. He thought the disease usually begins about the 20th of August; and frequently they rot the most from that time to the 1st of September. Last year he examined his potatoes about the 20th of August. The tops just began to show a little discoloration. He went away, and on his return in ten days he found that nearly all his potatoes were rotten. He set a man to dig some in the fall, and he worked most of a day where he ought to have had 1000 bushels, and he did not get a bushel, and those were small. No remedy can be named, but what has failed in some cases. Potatoes had been procured from Chili, its native country, and planted in this country, and we have heard no favorable report from them. There is some safety in planting early, and digging before the 20th of August. The variety called Ladies' Fingers have generally escaped the disease. Hill's Early have usually done well, but they rotted the last season. We may yet find a remedy.

Rev. Mr. Barry, of Hanover, said that he ploughed an acre of ash-colored loam last spring. On one half, in which was a gravelly hill, he spread well decomposed manure from the barn-yard, harrowed it, and planted with Chenangoes. On the other half he applied plaster, and planted Long Reds. The vines grew luxuriantly, and were green in November. He dug only 6 or 8 bushels where the land was manured; they rotted on the gravelly knoll as on the other parts; but on the half not manured, he obtained 50 bushels of sound potatoes. Last fall he fumigated a part of his Long Reds, as directed by Dr. Hayes, and many of them rotted But he placed a part of them in a dark, cool, dry part of the cellar, without fumigation, and they kept well. The crop had almost wholly failed the past year, in his section. He thought there were some general rules that might be followed to advantage. He would plant early, on dry, loamy soil, preferring greensward. The manure should be well decomposed and spread broadcast; and the later they are dug, the better they will keep. He thought that fungus was an effect, not the cause of the disease.

Col. Wilder remarked that the most scientific men of Europe regarded fungus as a cause of the disease.

Hon. Seth Sprague, of Duxbury, President of the Plymouth Agricultural Society, said that he had planted potatoes on various soils, and they have failed occasionally in all locations. He had manured variously, both in manner and in the quality of the manure, but the effect was about the same. Last Spring he planted on sword land, and spread the manure, but there was a failure. He planted a piece of light land, manured lightly with peat, and they were not much rotten at digging, but they decayed afterwards. His neighbors' crops failed also. Various remedies had been tried, and sometimes they succeeded, again they failed. Generally potatoes do better when planted early, and dug early. But they have sometimes failed under all circumstances. He said that he had no knowledge of the cause, or remedy for the disease, and he did not believe that any body else had.

Rev. Mr. Stetson, of Braintree, observed that in 1849, he ploughed an acre and a half of highland, on a northern slope. He harrowed in the manure, applied plaster, and planted the 23rd of April, and obtained 240 bushels, and not a rotten potato. His neighbor ploughed similar land, the same extent, managed it the same, excepting he did not plant till the 10th of May; and he had only 20 bushels. The last spring he sowed 12 bushels of salt on the same land, and planted potatoes, and they began to rot in August.

Friend J. M. Earle, of Worcester, said that no theory holds good as to this disease. Facts disprove all theories. Our very best potatoes are brought, this season, from the region of Lake Champlain, where the land is generally rather low, and the soil a clayey loam. One man planted potatoes late, and they did well, while his early planted failed.

Benjamin Flagg, Esq., of Worcester, planted Early Hill potatoes, on high land, early in the season for the market. He manured in the hill with compost. He dug some early and they were sound, but some remained in the ground, after they ripened, and they rotted. Last year he planted late, and they rotted.

Gen. Littleton, of Chicopee, remarked that this subject was of vast importance to farmers, and they were becoming discouraged. His gardener had presented to the agricultural society, as fine potatoes as ever grew, and they did not rot till last season. He considered the cause atmospheric, and the tops were first affected. In the State of New York, he found a potatoe from the West, resembling the Sand Lake, said to be hardy, but they had failed, and all others, excepting the Early Foxes, from Philadelphia, which had done well, probably owing to their earliness.

The meeting was unusually large, and the discussion animated and interesting. The large Hall was well filled with an attentive audience.

The Committee of Arrangement announced that the next subject would be "Thorough Draining and Subsoil Ploughing," and that it was expected that ex-governor Lincoln would preside, and open the discussion.

POTATO ROT.

We have been requested to publish what facts can be obtained on this subject, with a view of aiding the cultivator in guarding against the malady. The present is a favorable opportunity to offer our views, while a report of the discussion on this subject at the State House is before our readers. In that discussion no new facts were elicited, yet many important ones were stated and confirmed, the observance of which is important to success in cultivating this crop. Some theories were offered with ability, that were more plausible than correct; and we were sorry to see attempts made to upset well-established and highly important facts, merely by exceptions to a general rule. In proceeding with this subject we shall have occasion to refer to that report, or views therein advanced.

This disease is so well known that a description of it is unnecessary. We believe that it first made its appearance in this country in 1843. It then prevailed to a considerable extent in the State of New York, and in some sections with severity, particularly in the region about Utica. The disease might prevail in other parts of the continent, but we have no account of it. In 1844, it was common in nearly, or quite all parts of the country, where the potato was cultivated, and to a considerable extent it was very severe, destroying nearly all the crop.

This malady was prevalent in Europe about twelve years before it appeared here, and it continued with great violence in that country for a number of years after it visited this continent. So great was the destruction of the potato crop in Europe, that in some districts, where it had constituted the principal food of the inhabitants, thousands of persons lost their lives by starvation, and diseases consequent on scanty sustenance; and a far greater destruction of life would have occurred, but for charitable and liberal aid afforded by the inhabitants of this country. Various diseases in the potato had prevailed in Europe at different periods, but whether any one was identical with this we cannot say.

As to the cause of the potato rot, there have been many conjectures; and at first various, secondary or predisposing causes, such as wet land, animal manures, warm wet weather, planting on old lands, &c., &c., were by different observers regarded as the principal cause, and those remedies which had a partial effect, and in some cases seemed sufficient, were at once regarded as completely effectual.

Again, some varieties that were more hardy than usual, appeared from limited experiments to be proof against the disease. But as it continued, and occasionally increased in violence, in some sections it swept away all theories.

On every soil and location the potato has been affected; no manure, or mode of manuring, or the absence of manure has saved it from destruction, when the disease has been severe. No variety has escaped the ravages of this disease. Even new varieties, which some thought might be relied on, have rotted as readily as old ones. We have raised new varieties from the seed that have rotted the first year, and last year we lost more than 50 varieties that were two and three years from seed, as they all rotted. Since this disease has prevailed, we have had some seasons that were rather dry and tolerably cool, without one severe rain during the period of the potato rot, and yet the rot has prevailed.

It was supposed that the potato was declining generally, and that it might be renewed in full vigor by procuring seed and tubers from the native region of the potato. This has been tried without any favorable result. Potatoes from seed brought from Peru rotted as readily as old varieties planted by the side of them. When the disease was spreading nearly over the whole world, and the only places heard from where it did not decay were the south of Spain and some islands of the Mediterranean, potatoes were procured from those favored spots, and planted in England, but they failed also.

Although early planting is generally attended with the best success, yet no time of planting has been a security. We have known early potatoes to rot in June, and the disease to prevail occasionally from that time till the latter part of November. We have known it to appear early and then disappear for one or two months. One year, (1847,) we dug the most of our potatoes by the 20th of September, and they had rotted but very little, some varieties not any. We then omitted digging till the 10th of October, and in some cases they were half rotten by the side of those that had not rotted any at the previous digging.

The state of the weather is not the principal cause of the rot, for in years past we had as wet and as warm weather as we have ever had since the rot prevailed, yet the wet, warm, muggy weather, is the most powerful of all secondary or predisposing causes. So powerful that when the weather is dry and cool, the potato will generally resist not only the principal, but all other secondary causes. As an example, in 1849, a season in which the disease was very light, generally, we had procured a hardy and valuable kind, and to subject it to a severe test we planted some on wet land, and manured with unfermented animal manure. On digging them the last of September, they had not rotted. But as we had had no rain of consequence for some weeks, we let a part of them remain, till after rather heavy rains in October, and yet they had not rotted. This variety seemed so hardy, that we planted more of them than of any other variety last season, and the crop was not worth digging, not even on dry land. Whether this great difference was owing to the different state of the weather in the two years, or to the greater prevalence of the principal cause of the disease in 1850, we cannot say. We think that without regard to the weather, the main cause of the disease may abound more in one season than in another, and more in some sections of a country or of the world, than in others.

[*To be Concluded in our next Number.*]

For the New England Farmer.

THE CULTIVATION OF NATIVE TREES AND SHRUBS.

[*Continued from Vol. 2, p. 411.*]

The late lamented botanist, Mr. Oakes, supposed when he published his Botany of Vermont, that he had discovered in that State three species of trees, nowhere else to be found in New England. These were the Over Cup White Oak, Quercus Macrocarpa, the Northern Cork Elm, Ulmus Racemosa, and the Heart-leaved Balsam, Poplar, Populus Candicans. He also adds, the three fine species, viz: the two Balsam Poplars, and the magnificent Vermont Poplar, are scarcely found, unless cultivated, in any other of the New England States. The Vermont Poplar and the Heart-leaved Balsam Poplar were not seen native, in America, by either the elder or younger Michaux.

It is now known that the Over Cup White Oak is found in Massachusetts, likewise the Vermont Poplar, or Populus Monilifera, sometimes called the Virginian Poplar, and the Necklace Poplar.—The two Balsam Poplars, and the Northern Cork bark Elm, have not, as yet, to my knowledge, been discovered in Massachusetts, but they probably will be found, as they occur in the adjoining States. The Over Cup White Oak is a fine ornamental tree, and in its appearance is very distinct from the other species of the oak. It has a fine luxurious foliage, the leaves being larger than any of the oaks; sometimes in young and vigorous trees, they will measure twelve or more inches in length, by six or seven inches in breadth.—The acorns are very large and beautiful, covered more than half their length by cups having large scales, terminating in filaments resembling a fringe.

The Northern Cork Elm appears to have been wholly unknown, previous to the year 1829, when it was discovered and described in Silliman's Journal, by Mr. Thomas. It was likewise found in Vermont, by Mr. Oakes and Dr. Robbins. It is described in Torrey's Botany of New York, volume 2d, page 166, and illustrated by a plate. In its appearance, it resembles the common White Elm, and it would be by many persons mistaken for that tree. But upon a more close examination, it would be easily distinguished from any of the New England elms, by the broad plates of cork on its branches. It resembles somewhat the Ulmus Alata, or Wahoo, the elm found in the maritime parts of the Southern States. The Northern Cork Elm most resembles the European

Cork Elm. It grows to a large size, and is sufficiently unique to ensure its cultivation by the lovers of native trees.

The Vermont Poplar, also called the Necklace Poplar, is a handsome tree, with an altitude of 60 feet. Mr. Emerson says it has been cultivated for many years in Europe, where it is called Virginian Poplar, and Swiss Poplar, the last name being given from its having been extensively propagated in Switzerland. It is also known in England, by the name of Black Italian Poplar, from its having been introduced from Italy. It is valued for its rapid growth, which is, in the climate of London, between 30 and 40 feet in seven years; and even in Scotland, it has grown to the height of seventy feet, in 16 years; thus becoming of a size for timber, sooner than any other tree. Male trees are much to be preferred, in the vicinity of dwelling houses, as the cotton of the seeds adheres to clothes and furniture in a most troublesome manner.

The chesnut is a tree well suited for landscape gardening, being of a rapid growth, easily cultivated, and is one of our largest trees. There is a dwarf chesnut, called the Chinquapin, not more than six or eight feet high, very much resembling the common chesnut, a native of the Middle States, but hardy in the latitude of Boston. It is a very small tree or shrub, bearing its fruit when quite young, and very desirable for cultivation in a garden. It is to be found in the nurseries around Boston.

Some of the willows can be used to advantage in landscape gardening, to embellish low wet grounds, the borders of ponds and lakes, brooks and streams of water. The whole number of species to be found in the United States exceed 100. Torrey enumerates thirty species as growing in New York, and Emerson has found twenty-one in Massachusetts. One dwarf species of the willow, not hitherto noticed in this State, was discovered last summer, at one of the botanical excursions of the Essex Institute, on the sandy banks of the Merrimac river, at North Andover.—It was the long-leaved Sand Willow, the Salix Longiflora described by Torrey in his botany of New York, volume 2d, page 209.

The willows most noted for their beauty, and natives of Massachusetts, are the Glossy Willow, Heart-leaved Willow, Torrey's Willow, Stiff-leaved Willow, and the dense flowering early Willow. The foreign species introduced and now common are, the Weeping Willow, Golden Willow, Crack Willow, Varnished Willow, and the Bedford Willow. This last species was the favorite tree of Dr. Samuel Johnson, at Litchfield. The Ring-leaved Willow is a singular variety of the Weeping Willow, with curled leaves. The willows are mostly early flowering, and some of them have their branches and young shoots beautifully colored with crimson, a reddish brown or golden yellow, rendering them very conspicuous in winter. All willows, it is well known, are of the easiest cultivation, readily growing from cuttings or truncheons planted in the ground.

The three-thorned Acacia, found in the Western States, is somewhat cultivated in New England, and is thought by some persons worthy of cultivation, as an ornamental tree. It is distinguished for its small, delicate, light foliage, and for its seed pods, five or six inches in length, and its branches and trunk are armed with triple thorns. When the Acacia makes a large growth, and consequently the wood is imperfect, or not well matured, the ends of the branches die in the winter. There is a Chinese species of the Acacia, with large leaves, and triple thorns, presenting a most formidable appearance.

S. P. Fowler.

Danvers, Jan. 10th, 1851.

[*To be Continued.*]

For the New England Farmer.

FARMING IN COBB CO., GEORGIA.

Mr. Editor:—As I don't like to write to an agricultural paper, in renewing my subscription, and merely do it as a matter of business, I will throw in my mite with a view of cultivating the kindly feelings which are, I can almost say, peculiar to our avocation, and make an effort to inform, if I cannot interest my fellow-laborers of the north; and to this end I propose a slight sketch of the agriculture of this county, lying to the north and west of the Chatahoochee river, which was in possession of the Cherokee Indians until May, 1838, when they were removed; and the land was taken in hand by the whites, almost an uncultivated wilderness. The soil is *generally* poor and very hilly, being (geologically) primitive formation, mostly the debris of Feldopathic granite, forming a tough clay soil, covered with a thin mixed vegetable soil, which when first cleared produces from 10 to 30 bushels of corn, but soon wears down and washes away. Native growth, red, post and white oaks, chestnut, hickory and scattering pines and poplars. Cultivation much infested with weeds and crabb, or crop-grass. Oats grow finely from 20 to 30 bushels per acre; corn 10 to 30; wheat 3 to 10, being much injured by the Hessian fly, and subject to *rust;* rye so much affected by the same causes as to be neglected; the cow pea from 3 to 5; usually fed off by stock. Carrots suit the soil, but beets, cabbage, turnips and potatoes (Irish) do not succeed; the deficiency in the last is, however, made up by the sweet potato, producing 100 bushels; all this is the product unassisted by manure.

There is, however, a considerable portion of creek and river bottoms very good, apparently the debris of Hornblende rocks; these last produce nearly double the above quantities per acre. The grey land is grateful for and tenacious of the little manure we have tried it with, and in addition to the above products known at the North, we have the staple product of the South, which gives very satisfactory return after the land has been cultivated a few years, producing from 1 to 5 hundred weight of clean cotton to the acre, according to the quality of the land, and being about 50 per ct. more expensive to cultivate than corn. Our uncleared lands can be bought for from $1 to 10, and farm partly cleared and log house improvements, from $3 to 25 an acre. Some innocent soul, up east, may now be thinking about pasture and cattle and manure; well, we are beginning to think of them too, but generally our cows have a few corn *shucks* thrown to them in the lane, and may lean against the fence to ruminate. Here and there a farmer may be found whose attempts to cultivate the *tame* grasses make him the laughing-stock of the neighborhood. Good grass is not natural to the soil, though I have found red-top and orchard grass and striped clover all growing wild. Red clover will not grow without manure, and the

growth of that and other grasses tried is very much impeded by crop grass, which springs up in May and June, very soon after land is brought into cultivation, and covers all the soil which has been recently ploughed, making constant labor necessary in the corn and cotton crops, and out-growing and smothering the young tame grass; after wheat and oats are cut it comes up, where not checked by weeds, and makes a dense growth, from one to three feet high, and making, when cut, 5 to 30 hundred pounds of good hay; it dies with frost, and at times declines before that, having come to maturity. Another draw-back to the tame grasses is the dew berry vines, and a very coarse grass, the broom-sedge or broome-straw which *will* grow everywhere, and overshade and outgrow and smother and poison in a year or two, every pasture I have seen attempted.

Our population is hardy, but being able to get a support easily, not apt to overwork themselves; labor readily obtained at 50 cents per day, or when employed by the year and a house found, $10 per month, in both cases finding themselves; the number of slaves small.

The example of a few good farmers, who would show us a little Yankee tact and thrift, would do much to introduce better and more profitable farming among us.

If the forgoing is acceptable, Mr. Editor, I may at some other time say something of our climate, seasons, fruit &c.

A. S., of Oak-wood Farm.

Roswell, Cobb Co., Georgia, Jan. 2, 1851.

Remarks.—The preceding article will be interesting, as it shows what farmers are doing in other parts of the world; but the reader will be astonished at the low price of labor, and he will naturally be lead to inquire what makes the vast difference in the price of labor in New England and Georgia. It would be supposed that the cheapness of lands, and their fertility at the South, would enable the planter or farmer to pay good wages for labor.—Ed.

For the New England Farmer.

CEMENTING CELLARS.

It is getting to be quite a common thing for those who are troubled with wet cellars to have the bottoms cemented; many, too, whose cellars are dry, are doing the same. It is, too, a grand improvement. By having a cellar bottom cemented, and the cement evenly laid on, it is equal to having a stone bottom, with an entire flat surface. Those who are troubled with rats and mice in their cellars, can easily get rid of them by this means. People being near water are often annoyed with *wharf* rats, which are far more troublesome than the common rat. But there are other nice things about cementing cellar bottoms. They can always be kept clean with very little trouble, and there is no dirt to be carried up stairs on one's feet. Cellars fitted in this way are fine for keeping milk; every thing in the dairy line may be kept in nice order. But in regard to wet cellars, every one who is troubled in this way, knows very well that a cellar which has water in it six months out of twelve is of but little value, to say nothing of the injury done to the lower part of the house, by the dampness from the cellar. Now it seems to me that this may be prevented. I cannot bring proof positive, however, from my own experience as yet, although I have been trying the experiment in a cellar dug a year and a half ago. After completing the digging of the cellar, I dug down some fifteen or twenty inches and found water. During the summer the water kept about the same depth, but as soon as the fall rains commenced, the water raised and flowed into my cellar, and so remained through the winter and spring, varying from four to eight inches deep. There being no chance for a drain, I resolved on cementing the bottom and sides of the walls. In the first place I paved the bottom with small round stones, and then filled the crevices with fine gravel. This done the surface was swept over, and two coats of cement put on the sides of the wall. Now it strikes me that this will be a preventive, as this cement after it becomes hard seems to take the nature of stone; it becomes more solid and impervious in a damp place than in a dry. There is one thing connected with this matter, about which I wish for information. Not wishing to be deprived of the spring in my cellar, I stoned it up and fitted a sort of cistern, raised from twelve to fifteen inches above the bottom of the cellar. I have been told that in case of pressure, the water will be forced up this cistern above its level, and run over into the cellar. Now the question is, will the water in this cistern rise above its level?

Smithfield, R. I. A. Todd.

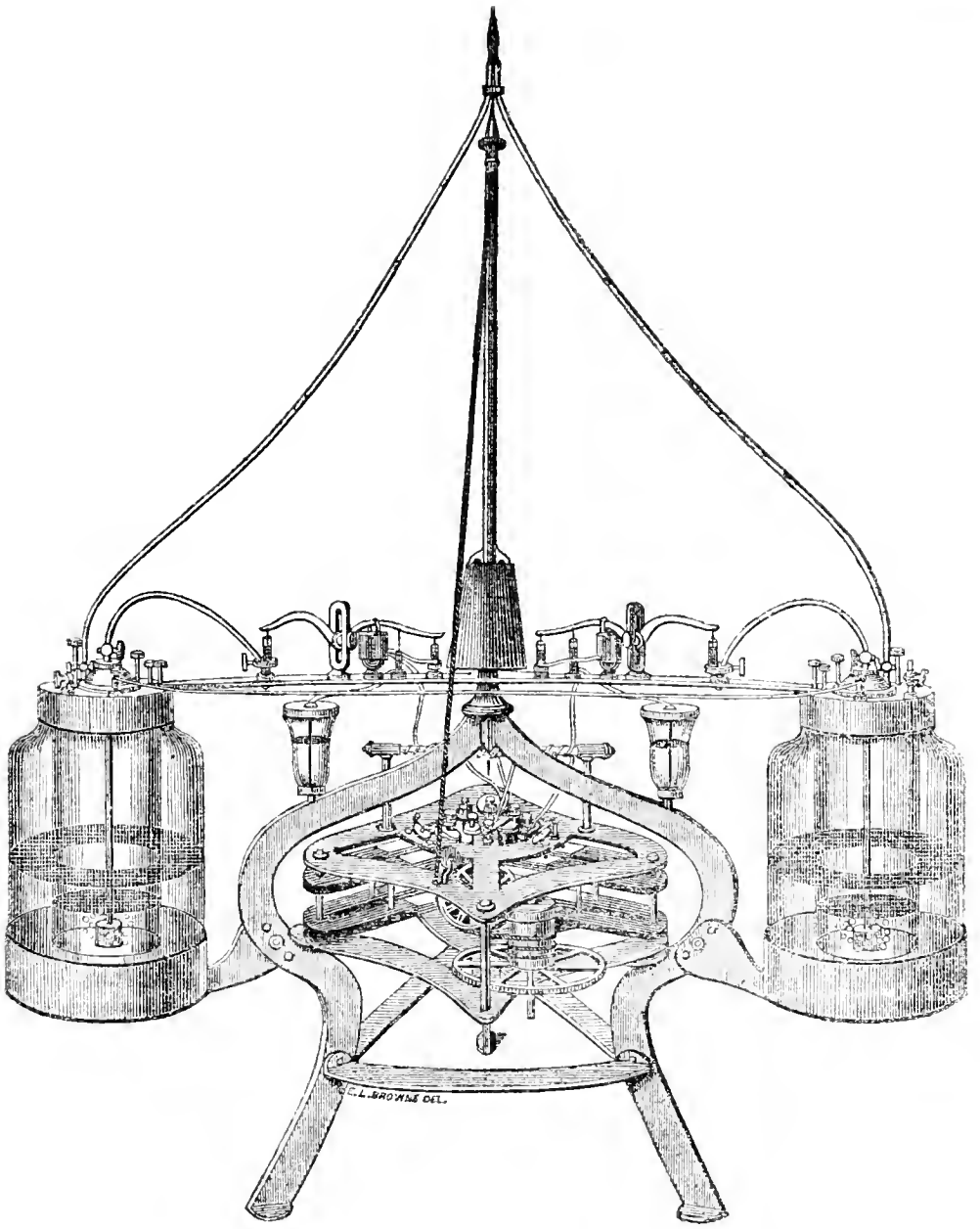
TO PRESERVE HAMS THROUGH THE SUMMER.

Messrs. Editors:—As the time of year is at hand for good house-keepers to put away their hams for summer and fall use, and as I hear so much about hams not keeping through the summer, I have thought it best to send you my method of taking care of them; and those of your subscribers who will try it as it should be tried, may write me if it fail, and I will pay the postage.

Make a number of cotton bags, a little larger than your hams: after the hams are well smoked, place them in the bags; then get the very best kind of sweet, well made hay, cut it with a cutting-box or knife, and with your hands press it well around the hams in the bags: tie your bags with good strings, put on a card the year, to show their age, and hang them up in your garret or some dry room; and my word for it, if you let them hang for five years, they will be better for boiling than on the day you put them up. I have kept them seven years, and have some now that are four years old. This method costs but little, as the bags will last for years. The only loss is the hay, and that the cattle will eat if given to them in the winter. No flies or bugs will trouble the hams if the hay is well pressed around them, the sweating of the hams will be taken up by the hay, and the hay will impart a fine flavor to the hams.—W. T Cuyler. —*Cuylerville, N. Y., March*, 1850.

Genesee Farmer.

Mutton Broth.—Put into a two-quart saucepan one pound of mutton chops, cleared from fat, one onion, half a dozen corns of black pepper, and three pints of cold water; let it warm gradually, when it boils, skim it, cover the pan close and set it over a gentle fire till the chops are cooked, which will be (if the meat is not too fresh,) in three-quarters of an hour.



MR. PAINE'S APPARATUS.

We are indebted to the proprietors of the "Commonwealth" for the above engraving of Mr. Paine's large apparatus for generating gas from water. We copy from that paper the following description of the engraving:

The engraving above represents in perspective Mr. Paine's larger apparatus for generating hydrogen from water, including three of the simple magneto-electro machines previously described in this paper (of Thursday), made to combine their currents in one set of electrodes. The machine was got up before Mr. Paine had discovered the *catalising* process, by spirits of turpentine, and therefore contains two bell-glass gasometers, one for hydrogen and the other for oxygen, so that a light might be made by supporting the combustion of the hydrogen with oxygen. The discovery of a mode of making the hydrogen luminous without any considerable expense, renders the generation of the oxygen unnecessary and relieves the process of some danger of explosion.

The machine consists of a tripod iron frame, about three feet in diameter, within which is mounted a smaller diamond shaped frame, containing the three sets of U magnets, with a train of toothed wheels to set in motion the helices, and to give the pole-chargers one revolution to three revolutions of helices. There are two small glasses of water for interrupting the wires so as to prevent the development of mixed gases, and above them on each side a contrivance, which Mr. Paine calls a governor, for letting off an excess of the electric current, a matter of great importance, which has seriously tasked his ingenuity. On the centre of the frame is a perpendicular rod passing through a large weight. The gravitation of this weight when drawn to the top of the rod, gives motion to the helices through the train of clock-work, and its descent will keep them in motion, if we understand Mr. Paine, for twenty-four hours. Mr. Paine asserts that the power of this machine, which we did not see in operation, as it was undergoing alterations to fit it for exhibition in the World's Fair, is not simply three times that of the single machine, but about twenty-seven times. He supposes that by combining the currents of several magnets, the decomposing power increases as *the cube* of the number of currents. The world of course will wait to see experiments which demonstrate this. To

us it does not seem unreasonable. There is another gain of power in this machine from the slower revolution of the pole-changers. We would have stated before that this improvement of Mr. Paine's is not introduced in the apparatus which we saw operating. Mr. Paine thinks this larger machine will feed a thousand burners. This we are not so sanguine as to believe, but we have no doubt it will light a considerable hotel.

In the engraving above one of the sets of magnets and all the helices are hidden by the frame work. Our readers, however, have seen a very good representation of this part of the apparatus in our Thursday's paper.

For the New England Farmer.

SELECTION OF SHEEP FOR BREEDING.

Mr. Editor:—In a former communication (vol. 2, p. 156,) I spoke of the feeding and general management of sheep, and I will make a few remarks on selection for breeding; a matter which has a more important bearing upon the improvement of our flocks and success in sheep husbandry, than proper winter and summer keep, and good management in other respects; and still one that is more generally neglected by the majority of wool-growers.

When our flock of ewes are not below a medium character, it is perhaps the most judicious and economical course to select the most valuable ones, and couple them with a buck of highly approved qualities, as one superior ram may have as great an influence on the improved character of the offspring as 50 or 75 ewes of like merits.

The importance of breeding from none but the best bucks is not seemingly fully appreciated by only a small portion of wool-growers. Many have not a convenient opportunity to select such bucks, and rather than be at the trouble and expense of procuring them, use those of an inferior quality; and some think it more profitable to make use of an ordinary animal than pay a liberal price for a good one. Such should bear in mind that the value of the offspring of two bucks from ewes of a like quality may vary from 25 cents to $1,00 or more per head; and this on a flock of 50 ewes would render it advantageous to pay even an extravagant price for a good buck, rather than use a poor one if it were given to them.

Again, there are farmers who are anxious to improve their flocks and willing to pay liberally for the means, but have not had sufficient experience in the examination and comparison of the different breeds and flocks to know what constitutes the most desirable form and fleece; and consequently are not qualified for making the best selections.

I will here speak of what I conceive to be some of the most valuable qualities of a stock buck for wool-growing purposes. It should be remarked that all of the desirable properties are seldom if ever united in the highest degree of perfection in one animal, and the best we can do is to choose those that approximate nearest to what we wish.

It is of the first importance that a stock buck should be a descendant from a pure and thorough bred flock. Unless this condition is complied with he will be subject to hereditary defects not visible to the eye in the animal we select, but which will be perceptible in many of his offspring.

Much attention should be paid to the form. A good symmetrical structure is not only gratifying to the fancy, but an index to many valuable properties. The body should be long, with a deep, wide chest, broad back, round and well spread hips, swelling barrel, but no sag, short legs, thick, short, well raised neck, wide between the eyes, face short and wide, and not too white; that portion of it destitute of wool should be covered with fine, soft, short downy hair. The skin around the eye should be of a chocolate color, and it is a good sign to have the lips resemble this color, or have dark spots upon them. Such marks of the face are good evidence of purity of blood and valuable sheep The skin on the body should be of a light pink color—very loose, with small rolls on the neck (large ones are liable to throw out *jar*) and many folds should be perceptible on other parts when shorn, especially on the ribs, flanks, and round the tail. A loose skin and many folds are traits much esteemed by the German wool-growers at the present time—they being so universally connected with a heavy fleece and high bred sheep.

The Germans for many years selected sheep for breeding with smooth tight skins, but experience proved to them that such sheep had delicate constitutions and light fleeces, and now for a number of years past they have selected bucks of an opposite character, and have succeeded in obtaining sheep with a hardy constitution and heavy fleece, with a high degree of fineness.

A buck should have a bold, yet docile look, and magestic carriage; and one with the above form, look and appearance, will almost universally have a hardy constitution, which is indispensable for a healthy and vigorous offspring, quiet disposition, and a close thick set fleece, which should be of good length and fineness on all parts of the body. He should be well wooled over the head and down on the legs to the hoof. This is not so important for the extra amount of wool grown on these parts, but it is a sure sign of a heavy shearer and one that will generally cut more wool on the same surface on the body than those destitute of wool on the extremities. Particular attention should be paid to the properties of the wool on different parts of the body. There should be as much uniformity as possible in the fineness, length and compactness of the wool throughout the fleece. We frequently meet with sheep with fine wool on the shoulder and back, and quite coarse wool on the belly, flanks, legs, &c. And it may be of good length and thickness on the back and shoulder, and comparatively thin and short on other parts. This unevenness naturally lessons the value of the fleece, and cannot be too much guarded against in a stock buck.

The color of the wool, and form it naturally assumes on the sheep, is a matter of high consideration. Indeed, an experienced eye can judge very accurately of the quality of the wool and character of the sheep from the external appearance of the fleece. The wool should have a dark, even surface but open white, (or creamy white) and glossy, and grow in small cylindrical tufts, which should not be united to each other by cross hairs, or coarse wool, and the smaller divisions or strands composing those tufts should be free from twist. The fibre should have short and uniform curors. This is an excellent test of fineness. It is a rule, with seldom an exception, that the greater the number of curors within a given span the better the quality of the wool. The description which I have given

of a buck would be my type of a ewe with such deviations as are characteristic of the sex.

The fleece of a buck should have an abundant supply of clear, thin oil, flowing to the end of the staple, which by the adherence of dust and smut, give the extremities of the wool a dark appearance, and what the Spaniards term the "noble color." A merino buck's fleece that is well supplied with oil will shrink in cleansing after a common cold water wash from 45 to 50 per cent., but by a thorough washing, from 40 to 45 per cent. This shrinkage may seem large to many, but it should be kept in mind that a buck's fleece will shrink about one-third more than a ewe's of the same blood, and the ewe descendants of a buck that shrunk less than this, would not be likely to have a sufficent quantity of oil to preserve the wool from "dead ends," and produce the most perfect and valuable fleece.

Wool-buyers frequently make a good deal of noise about the oil and gum in merino wool; some of them speak of it as a useless ingredient which can be dispensed with at pleasure; still a good supply of oil of the right kind is more highly appreciated by intelligent and well informed wool-growers now, than formerlly. Experience having proved that it is just as natural to merino sheep as fine wool, and cannot be bred out without impairing the value of the fleece, bodily health of the sheep, and profits of the wool-grower, as it protects the sheep and fleece against the injurious effects of the weather, promotes the growth and gives increased strength, elasticity, softness and lustre to the wool; and inasmuch as it adds to the bodily warmth of sheep in cold weather, they will consume less food. There is a kind of gum of a thick yellow nature, which is very objectionable. This does not circulate freely to the ends of the wool, but may be seen within the fleece in small adhesive particles, somewhat resembling "ear-wax." Such fleeces frequently have a whitish surface, with "dead ends," and are harder to wash, and will skrink more in cleansing than any others. Indeed, gum cannot be washed out by a common brook washing. This sort of gum is never found in the best wooled merinos when in a healthy state, and its presence in the fleece of a healthy sheep may be taken as proof of impure blood.

I believe the prejudice of some manufacturers and wool-buyers against oily sheep, has been mainly caused by this last named gum, and having our sheep imperfectly washed, and letting them carry their fleeces too long after washing. Sheep whose fleeces abound in oil or gum, should be soaked and let out into a close yard, and allowed to get up a steam before taken in to wash, and then shear them as soon as the fleece becomes thoroughly dry and a little moist with oil. When fleeces that abound in oil, and do not have this objectionable gum, are treated in this way, they will shrink but a trifle more than the fleeces of sheep quite destitute of oil, and they are easier manufactured and have no waste of "dead ends,"—besides making a more beautiful and durable fabric.

People in judging of the comparative merits of sheep are not apt to take the size into right consideration. Many, I presume, would prefer a large sheep to a small one, even if it did not produce quite as much wool, but it should be borne in mind that as a general rule, animals of the same species after coming to maturity, consume food in proportion to their size; from this it would follow, that other things being equal, those sheep are the most valuable for the production of wool that yields the largest amount of *cleansed* wool in the ratio of their size. Still when other things are nearly balanced I should choose a good sized sheep to a small one, as they are more pleasing to our taste, and generally possess stronger constitutions, and are better breeders; besides they will make us less labor and trouble in proportion to their income.

I believe the growing of fine wool will eventually be the most profitable to the New England wool-grower; that is, as fine as practicable and obtain a heavy fleece and sheep with a strong constitution. There is not much difficulty in producing fleeces that will average 4 lbs. of clear washed wool, which would be classed by a wool-sorter as "Fine" and "No. 1." My entire flock of breeding ewes and lambs averaged at the last shearing 4 lbs. 2 ounces, and with the exception of a few fleeces for domestic use, were carried to the wool depot, and out of about 330 fleeces, there were but two of "No. 2," the remainder going into the three higher qualities which sold for 41 1-2, 43 1-4, and 46 cents per pound. One reason why the growing of fine wool will be the most profitable to Eastern wool-growers, is the increase of competition from the West on wool of a coarse and medium quality. The cheapness and richness of the Western lands and length of time of foddering are such that wool of an ordinary and medium quality can be grown there at a much less cost than in the Eastern States, but I do not think the Western wool-growers can successfully compete with us on fine wool. The farmers at the West, taken as a whole, have not the requisite practical knowledge in sheep husbandry, and fixtures so essential for the production of truly fine wool; and provided they had all this, the surface of the land, soil and climate are all against the growth of fine wool, and must more than balance the skill of the wool-grower in breeding to keep up a good degree of fineness. I believe the prospects of receiving remunerating prices for fine wool are more promising than they have been for many years. The want of an efficient tariff and political revolutions in several wool-growing and manufacturing countries have thrown a large quantity of fine cloths into our markets for a few years past, which have operated to keep down the price of fine wool; but the natural inference is, and it is so represented, that those political disturbances have broken up some of the most valuable flocks in those countries and stopped and impeded many of their manufactories, so that it must now be some little time before they can raise the material and manufacture their usual quantity of cloths.

I think it would much accelerate the improvement of our flocks, if there could be more of a mutual interest and understanding between wool-growers and manufacturers as to what constitutes the most valuable and desirable sheep for the production of wool. Many wool-growers are ignorant of the properties that a fleece should possess to render it the most acceptable to the manufacturer, and many of the latter have a very imperfect knowledge of the character and traits a sheep should have for the successful growth of a fleece which would meet their approbation, and through ignorance or selfishness the manufacturers have influenced some wool-growers in the choice and breeding of sheep very much to the disadvantage of the latter; and were the advice of some of the manufacturers heeded

by wool-growers generally, their council would in the end opperate very much to their own disadvantage. I am of the opinion that the pure merino will give us the most valuable fleece and are the most profitable where the main object is the growing of wool. I have kept a flock of merinos with but little variation from 400 for twenty years, and with the exception of a few years when there was much wool sold as low as 22 and 26 cents per pound, I have never failed to realize a profit from them. The income of my flock for the past year, including the sale of wool and surplus sheep, was $3,17 per head. I did not sell any of my young stock the last year except wether lambs; the majority of those sold were my oldest and most objectionable ewes, and if I had sold lambs in the place of these the above income could not have amounted to less than $3,50 per head. I will send you samples of wool from my sheep, that you may judge of their character as to fineness. EBEN'R BRIDGE.

Pomfret, Vt., Jan. 20th, 1851.

REMARKS.—Accompanying this article, we have a card of specimens of Mr. Bridge's wool; they are very fine, and of even texture. Any one who wishes can examine them at our office. While some have become discouraged, and others have wrote discouragingly in regard to raising fine wool in New England, we are pleased to learn that Mr. Bridge finds the business so promising. We hope that his successful example will encourage others.—ED.

For the New England Farmer.

GRASSES FOR LAWNS.

[*Continued from Page* 29.]

MR. COLE:—When the soil is naturally uncongenial to the growth of the finer grasses, it is absolute folly to attempt forming a close and compact lawn, until it be first improved by artificial means. Loam, moderately fertile, is the best kind of soil on which to form a permanent lawn, and nearly all the finer grasses flourish on this soil, unless it be too wet, in which case drainage is necessary. If the soil be naturally light, a dressing of stiff clay will be beneficial; if naturally heavy and stiff, it should be well dressed with material calculated to reduce its texture, and modify its natural conditions.

The greatest difficulty I have met with, however, in sowing down lawns, is in obtaining the requisite variety of suitable grass seeds. And as it is almost impossible to form an artificial lawn, of good elastic turf, with one or two varieties of grass, the only resource is to sod it over with turf from a good sward, which is not only expensive, but often difficult to obtain of good quality; for a sward which may appear thick and close when grown on its natural bed, will frequently change its character when laid down on rich soil, and subjected to the scythe. Again, a sward which is allowed to grow naturally, and ripen its seeds, will change its character, if lifted and laid down in a garden, and kept continually mown before the plants form their flower-stalks. If the proper seeds can be procured, it is much better to sow down lawns, than to sod them with turf, even if the original cost were the same.

Much diversity of opinion prevails regarding the proper quantity of seeds to sow per acre, and from my observations I think many err more frequently by sowing too little, than too much. In fact, the *quantity* is generally a matter of mere guess work, and some will sow with the greatest confidence one bushel per acre, while others with equal confidence will sow five. Now, if my experience be worth anything at all, it goes to prove that the latter is nearer the mark than the former, and however wasteful this may appear to some, a rigid investigation of facts will prove this pretty near the truth.

An ordinary sward of the fine grasses will contain more than one thousand plants to the square foot, even when full grown, and some swards nearly twice that number. But supposing we calculate only 1000 plants to the square foot, or about 7 to the square inch, it would take nearly four bushels of seeds to the acre of the finer grasses to supply this number of grass plants. Supposing therefore that all the seeds that were sown vegetated and formed plants, this quantity would not be too much to form a sward; but not more than one half, or more frequently—one fourth of the seed sown vegetates; and therefore instead of seven, there is only two or three plants to the inch; and instead of one thousand, only three or four hundred to the square foot, which is never again supplied except by indigenous herbage, which generally destroy the sward, instead of mending it.

Injury is more likely to result from thin seeding in this country than in England; for if the sward be very thin, the surface of the ground is more liable to crack in dry weather, and also to be sooner burnt up than if thickly covered with plants. It is therefore more advisable to seed plentifully, than sparsely. Even if a large portion of the young plants should be destroyed for want of room, they improve the sward, both by excluding the drought, and affording nourishment to the rest by their decay.

I would recommend the following mixture for sowing down permanent lawns, which may be obtained at trifling expense.

Agnostis purpurea, (red-top,) - - - -	16 quarts.
Anthoxanthum ordoratum, (sweet vernal grass,)	2 do.
Avena flavescens, (oat grass,) - - - -	4 do.
Festuca duriuscula, (hard fescue grass,) - -	8 do.
Festuca Ovina, (sheep's fescue,) - - -	16 do.
Festuca tenuifolia, (fine-leaved fescue,) - -	16 do.
Solium perenne tenue, (fine-leaved rye grass,)	4 do.
Poa nemoralis, (wood meadow grass,) - -	8 do.
" " sempervirens, (evergreen,) -	8 do.
Poa nervata, (nerved meadow grass,) - -	8 do.
" pratense, (smooth-stalked meadow grass,)	4 do.
Trifolium repens, (white clover,) - - -	4 lbs.
minus filiforme, (small green clover,)	4 lbs.

To this mixture may be added 16 quarts of the Cynosurus cristatus, (crested dog's tail grass) forming in all nearly three and a half bushels, which will be quite little enough for one acre, even supposing the seed to be of first rate quality, and this quantity should rather be increased than diminished, for it is vain to look for a good lawn unless the plants come up sufficiently thick to cover the whole ground regularly, when they are two or three inches high.

Before sowing the seed the surface of the ground should be made smooth and firm. None of the seeds should be covered more than from a quarter to half an inch deep, and the small and tighter kinds of seed, as the Agrostis, should not be buried at all, but merely pressed with the roller. In most cases more than one half of the seed is destroyed by being covered too deep, for it is well

known that if the seeds of the finer grasses be covered to the depth of an inch, they will not vegetate at all. It is therefore the better way to sow the larger seeds first, then rake the ground lightly, then sow the lighter seeds, and roll, while the ground is dry, and if the weather prove a little moist after the sowing, the light seeds will spring first, and soon cover the surface with verdure.

After the grass has all *brairded*, the roller should be passed over it, and this should be frequently repeated during the season. When the grass is young, the roller should be applied instead of the scythe, especially if the weather be very dry. A young grass lawn ought not to be often mown in very dry weather, during the first or second season of its growth, for the drought gets in among the roots, the stems dry up and the plants perish.

The rolling of grass lawns is very little attended to in American gardens, even where a fine one is wished. In the finest of English pleasure grounds, the lawn is generally rolled *before* it is mown, which not only makes a smooth close bottom, but makes it much easier mown; so much so, that I have often seen the mowers quit their usual morning's task before it was half finished, just because it had not been rolled the preceding evening.

R. B. Leuchars.

For the New England Farmer.

WHEAT-GROWING IN THE STATE OF MAINE.

Sir:—I beg your permission to make a few remarks on an article in the *Maine Farmer*, concerning the comparative advantages for wheat-growing in Maine, and in Scotland. The article alluded to says:—"The example of Scotland is encouraging to us. Our climate is as good for wheat, as Scotland is. It is probably somewhat colder in the winter, but it is less variable and therefore more suitable. Experience in Maine we think has abundantly proved that winter wheat will endure any amount of *cold*, but will not bear too many freezings and thawings, not because the constitution or organic system of the plant will not endure this also, but in consequence of the mechanical operation of lifting it out of its place and breaking its roots. Of course, when its *neck is broken* it dies. Well, now, if Scotland, by the skilful application of science to the raising of wheat, has made her hard and primitive soil beat the more favored wheat-growing regions of the North, cannot Maine do the same? Are not the Yankees of Maine as well taught and as ingenious and as industrious as the 'highland laddies' of Old Scotia? If they are not, it is full time they were."

From what source the editor has received his information, I am not aware; but it strikes me forcibly that his intelligence has not the certificate of *practical experience* to authenticate it. Wheat-growing in Scotland, generally, is like putting money into a lottery; you may have a chance, but no security, to receive it back with interest. With the exception of a very few instances, this insecurity is common over the whole country. The exceptions are the Lothians, the Carse of Gowrie, and a few other smaller spots where the soil is a deep alluvial deposit, and has been carefully and *scientifically* cultivated with a view to the growth of wheat. Even in these places the alternation of heat and cold are feared, and many times fatal to the winter wheats; and it is well known that they are not so great as they are felt to be in the Northern States of America. Winter wheat is more seldom used every successive year—the farmers preferring the spring wheat—and the advantages of what they call *fallowing*, which means ploughing up the soil in the fall, and letting it lie exposed to the atmosphere, and the reception of the benefits which proceed from frost, snow, &c., until sowing time. But, even with every care in preparation and culture, and the use of the most favoring conditions to ensure a liberal harvest, the farmers of Scotland can neither produce the *bulk* or *weight* of wheat that their Southern brethren in England can do. From 46 to 58 lbs. per bushel, I should think a fair statement of weight; while in the English markets 62 to 65 lbs. is commonly the weight. I would not be willing to declare that there were no single exceptions to the rule of comparison; but such as exist have no general weight, as the facts I have stated. With every deference to the opinion of the editor of the *Maine Farmer*, I am, I think, justified in saying that the farmers of Scotland are well educated men, and that they are *scientific* as well as *practical* farmers; and that they have discovered that *oat-growing* is the natural advantage their soil and climate accords them, (and this, after patient and well-conducted scientific enquiry,) and that it has been again resorted to very generally, is the clearest proof that they practically repudiate the position assumed by the editor of that journal. Their soil is cold, and alkaline manures will not warm it or favor its successful production of a wheat crop. A great portion of Scotland is incumbent on lime-stone, the disintegration of which supplies (according to some authorities) a sufficiency of alkaline food for cereals and the pulse crops; but, while beans, peas, oats, barley and bigg (or bere) grow to perfection, wheat, as I have said, is a kind of exotic that will not grow under common culture: any other will not pay. I apprehend that Maine would not prosper better in her efforts; for neither soil, climate or other favoring conditions exist in that State to be advantageously used in wheat-growing. I am not sure that the "Yankees of Maine" have not discovered this thing, themselves; for some months' sojourn "down east" and all 'long shore, gave me opportunity to hear and learn something very like it. The insectivoræ, too, have shewed that wheat-growing is by no means an indigenous feature in Maine farming. Wishing my down east friends every success in productive crops, more germain to their soil, I am very truly yours,

John Charles Moore.

Boston, Jan. 13th, 1851.

Remarks.—If winter wheat is a very uncertain crop in Scotland, and we doubt not the correctness of our correspondent's views, for he is well acquainted with the agriculture fo that country, it only shows that the arguments drawn from wheat-growing in Scotland, in favor of this crop here, are without effect.

But whether wheat flourishes or fails in other lands, we contend that there should be more experiments in raising it in New England. We have many instances of great success, and we hope that these cases will lead to further trials and ex-

ried experiments, and that no farmer will come to the conclusion that he cannot raise wheat until he has tried it thoroughly. A single experiment on one location is not sufficient. Various soils, modes of management, manures, &c., should be tried.

The wheat crop is an important one, and we now have to depend upon other States for the staff of life, which is assuming more and more importance, for in the largest grain-growing States this staple, is declining, and it must enevitably decline, as the process of culture is wearing out the natural fertility of the land, and when that is gone, the land can be enriched and wheat grown only at higher prices. —Ed.

BEAUTIFUL FLOWERING TREES.

In the tropics, vegetation is generally of a fresher verdure, more luxuriant and succulent, and adorned with larger and more shining leaves than in our northern climates. The "social plants," which often impart so uniform a character to European countries, are almost entirely absent in the equatorial regions. Trees almost as lofty as our oaks are adorned with flowers as large and beautiful as our lilies. On the shady banks of Rio Magdalena in South America, there grows a climbing Aristolochia, bearing flowers four feet in circumference, which the India boys draw over their heads in sport and wear as hats or helmets. In the island of the Indian Archipelago, the flower of the Refflesia is nearly three feet in diameter, and weighs over fourteen pounds.—*Humbolt's Aspects of Nature.*

Mechanics' Department, Arts, &c.

GRAVEL CEMENT FOR BUILDING.

A correspondent of the *Phrenological Journal*, writing from Wisconsin, describes a method of building from gravel and quicklime, which is exceedingly economical, and neat in appearance.

A gentleman (Mr. J. Goodrich), occupying a prairie farm in Wisconsin, came to the conclusion that where timber were thus scarce nature had undoubtedly provided other building material. He knew that under the prairie soil and subsoil, which is there about three feet deep, there existed a coarse, clean gravel, and often gravel banks, and also that lime abounded throughout the West; hence he reasoned with himself—Why will not this coarse gravel and lime make good walls for dwellings? He was not long in reducing his reasonings to a practical test.

The correspondent of the Journal thus speaks of the subject:—"I have seen Mr. Goodrich, examined this mode of structure thoroughly, and pronounce it, in my judgment, every way better than either brick or wood, and yet not one-fourth as expensive. The principal expense consists in drawing the material and lifting the mortar into the walls. Sand abounds almost everywhere, and can be got—especially coarse gravel—for nothing; and lime is cheap, say twelve or fifteen cents per bushel, unslacked. In this way, one bushel of lime serves for twenty bushels of gravel, so that 100 bushels of lime will put up 2,100 bushels of mortar, or some 2,500 cubic feet of wall, which, supposing your wall is one foot thick—enough, doubtless, for all practical purposes—would build the outside walls of a house thirty feet square and twenty feet high; and if the inside walls were eight inches thick, and run through the house each way, one to form the entry and the other to divide the house into front and back rooms, it would take only about thirty bushels more, or 130 bushels in all, at a cost less than twenty dollars! And how many days' work is it likely to require to slack this lime and shovel the gravel into it, and stir up the two together—for no working is needed, only mixing—and carry it up into the walls? There are about 3,300 cubic feet of mortar. Cannot a man mix up, on an average, one hundred cubic feet per day? I should think he could double this, yet at this rate the naked walls would cost thirty-three dollars for labor—and the commonest laborer can do it—supposing labor to be one dollar per day; and say, perhaps seventeen dollars for lime, or only fifty dollars. The chimneys can be carried up in the wall, as is now done in brick walls, and with trifling additional labor, and with no additional cost of brick and mortar. The walls of a good sized dwelling-house were put up in Elgin, Ill., last year, for about forty dollars, as I was informed by a Mr. Quigley, who was then building a church in that place."

The question may arise, are walls thus constructed sufficiently solid, and will they stand? The first building put up by Mr. Goodrich has stood for six years, without any plastering or cement on the outside, and shows no signs of decay whatever; on the contrary, it has become harder and stronger every year. The Journal's correspondent, in travelling through Illinois, Wisconsin and Michigan, saw probably one hundred houses and some fences built in this way—all looking well and substantial, with the exception of a few that had cracked on account of defective foundation.

Mr. Goodrich, the inventor, has had considerable experience in the business, being the builder and proprietor of the greater portion of the beautiful village of Milton, situated at the head of Prairie du Lac, in Rock county, Wisconsin. The success he has met with is known to many, who have visited that section of the country, as he has already several fine dwellings, a tavern house, a large block of stores, an academy and various other buildings completed, presenting a very pleasing appearance from their neat exterior, and giving the amplest evidence of the utility of cement in the construction of buildings of all classes.

"My buildings are made of clear, coarse gravel, and common quicklime. I use twelve parts of the former to one part of the latter; but if the former is free from dirt, soil, or clay, and the lime well burned or fresh, you cannot hit amiss, for it will cement in any proportion from one part of lime to one of gravel, to one part of lime to twenty parts of gravel. I prefer laying the foundation with stone laid in mortar, the same as for a brick house. The gravel walls are made of any thickness, according to the size and height of the house to be built. I have made the walls from ten to fifteen inches thick in my buildings. For curbing, we use pine plank, straight grained, one and a half inches thick, and twelve inches wide, and have enough to curb all the walls around the building at once. The planks are held up by narrow strips of boards, set

up edgeways, and tacked with a nail to the plank at or near each end. The planks are held together by clamps made of pieces of scantling some two feet long, with strong pins put in far enough apart to include the thickness of the wall, and also the two curbing planks. These clamps are hung over the top of the edges of the planks, and said pins hang down on each side, to hold them together, while a small stick, as long as the wall is thick, is placed between the planks and immediately under the clamps, to hold the upper part of the planks apart. As the wall rises the lower edge of the planks lap on the former layers, so as to keep the bottom right. We use a plumb, which is indispensably necessary, to carry up the wall true. The window frames and door frames ought to be as wide as the plank is thick, and about three inches thick, framed together, grooved and planed on the faced side to let in the stoppers to hold the sash and rabbeted, for the doors to shut in; they need no casing, which lessons the cost of finish very much. The joints are put into the wall the same as brick walls, hence you need no post, sills, or beams. I make flat roofs, so as to not need any plates or rafters, letting the joists give a pitch of half an inch to the foot, which is sufficient to cause the water to run off. I nail on to these joists straight-edged pine-boards, and plaster on two inches thick of gravel mortar, so as to make it fire-proof. Then on the top of this, as soon as it becomes dry, a coat of tar; then sift on sand, which makes it hard as it settles into the tar; then another coat likewise, and if it leaks, several coats of tar and sand, until it is water tight. This soon becomes very hard and solid, and it is cheaper than any covering I have yet found, and apparently durable. I carry up the wall still higher than the roof, so as to carry a balustrade in any shape that taste may dictate. These walls are rough and uninviting to the eye, but can easily be made smooth and level by plastering on a coat of coarse sand and lime, say one of the latter to eight of the former, and floated on to level up. Then a fine coat, say half lime and half sand, put on with the trowel and brush, which makes a hard finish for both outside and in. Then whitewash two or three coats, with fresh lime and you have a beautiful white finish, which is both imposing and inviting to the eye.

"The cost of the walls will be about one-third of the cost of brick; say from five to six cents per cubic foot, before they are plastered, including labor and material, board, &c., and they may be put up by any common laborer, if he can make the wall straight and plumb. If they are built in the early part of the season, and of good material, they are sure to stand; but they do not become hard like stone at once. This hardening process is slow but sure. The carbonic acid which is first driven off from the lime, by the burning in a kiln, returns through the atmosphere, in the same quantity, and re-unites with the lime in the wall, and this converts the lime into stone again; and as the gravel is stone, it of course all becomes stone or rock, and will be as durable as time. In fact, you can break the pebbles of gravel with a hammer before it will loosen them from the wall."—*Farmer & Mechanic.*

Ohio Wine.—A Mr. Shumans is preparing a box of wine, of his manufacture, from grapes grown in Ohio, for the great London Exhibition. The peculiarity of the wine is, that it is not fermented in the usual way, not adulterated with sugar or brandy, but is the pure juice of the Catawba grape, retaining the aroma and flavor of the fruit in a remarkable degree. The grapes were gathered last September, pressed in October, and the wine therefore needs the benefit of age.

METHOD OF SILVERING COIN,

AS PRACTISED BY MAJ. JEWREINOFF.

The combination of iron with carbon (cast iron) from the ease with which it melts, and the consequent possibility of taking the finest impressions of form, has come into very extensive application. The art of founding converts cast iron into enormous arches, columns, cannons, and also into the most delicate bracelets, ear-rings, &c. Unfortunately, the moist atmosphere very soon alters the surface of these objects, and it is found necessary to coat them with paint, which gives the cast iron, the color of which is itself not very attractive, the appearance of mourning.

In the present state of the art of founding, cast iron might easily be substituted for bronze were it not for its sombre appearance, which entirely excludes it. This disadvantage may, however, be entirely overcome, from the possibility of plating it with silver; in fact, cast iron may be readily silvered, and equally as well as copper and bronze. Some successful experiments which Major Jewreinoff, of St. Petersburg, had made on this subject, induced him to give a short description of the method which he had employed.

The liquid for silvering is prepared in the following manner:—Cyanide of potassium prepared according to Liebig's method, is introduced into a stoppered vessel, and freshly prepared pure chloride of silver, still in a moist state, added; the whole being covered with water, and shaken violently for some time, at the ordinary temperature. An excess of chloride of silver is taken, and should a small quantity of it remain undissolved, a few pieces more of the cyanide are added after some time, taking care, however, to avoid having an excess of the latter salt, but always a small quantity of undissolved chloride at the bottom of the vessel. This last circumstance is important, because when the liquor contains too much free cyanide of potassium, it is easily decomposed, and moreover does not silver so well.

Before employing it, it is filtered, and is thus rendered perfectly clear, iron and a little chloride of silver remaining on the filter. He effects the plating by means of a galvanic battery of one pair, consisting of a zinc and a coke cylinder, which are separated from each other by means of an earthen diaphragm. The pair are placed in a glass vessel, and diluted nitric acid is conveyed into the earthen diaphragm. Experience has shown that the best mixture for the coke cylinders should consist of five parts, by weight, of finely pulverized coil, and two parts common rye flour.

When the cylinders are dry they are placed in earthen crucibles, in the lids of which there is an aperture for the escape of the gases, and are then heated to redness. Those cast-iron objects may be most easily silvered which have not been painted as the removal of the paint from the surface of the metal is somewhat difficult. The cleansed object is immersed in the silver solution, and connected with the zinc pole by means of a conducting wire, and a

platinum plate immersed in the liquid at some distance from the object to be silvered, and connected with the coke cylinder. A plate of cast iron, of four square inches surface, is generally completely plated in half an hour.

Ladies' Department.

HOME AND WOMAN.

If ever there has been a more touching and eloquent eulogium upon the charms of home, and its dearest treasure, woman, than is contained in the following extract from the *Christian Inquirer*, it has not been our good fortune to meet it:—

"Our homes, what is their corner-stone but virtue of woman, and on what does social well-being rest but on our homes? Must we not trace all other blessings of civilized life to the doors of our private dwellings? Are not our hearth stones, guarded by the holy forms of conjugal, filial, and parental love, the corner-stones of church and State; more sacred than either; more necessary than both? Let our temples crumble, and our academies decay: let every public edifice, our halls of justice, and our capitals of state be levelled with the dust; but spare our homes. Man did not invent and he cannot improve or abrogate them. A private shelter to cover in two hearts dearer to each other than all in the world; high walls to exclude the profane eyes of every human being; seclusion enough for children to feel that mother is a holy and peculiar name—this is home; and here is the birth-place of every virtuous impulse, of every sacred thought. Here the church and the State must come for their origin and their support. O, spare our homes! The love we experience there gives us our faith in an infinite goodness; the purity and disinterested tenderness of home is our foretaste and our earnest of a better world. In the relations there established and fostered, do we find through life the chief solace and joy of existence. What friends deserve the name compared with those whom a birth-right gave us. One mother is worth a thousand friends, one sister dearer and truer than twenty intimate companions. We who have played on the same hearth, under the lights of smile, who date back to the same scene and season of innocence and hope; in whose veins runs the same blood, do we not find that years only make more sacred and important the tie that binds us? Coldness may spring up, distance may separate, different spheres may divide—but those who can love anything, who continue love at all, must find that the friends whom God himself gave are wholly unlike any we can choose for ourselves, and that the yearning for these is the strongest spark in our expiring affection.

Home Education.—Education does not commence with the alphabet. It begins with a mother's look—with a father's nod of approbation, or sign of reproof—with a sister's gentle pressure of the hand, or a brother's noble act of forbearance—with handfuls of flowers in green, daisy meadows—with birds' nests, admired but not touched—with creeping aunts, and almost imperceptible emmets—with humming bees, and glass bee-hives—with pleasant walks, and shady lanes—and with thoughts directed in sweet and kindly tones and words to nature, to beauty, to acts of benevolence, to deeds of virtue, and to the source of all good, to God himself.

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."

Mock Turtle.—Take two calf's feet, and one chicken, cut them into pieces as for a fricasee; make the seasoning with three large onions, a large handful of parsley, and a few sweet herbs; chop them all together; then season the meat; let the calf's feet stew two hours and a half in three quarts of water; then put in the chicken, let it stew half an hour; then take the juice of two lemons; some cayenne pepper; put that in last; let it all stew together half an hour and serve it up in a soup-dish. Forced-meat balls of veal may be laid at the top, and hard eggs.

Gingerbread Snaps.—Take a pound and a half of flour, half a pound of butter, the same of sugar, and molasses, and an ounce of powdered ginger. Mix well before the fire, add five table-spoonfuls of thick cream, work into a stiff paste, roll out thin, dip a wine-glass into flour, cut out the snaps with it, and bake in a quick oven.

Beef Tea.—Cut a pound of lean beef into thin slices, put it into three pints of cold water, set it over a gentle fire where it may become gradually warm, let it be well skimmed, cover the saucepan close, and boil gently for two hours, strain it, and let it stand to settle, then pour it off clean. One onion, a few peppercorns, and a little salt, may be added if required.

☞ Brave actions are the substance of life, and good sayings the ornament of it.

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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, FEBRUARY 15, 1851. NO. 4.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

THIRD AGRICULTURAL MEETING

At the State House, Jan. 28, 1851.

Gen. Dearborn, Mayor of Roxbury, in the Chair,—Subject, "Thorough Draining and Subsoil Ploughing."

The President for the evening addressed the meeting at length on the general subject of Agriculture, with great ability and in an eloquent manner. He spoke of the great agricultural improvements in England by which her products had been doubled, tripled, and quadrupled in half a century. Other countries of Europe had also made great improvements.

In this country there had been but little legislative aid to agriculture until recently, though seven-tenths of the people were engaged in this branch of industry; and even at this time our general government had done nothing of consequence. Massachusetts took the lead in this business, and the subject was receiving attention by many other States. A few years ago science was a mere abstraction, but now it was applied to the practical purposes of life. It has done much for the mechanic arts and other professions, and when properly directed to agriculture, it will accomplish equally wonderful results for that branch. Our country has a diversity of climate and soil, and like China, with skilful cultivation, it is capable of supporting a vast population.

After this address, of which we cannot now give even a sketch, Gen. Dearborn announced the subject for the evening, and made a very few remarks on its utility. Mr. Whittaker read a letter from Col. Wilder in regard to the potato rot, in which it was stated that the potato had rotted in its native region, but as it was contiuually reproduced there, the inhabitants of that country did not seriously feel the calamity. He then remarked that a gentleman wished to offer a few propositions, and he called on Prof. Fowler, of Amherst.

Mr. Fowler thought that our discussions should lead to some definite information, and he proposed that a committee of two be appointed, who at the close of the discussion should propose certain questions on the subject discussed, leading to further investigation, and for discussion at the meetings another year. As an example of his plan, he then proposed some 10 questions in relation to the potato rot, the subject discuseed at the previous meeting.

The proposition of Mr. Fowler was favorably received by the meeting, and Mr. Fowler and Gen. Cushing were appointed a committee to effect the object proposed.

Mr. French, of Braintree, was called on, who gave a short history of draining and sub-soiling as it had its rise in Great Britain. He then spoke of his own experience, particularly in making drains under his walls, by which his land had been greatly improved, and even plants peculiar to dry lands had taken the place of aquatic productions. He had found these drains very profitable. Stones are used in various ways in making drains. Judge Buel used saplings for this purpose, placing them butt upwards, and the drains worked well 20 years after they were made. Mr. French showed draining tiles, of two patterns. They are made of clay, like that used for bricks; the length is about fourteen inches, the thickness about two-thirds of an inch. The calibre four inches. One kind is tubular, forming a pipe, with a flat surface on one side, to prevent its sinking in soft soils. The ends are square, and are placed against each other, without any insertion, and as the ends will not be tight, the water will run into them. The other is made in the same manner, excepting the sole or bottom is wanting, and they are intended to lay on a hard soil, such as a pan, or they may be laid on small or flat stones arranged for that purpose.

Mr. French spoke also of the very favorable effects of sub-soiling, by which the earth was stirred to a great depth. This system had produced wonderful effects in Scotland, where it was first introduced, and is now extensively practised.

Ex-Gov. Hill, of New Hampshire, being called on, addressed the meeting. He said that for several years he had taken a deep interest in the subject before the meeting. He thought that it was at the bottom of all other improvements. He considered the under layer of soil more valuable than the surface soil. He had been led to this practice from the favorable effects which he saw from it on the farm of the gentleman who had just spoken. He thought that by the application of sub-soiling to our light soils, they would become our most profitable lands. Our whole lands may become as a garden. He thought that capital and labor could be as profitable invested in farming in this part of the country as in any other place. The poorest soils by deep stirring may be greatly improved. By ploughing deep and mixing the manure well with the soil, it will do more good. On light soils it generally escapes at the surface from too shallow an application. Manures do not waste by descent. The soil or sand is generally pure below where the soil has become stirred.

Mr. Amasa Walker, Secretary of State, said that he purchased a piece of wet land, that did not yield any income. He thorough-drained it by digging drains three and a half to four feet deep, throwing the mud on one side, and the gravel on the other. After exposing the mud two or three years to the action of the frost and atmosphere, he hauled it into his barn-yard, and it was worth enough to pay for digging the ditches. The gravel was spread over the land with excellent effect. Highland grasses came in, and he got good crops where he applied no manure, but better where he manured. With a little manuring these lands continued to yield large crops of grasses, which cost him much less than grass raised on high land. He filled his drains to within one foot of the top, with stones from the high land, which were a nuisance there. He then inverted the sods on the stones and filled them up with materials from the ditch, which were left for that purpose. Mr. Walker remarked that when he was travelling in England some years ago, he was astonished at the great variety of ploughs used there. At Ransom's Agricultural House, there were 107 kinds of ploughs, and he was informed that 25 was considered an ordinary supply for one farm. But here one plough is often used for all soils, and for all purposes. We do not plough sufficiently.

Gen. Cushing, of Newbury, read a letter handed to him by an intelligent Scotch agriculturist, on draining, which he read. It was stated that when draining was first introduced into Scotland, the drains were made about one and a half to two feet deep, and about 18 feet apart. After 10,000 miles were laid, it was found that they were not sufficient. Then they were made from two and a half to three feet deep, and forty feet apart. This system cost less, and was more effectual. A great depth, with a great distance, was tried, but with unfavorable results.

The discussion continued on Page 66.

FINE SUFFOLK PIGS.

We have noticed at the stall No. 28 Faneuil Hall Market, a fine lot of Suffolk pigs, which were raised, fatted, and brought to market by Mr. J. L. Lovering, Hartford, Vt. These pigs, 12 in number, weighed 3,470 lbs. In age they ranged from 6 to 14 months, only two were over a year old, and they weighed over 400 lbs. apiece. Some that were 10 months old weighed 300 lbs.

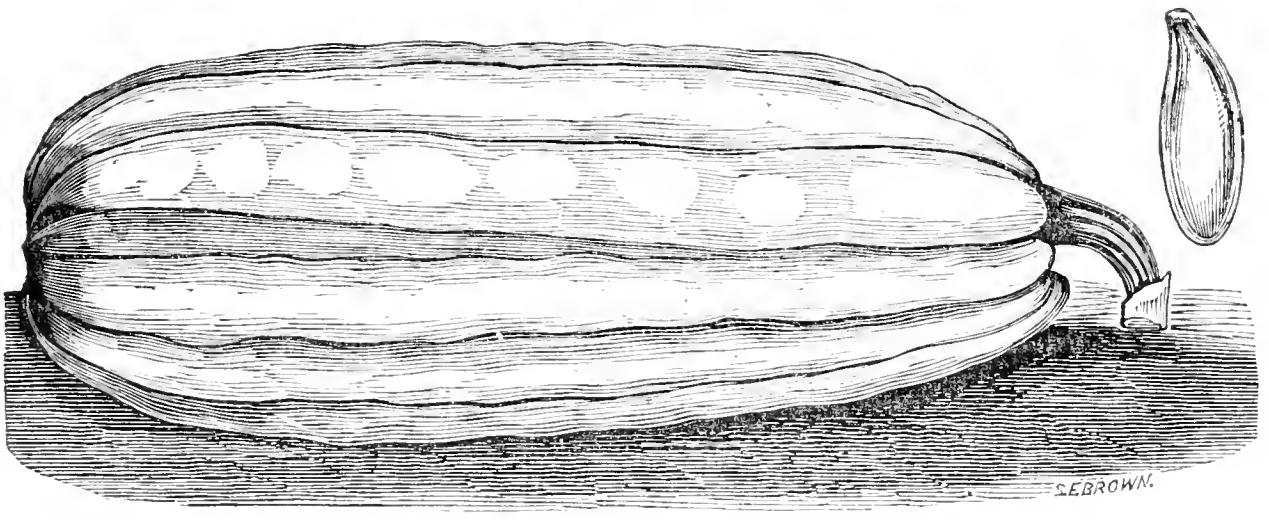
These pigs were fattened largely on apples. They were also fed on small potatoes, and corn meal. Mr. L. like most other persons who keep the Suffolk breed of hogs, think that they produce more pork in proportion to the food that they consume, than any other breed. This breed is of a moderate or rather small size, compactly built. The head, legs, and tail are very small; and the bones are very small. The flesh is thick on all parts of the body, and the skin so thin that the blood veins appear very prominent through it.

The smallness of the least valuable or waste parts, is not the only advantage in this deservedly popular race of hogs, for the flesh is very tender, of a fine texture, and remarkably sweet. We consider the pork decidedly superior to that of our common breeds. The very peaceable disposition of this breed is no small recommendation. Mr. L. can fill orders for live pigs.

HOW COAL SHOULD BE CONSUMED.

Notwithstanding the general use of anthracite coal in families, few persons know exactly how to use it properly. This business is usually entrusted to servants, and as their experience has taught them—the more wood the more fire—they throw on the coal on the same principle, expecting the same results. This practice, however, destroys the draught necessary to consume the coal, and the consequence is that the sulphuric gases, instead of being consumed, are dispersed through the rooms of the house, to the injury of health, and frequently the spoiling of the food in the process of cooking. No stove should ever contain, on a fair average, a greater layer than four inches of coal—less in a majority of cases will answer. A beautiful red heat is then generated, the coal parts with all its inflammable elements, and deposits its earthy matter in fine particles in the receiver Try the experiment and see the results. Anthracite would be the only fuel used for domestic purposes in every family, if the proper mode of making a coal fire was more generally understood.—*Public Ledger.*

Vegetable Perfumes.—The leaves of southron-wood, like those of all other plants having highly scented leaves, will be found, if held up to the light, to be full of transparent dots. These are cells containing the fragrant oil which gives out the perfume. By bruising the leaves these become broken and the scent stronger.



CUSTARD SQUASH.

For the New England Farmer.

CUSTARD SQUASH.

Mr. Cole:—Having raised this squash, the last summer, and proved its qualities, I herewith send to you a description and figure of it, with a parcel of the seeds for distribution.

It is *a winter squash with a hard rind*, and is said to have been brought from the city of New York to Waltham, where some of the fruit was grown in the summer of 1849. The friend who gave me this account, favored me with seeds, which were planted on the 25th of last May. Previously, however, in February or March, I saw the same kind of squash in Boston market, and was told that it came from the *West Indies*, and I think it highly probable that it originated there. Nevertheless, it is perfectly well adapted to our latitude and climate, having grown and ripened in my garden, the last summer, which was not a favorable season for this kind of fruit.

My squashes were gathered on the 8th of October. Some of them were soon used for puddings or pies, as they are often called, and were found to be very good for that purpose. The flesh, when stewed, was tender throughout, and lighter colored than that of our common winter squashes, but inferior in flavor. It was easily separated, by scraping from the thin and tough rind which, did not become tender by cooking. As a sauce, with meat, it is not so good as the crook-necked, and much inferior to the marrow squash.

One of these squashes was kept till the 22nd of January. It weighed 18 1-2 pounds; was 16 1-2 inches long, and 2 feet, 2 inches in circumference around the middle. Form, elongated elipsoidal; slightly depressed at each end; longitudinally ten-ribbed, five of the ribs corresponding with the angles of the stem, more prominent than the others. Scar at the blossom-end small, about one-quarter of an inch in diameter. Rind smooth, with a few irregular elevations on it; harder than that of the crook-necked winter squash, but not woody, about as thick as press-paper and of a dark cream or cheese color. Flesh 1 1-4 inch thick, deep yellow, very firm and fine-grained throughout. Seeds numerous, whitish, oblong oval, truncated at base, and, like those of pumpkins and squashes, furrowed all round within the margin.* Like the latter, also, they are connected by orange-colored fibres to the sides of the fruit, in six parcels, each parcel consisting of three ranks of seeds. The membranous partitions, dividing the cavity of the squash into three cells, though broken away from the sides, had not entirely disappeared. Fruit-stem 6 inches long, slightly enlarged next the fruit, with five rounded edges of angles, and as many deep intervening furrows, in the bottom of each of which was also an elevated line or ridge.

The vines, leaves and blossoms do not differ essentially from those of the common winter pumpkin and winter squash.

Yours, truly, T. W. Harris.

Cambridge, Jan. 25, 1851.

* An outline of the seed is given of the natural size.

Remarks.—We are much obliged to Dr. Harris, for his valuable contribution. We have already distributed most of the seeds. A very fine specimen of this squash weighing 16 lbs. is now before us, raised by Mr. Raynolds, one of our publishers, on his place in Concord. He thinks much of them as to their quality, production and keeping. They ripened well last season, though it was rather cool for plants from a tropical climate. Dealers in the market, who frequently have this squash from the West Indies, say that it sometimes succeeds well here, but is rather uncertain.—Ed.

Corrections.—In a recent article on sheep, by Mr. Bridge, a remark runs thus: "My entire flock of breeding ewes and lambs averaged at the last shearing, 4 lbs., 2 ounces." For 2 ounces, read 6 ounces. Towards the close of his article, for *curors* read *curves*.

☞ We have several communications on hand, which will appear soon.

Swimming Stockings.—Among the newest inventions are swimming stockings, acting on the same principle as the webbed feet of aquatic birds. They were tested by one of the members of the British association, who, with their aid, swam from New Haven to Leith Harbor, against tide.

POTATO ROT.

Concluded from Page 46.

The important question "What is the cause of the Potato Rot," is often asked, and to this question no satisfactory answer has ever been given. Ever since the prevalence of the disease, it has been our opinion that the main cause is in the *atmosphere*. We are aware that this answer, if correct, is indefinite, and it is unsatisfactory as it shows that the cause is beyond our control, and it affords no clue to a remedy. There may be a slight change in the constitution of the atmosphere, or it may contain some deleterious substance that affect certain vegetables. If fungus is the cause of the rot, the seeds of the fungus float in the atmosphere, and are too minute to be perceptible to the naked eye.

The question is often asked, "Why are not animals diseased as well as the potato, if the cause is atmospheric." A knowledge of the anatomy and physiology of animals and plants, and the constituent elements of the atmosphere, shows the impropriety of this question. The atmosphere may be fraught with destruction to vegetation, and yet be healthy to animals, and the reverse. In 1849, the cholera prevailed to some extent in this country, and the dysentery was very common and fatal, yet there was but very little potato rot. In 1850, the potato rot was more severe than it was ever known before, and the other diseases were no more prevalent than is generally the case. The very breath exhaled by animals, which is destructive of animal life, contains nutriment for vegetables, and the gas evolved by the growing vegetables contains the principles of vitality for animals. Hence the purity of the atmosphere in elevated forests, and in verdant fields, and the propriety of animals and vegetables living together. The expiration of one is food for the other.

During the prevalence of the potato rot, other vegetables, such as carrots, onions, turnips, &c., have been affected with a blight also, and such as was not known, and some have stated, previous to the potato rot.

There are other diseases that affect potatoes besides the rot, and various insects also injure or destroy them, and these affections or injuries are generally all considered as the result of the potato rot. In this respect a great mistake was made the last season. Generally, previous to the rot, there was a very severe case of the rust on potatoes, which prevented their growth, so that in some cases there were no tubers at all. This disease generally cut short the crop of late planted potatoes, in this section, one-half, and what were produced were inferior both in size and quality; so that if no rot had prevailed last year, the crop of late planted potatoes would not have been worth more than one.third of what it used to be in years past. We speak of its value for consumption, not its price in the market. In addition to the loss by rust, the rot destroyed most of the poor crop that was produced.

Many years ago, we had severe cases of the rust, and the consequence was a light crop of poor potatoes. We have known warm, muggy weather continue, with little interruption, for three weeks, and one season, which was during the last war between this country and England, the rye that was cut and shocked, and that standing in the field, vegetated and grew from one to two inches in length, looking as flourishing as we ever saw any starting from a fertile field; yet in those days there was no potato rot like that of recent date, which shows that it is a new disease, and that the state of the weather is not the main cause, though a powerful predisposing cause, having far more influence than any other, and perhaps as much effect as all other secondary causes.

We will now consider some of the most effectual modes of preventing the rot. On this point we shall be met by some persons who say that all precautions are useless; that what avails in one case, has no effect in another. They might as well say that it is useless to take precautions against the cholera, dysentery, small pox, or other disorders in the human race, or using any medicines to mitigate their malignity, because in some cases all precau tions fail, and medicines have no effect.

The first important requisite in guarding against the rot, is to cultivate those varieties that are generally hardy and resist the disease, and which, in severe cases of rot, are liable to less injury than the tender kinds. In all cases of making improvement in animals and vegetables, the cheapest and most economical mode is to procure the best breeds or varieties to propagate from. A single animal that costs the farmer 50 dollars extra, may profit him 50 dollars annually. An ear of corn, or head of wheat, or some other valuable seed that costs him only a few cents, in the beginning, may add to the value of his crops many dollars annually. The seed obtained may pay a thousand fold on the cost, and the time spent in producing it.

If this valuable rule was applied to the raising of potatoes, having particular reference to hardiness, as well as other good properties, but making hardiness the leading object, we should not hear so much about the sad effects of the potato rot. In common seasons of this disease, they would be only slightly affected, and in the most severe cases the greater part would escape destruction. We have urged the importance of this course for years, but some farmers have neglected it, and cultivated the tenderest kinds, and the consequence has been the occasional loss of nearly all the crop.

We have cultivated 60 varieties of standard potatoes, and 200 kinds of seedlings, and made numerous experiments, year after year, to test their hardiness. We have also learned from observing the fields of others, and gathered facts from numer-

ous farmers on this subject; yet we doubt not that the result of our experience and observation is very different from that of some other experimenters; and every farmer should make experiments for himself, as there may be in his neighborhood some valuable kinds not generally known.

In our experiments last season, to which we refer, we planted late—say the latter part of May—and they mostly rotted, so it was a very severe test. Since dug, scarcely any have rotted.

Chenango, *Mercer.*—This is a very popular potato in the market, and is cultivated throughout the country more extensively than any other kind. It is very apt to rot. In favorable seasons, and under favorable circumstances, but very few rot, but when season and circumstances are against it, they nearly all rot. Thus they fail when potatoes are in great demand. In our experiment last season seven-ninths rotted. We have better kinds, some for early, and others for late use, which yield more.

Carter is an excellent potato, but much inclined to rot. Last season five-sixths rotted.

Snowball has been considered by some identical with Carter, but it is different. The quality is very fine; the yield middling. Last season, they all rotted.

Early Purple.—This is often called Early Blue, but it is not the old rough coat Early Blue, well known in this country many years ago. These nearly escaped rot, and probably from their great earliness. Only two-seventeenth rotted last season, in our experiments.

Hall's Early.—A fine early potato, and it yields well. It is better than Hill's Early, and yields more than that or the Chenango. Last season one-half rotted.

Early Worcester, *Riley.*—This variety seemed proof against the rot until last season, even when planted on wet land. Comparatively it is a hardy kind. Last season one-third rotted. It is as early or earlier than the Chenango, and is more mealy early in the season. For late use, it is too mealy. It out-yields most other kinds known to us. It yields about as much as the Long Reds and other prolific varieties. The greatest objection to it is that the tubers are rather small, though many in a hill, like the Forty-fold potato.

Early White Blue Nose, *Eastport.*—This potato is very apt to rot. As it yields poorly, we have discarded it, as the Early Purple is as early, as good, and it is larger and yields more.

Buffalo Pink is a potato of most excellent quality, but it does not yield very well, and it is very apt to rot. Last season two-thirds rotted.

Wait's Long, is a very long white potato, that yields very largely. As it is a late kind, and the tubers but partially grown, it was more exposed to rot than early kinds, and this remark will apply to late kinds generally. Last season four-fifths rotted.

Long White is a seedling from the Butnam, and it resembles Wait's Long in appearance, lateness, and yield. Last season two-thirds rotted.

Long Red, *Merino, Long John.*—This variety is well known throughout the country. Many farmers say that it has escaped the rot about as well as any variety. There is one thing peculiar about it. Frequently it is less rotten than other kinds at digging, but is much inclined to rot after it is dug. Last season, in our experiment, two-thirds rotted.

Dean, *Veto, Abington Blues.*—This potato yields largely, and it is of a good quality, particularly for a late potato; but it is very apt to rot; one of the most tender kinds. It generally yields about as much as the Long Red, but in our experiment last season, the yield was very light, owing to the rust—not half so much as the Long Red—and seven-elevenths rotted. When the rot is rather light, this is often considerably affected.

Black Potato, *Black Chenango.*—This is a remarkably hardy kind, against rust, rot, time, and other hard cases which the potato meets. It yields nearly as much as the most prolific kinds. Last year it yielded as much as the Long Red, and only one-fifth rotted. Previous to last year, we seldom saw any rot in this variety; and several farmers have spoken of its hardiness. This potato has never been justly estimated, excepting by a few individuals; it is not a favorite in the market, and poorer potatoes sell better. Few know how to cook it. It should boil one-quarter or one-third longer than other kinds, and then it is greatly improved by steaming a few minutes. It keeps remarkably pure, having no defects, like Chenango, Long Red, and some others.

Peach Blow.—This potato has been much admired by some, and condemned by others. It yields well, the quality is good, and it usually sells at a good price in the market. It is hardy against the rot. But there is a disease peculiar to this variety. When we have had forty of fifty kinds all growing together and in a flourishing condition, early in the season, the Peach Blow has been affected with the curl in the leaf, sometimes to the extent of half the hills, and potatoes were produced no larger than common potato balls. Several farmers have met with the same trouble with this potato; others say that it has always done well with them. Such may do well to continue it. As we had excluded it, we did not subject it to the severe test last year.

Butnam is of superior quality, but it yields rather lightly. It is tolerably hardy against the rot.

Kidney yields tolerably well, and the quality is very good. It is tolerably hardy.

St. Helena generally yields a little less than the Chenango, and it is less liable to rot; yet it rots readily. The quality is very good, and it is very saleable in the market.

Ladies Fingers.—This is an excellent potato for baking, but not good for boiling. On dry soils in good condition it yields well. We have heard,

in different parts of the country, of this variety rotting less than most other kinds, yet in some places it has rotted to considerable extent.

The four varieties last named were not in our experiment last year; which was by far the most severe case of the rot.

Sealsfoot.—They yield middling; the quality excellent. Generally it has rotted but little; but last season, the yield was very light, by reason of the rust, and seven-fifteenths rotted.

Orange or English Orange, Lafayette, Pink Eye, Wait's Round, Hancock, Waterloo, Parker, Cranberry and several other varieties yield pretty well, and some of them are tolerably hardy against the rot; but they are usually hard, heavy potatoes. If we had room, we would discriminate more nicely as to these and several other kinds. Last season four-fifths of the Cranberry rotted, and all of the Lafayette.

We have never known any variety of potato to resist the rot perfectly, when it has been very severe. The nearest to an escape was a seedling in our experiment last season, which was the third year from the seed, and had not rotted before. In six pounds only one small potato was rotten. It is yet doubtful about its yield, quality and hardiness. Another seedling, of the same age, was but slightly affected. Only half a pound rotted in eight pounds. But generally our seedlings rotted as much as our standard varieties. Many were all rotten.

We have gone into this part of the subject at length, as it is of much importance, and had proper attention been paid to it, the farming community would have saved to the amount of millions of dollars in potatoes; and many consumers would have found a good supply at moderate prices. We would caution the cultivator about depending implicitly on our statements as settling any points as to the hardihood of different kinds, as the results of experiments vary in seasons, with time of planting, &c. Our object is to throw out some useful suggestions that may serve as a clue and lead to a more thorough investigation on this subject.

A proper selection of soil for potatoes is an important consideration. We used to get our largest and best crops of potatoes, especially in warm summers, on rather moist, cool soils; but on such soils the potato is very liable to rot. Sandy and gravelly soils, or light loams, should be preferred, where heavy rains subside immediately. In a very few cases only, potatoes have escaped the rot on wet land, while they have generally decayed. This is an exception to the general rule, and may be owing to peat, or some preservative substance in the soil. Manures have an important effect. All manures that are not well decomposed before applied, whether animal or vegetable, are liable to ferment in the soil, and produce too much heat, and rapid growth, rendering the potato plant tender from its great luxuriance, and more susceptible of disease. Therefore in applying manure not well decomposed, or an abundance that is decomposed, it is better to mix it with the soil generally, and not apply it in the hill, lest it induce too rapid growth.

Mineral manures, such as ashes, lime, salt, plaster, and also charcoal dust, soot, guano, and some other specifics, have, apparently, at times been useful in preventing the rot, and again they have failed, so that we have nothing very satisfactory or conclusive on these points. They are still subjects for further investigation.

There is a great advantage in selecting for potatoes new lands fresh from the forest, or pasture lands that have not been tilled recently, which retain natural richness sufficient to yield a good crop without manure. On such lands the potato is not only less liable to rot than on old lands, but the quality is far better. We might arrange a rotation of crops, so as to have a well decomposed sward as a manure for the potato crop.

One of the best preventatives of the potato rot is early planting, by which the crop is grown during favorable weather, and can generally be harvested the latter part of August, when the weather is dry. In such cases the crop generally keeps well. It is a false view of the subject to omit digging till late, in order that all that will rot, may rot before digging. There are cases in which potatoes are already decaying fast, and they may as well rot in the ground as out of it, as digging will not arrest the disease.

By early planting the crop is generally matured before the warm, wet or dog-day weather, which is a great secondary cause of the disease, and without which it will have but little effect. If potatoes cannot be planted early, and are planted tolerably early, there may be an advantage in planting early kinds, that they may ripen before unfavorable weather.

Greening the seed by exposing it to the sun and air, as recommended by Dr. Hogan, in his interesting article on this subject, in our last number, has been practised to considerable extent and with good results in England. It has also been considered a useful practice, to dig the potatoes before quite ripe that they may be more vigorous for seed. But little attention has been given to changing seed in this country for the purpose of preventing the rot, as recommended by Dr. Hogan; yet a great many changes have been made, in procuring new varieties for experiment, and in using for seed potatoes that have been sent a great distance to market.

On the preservation of potatoes, we have room for only a few remarks, though it is a prolific subject. They should be dug in dry weather, and exposed to the sun or air till well dried. Much exposure injures the quality very much. Then house them in a dry cool place, spreading them for the double purpose of preventing heating and rotting, and affording a convenient opportunity of examin-

ing them frequently, and removing all that are decaying. Many farmers have found a great advantage in strewing lime on plaster among potatoes after harvested. In this way the disease has often been arrested, when it was proceeding rapidly with the work of destruction. The mode of saving by fumigating with sulphur, as recommended last year by Dr. Hayes, is very troublesome, and it does not generally succeed.

The modes generally adopted to save potatoes from the rot, injure their quality very much, hence they are generally of an inferior quality since the rot has prevailed. All exposure to the air and sun, whether in casks or not, also in keeping them in warm stores, and spreading out to the air, though tending to prevent the rot, are destructive to the fine qualities of good potatoes, so that they are often saved from the disease, and yet nearly lost in quality. Before the rot prevailed, the best way of saving potatoes, was to dig and turn them into a cart, and then cover them with a rug, and in a few hours put them into the cellar, in large close bins, slightly moist, as they come from the soil; and they were better for keeping the cellar dark and close, and covering the bins with hemlock or other evergreen boughs. But those palmy days for potatoes are past, and now our mode exhibits a paradox, as we *lose* the potato in *saving* it.

If the rot continues, further experiments and more thorough investigation will lead to a more systematic and successful mode of cultivation and management, that will enable us to avoid the evil, in a greater measure. The reader will please excuse the length of this article, which has exceeded our intentions at the commencement, and yet we have omitted many things.

For the New England Farmer.

SELECTION AND CULTIVATION OF FLOWERS.

Mr. Editor:—Although I should prefer native plants for a small collection, there are still many flowers of foreign origin, which, by long cultivation or similarity of climate, have become perfectly hardy, and in forming a large assortment it is desirable to select the most beautiful kinds from different sections.

Among these, perennials require the least care, and are generally the hardiest. One of the earliest as well as the most beautiful is a dwarf species of Iris, sometimes called Lily of the Valley. The petals are of a delicate blue, with a rich velvet texture, and it blossoms profusely; it should be placed in a slightly elevated situation, as the flowers rise but a few inches from the ground; if placed on the south side of a building, it will blossom much earlier.

There is another variety of Iris generally called Flower-de-luce which grows much larger, flowers later, and is generally beautiful; a variety of Iris called Blue Flag grows abundantly in meadows and along the banks of streams.

The common Peony is known to almost every one, and is a very showy as well as hardy plant.

The various species of perennial Phlox, although some of them appear rather coarse upon close inspection, are extremely showy at a little distance, and as they blossom at different seasons, they form a succession lasting nearly through the summer; when well rooted, they are not easily destroyed.

The Scarlet Lychness, with its large bunches of scarlet flowers, is highly ornamental and easily cultivated.

But the flower which has attracted the most attention in my collection, is the Grand Flowering Larkspur. It continues flowering for a considerable length of time; its petals are quite delicate and of a rich blue color, and its leaves are somewhat ornamental, giving it an imposing appearance without presenting anything of that coarseness to which large plants are liable.

The Pink, although not as hardy as the flowers which I have named above, may be cultivated without difficulty, by raising plants from seed every two or three years, and the species are so numerous that a very respectable flower garden might be filled with Pinks alone. Among the most beautiful, are the Carnation Pink, the Double Grass Pink, and the Bunch Pink or Sweet William; the flowers of the latter are fascicled, continue a long time in bloom, and present almost every variety of color from white to dark velvet red. Nearly all the varieties are sweet-scented, which makes them universal favorites.

The Tiger Lily, the Monk's-hood, Columbine, and Burgundy Rose, are also worth a place in a large collection, although the latter is not perfectly hardy.

There is another class of plants which are called annuals, but which may be made to become perennial in this climate if kept in the house in winter. In spring they may be increased by cuttings to any desired extent. The Petunia and Verbena are examples of this class, and may in this manner take their places among the finest ornaments of the garden.

The best method of raising plants by cuttings is to place them in a slight hot-bed in such a manner that one joint may be above, and one below the surface of the ground; they should be well watered and partially protected from the rays of the sun. If this cannot be done, they may be planted in a flower-pot, and a common drinking glass inverted over them.

Annuals are generally more difficult to cultivate, but some of them are pretty hardy. The seeds should be protected from the sun and beating rains by laying something over them; I have found coarse straw as good as any thing; it should be fastened at the ends to prevent the wind from blowing it away, and it should be removed before the young plant makes its appearance.

Among the most beautiful annuals may be named Drummond's Phlox, the China Aster, Branching Larkspur, and for training on walls or against the sides of houses, the Blue and Purple Morning Glory, Sweet Pea, Crimson Cypress Vine, and Nasturtium or Indian Cress.

The Balsam is very hardy, and if any method could be adopted to secure double flowers, would be very fine.

The Double French Marygold and the Striped African Marygold are easily cultivated, and, although not so fine as many other flowers, are somewhat ornamental.

The Globe Flower or Bachelor's Button is among the finest, but the seed is very liable to fail unless sown under glass; the plant may, however, be transplanted into the open ground at any time after they are fairly started. The crimson blossoms of this plant, if picked just before the frost comes, will retain their form and color all winter.

Those who wish to see specimens of various flowers before they undertake their cultivation, will find from sixty to seventy figured annually in the American Flora, published by Green & Spencer, New York. W. F B.

Ashfield, Jan. 20.

For the New England Farmer.

PLOUGHS AND PLOUGHING.

Mr. Cole:—I have noticed with much interest in the agricultural papers the past season, the discussion of the subjects of ploughs and ploughing—of the narrow slice and broad slice, the deep and the shoal—turning the sod over flapjack fashion and setting it upon edge. The experience of fifty years and more forbids my concurrence in the modern doctrine of narrow furrow and slice set up edgeways. I mean in turning up sward ground. As to ploughing old grounds, corn hills, stubble, &c., it is no new thing to use small ploughs, and cut narrow furrows so as to pulverise the soil.

When a boy, and I first began to drive or hold, I thought I could plough faster with the large breaking up plough on the old ground, but my father would not permit, and told me to use what was then called the old ground or seed plough—and cut narrow furrows more thoroughly to pulverise the soil. The intelligent farmer will consider the nature and condition of the soil he is to cultivate, and the object he has in its cultivation, and then adapt his operations and instruments to the object in view—different soils require different treatment. Our best ploughs for our New England soils, rocky, clay or sandy, would be but sorry implements on the prairies of the West.

Some correspondents of agricultural papers, however, seem to prescribe the same mode for all ploughing—of sward ground or otherwise, and whether the sward be tough or tender, deep or shoal, wet or dry, or the soil clayey, strong or sandy Now this looks to me like book farming in the bad sense, and not the fruits of a series of practical experiments; for to an observing agriculturist his whole life of labor is but a series of experiments.

One object in breaking up the sward ground is to kill the vegetation then growing, root and branch and convert it into vegetable mould or manure. This surely cannot be done in case of strong sward by setting the turf up edgeways, and drying it. Try such by ploughing in the fall, and by planting time, if the season be dry, you will find the turf not in progress of decomposition, but dry as a sheep skin hung exposed to air and sun; or if the spring be wet the grass on the slice will be starting fresh as on the unploughed field.

But say the advocates of this new doctrine, you must let the air below the surface—let the sod be exposed to the air—the air must not be excluded by wide furrow slices laid over flat. I think a little careful observation will show that all needful air cannot be kept from the bottom of the turf by simply turning it over unless the soil is so wet that it seems like mortar, and closes the seams between the slices, in which condition no experienced farmer would desire to have his ground ploughed. The use of the roller over broke-up ground has been strongly recommended, and for the reason that it presses down the sod, prevents the vegetation from drying, and makes it ferment and rot. My experience fully confirms the benefit of this practice.

I have never been able on good tillage land when dry enough to plough—that is when the earth below the sod will pulverise as it is turned up, to lay the turf over too flat—too flat to destroy the vegetation and rot, and prepare it for the use of the cultivated crop for the first and second year of cultivation. Indeed, a valid objection is made to a two years course on strong sward land for the reason that the sod, the grass roots, cannot be thoroughly rotted and pulverised, and be well and smoothly laid down without a third years cultivation.

The objection I have to a narrow slice is that it cannot be so effectually turned over to prevent the grass from growing at the edge as in a wider one, especially if the plough is run as deep as the ground ought to be stirred. If the ground be strong it is difficult to keep the plough steady to its bearing unless you cut a slice so wide as to have a weighty pressure on the mould or furrow-board to prevent its being thrown out even by stones of a small size.

To turn the turf well and easily there must be a due proportion between its width and depth—say a foot wide to six or eight inches deep. Such was my practical experience when a boy, with the badly constructed ploughs of those days, and I find it the same with the greatly improved ploughs of the present day.

I intended to make some suggestions as to the nature of the improvements on the old ploughs of former days, but I find my sheet nearly covered, and I must defer them to a more convenient season.

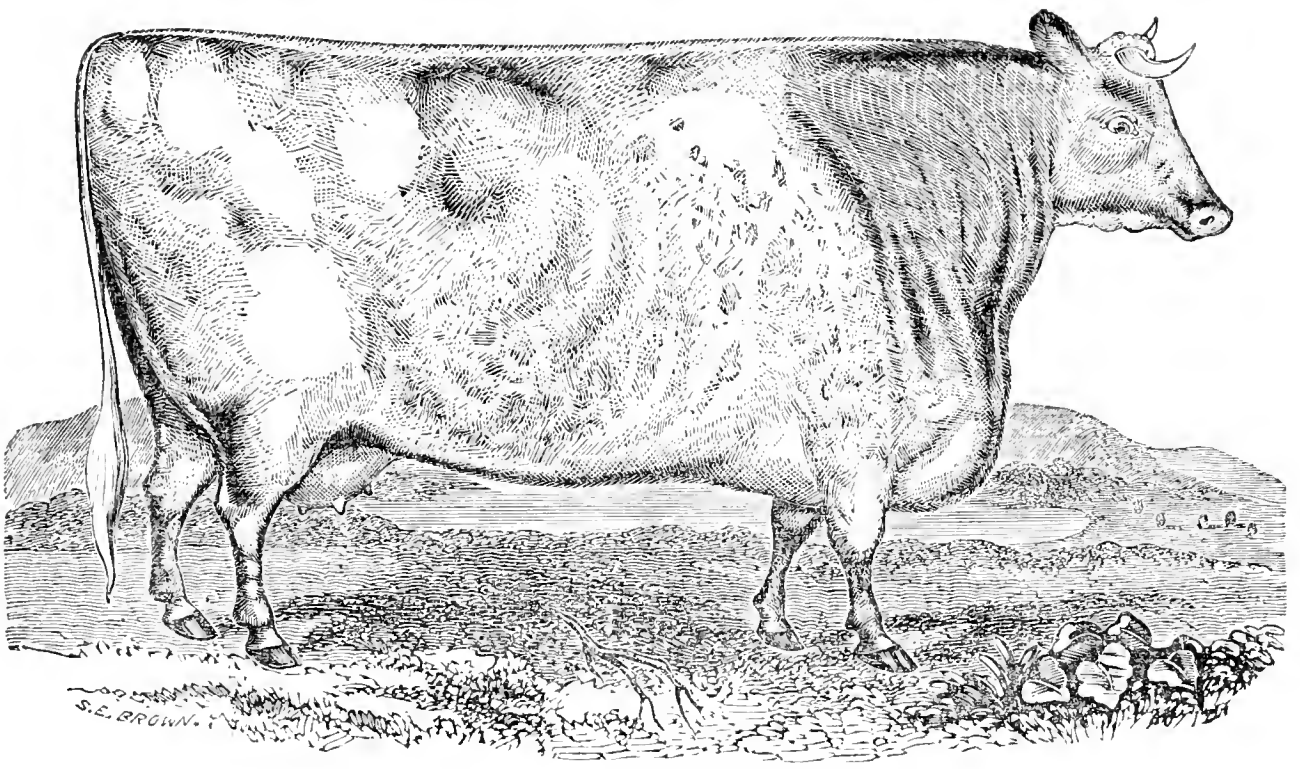
Rufus McIntire.

Parsonsfield, Me.

MASHED POTATOES.

How few know how to prepare good mashed potatoes? Those who are ignorant of the secret, may learn from the following receipt:—

Boil them perfectly tender quite through, pour off the water, and steam them very dry, peel them quickly, take out every speck, and while they are still hot, press the potatoes through an earthen cullender, or bruise them to a smooth mash with a strong wooden fork or spoon, but never pound them in a mortar, as that will reduce them to a close heavy paste. *Let them be entirely free from lumps*, for nothing can be more indicative of carelessness or want of skill on the part of the cook, than mashed potatoes sent to the table full of these. Melt in a clean saucepan a slice of good butter with a few spoonfuls of milk, or, better still, of cream; put in the potatoes after having sprinkled some fine salt upon them, and stir the whole over a gentle fire, with a *wooden* spoon, until the ingredients are well mixed, and the whole is very hot. It may then be served directly; or heaped high in a dish left rough on the surface, and browned before the fire; or it may be pressed into a well-buttered mould of handsome form, which has been strewed with the finest bread-crumbs, and shaken free of the loose ones, then turned out and browned in a Dutch or common oven. More or less liquid will be required to moisten sufficiently potatoes of various kinds.



SHORT HORNED COW, CAMBRIDGE.

This cow was bred by Thomas Bates, Esq., Kirklevington, Yorkshire, Eng., by whom she was exhibited, at the meeting of the Royal Agricultural Society, in 1840, when eight years old, where she won the first prize for the best cow of any age.

The Short Horned, or Durham breed of cattle hold a high rank in England, particularly for beef; and in some of the large milk establishments, this breed is preferred. In this country, particularly in the West, the introduction and general diffusion of this breed has made a vast improvement in stock, not only where this race is kept pure, but there has been great advantage in crossing it with the common breeds of the country, as blood stock generally stamps its peculiar characteristics upon the cross. The great gain by the use of the Short Horns is in their early maturity, by which they are as well ripened for beef at three years of age, as the common stock at four. Every farmer is aware that this is an important consideration.

This stock and its crosses are raised in large herds in the fertile West, and when fit for market, many of the animals are driven East, leisurely, and allowed to feed on the way, as the road-sides generally abound in good pasturage, so that they arrive in the New York or Brighton Market in as good condition as when they left their native pastures. In this way, the beef is not injured, and as it were poisoned, by hard driving and exhaustion, in hot weather.

As the pasturage of New England is not, generally, very luxuriant, nor the usual winter feed of cattle very high, the Short Horns are not esteemed very highly in this section of the country. Besides these unfavorable circumstances in regard to this stock in the Eastern States, but few animals are raised purposely for beef, as is the case in the West; but they are used for work or milk several years, then fattened for beef.

The Durham or Short Horned Cattle are not distinguished as milkers, though some breeders of this race are giving particular attention to the production of a variety that will have a milking strain, and as they have some good milkers to breed from, we trust that they will be successful.

As for labor, the Short Horns are very mild and tractable, and some farmers who have tried them regard them as very good in this respect; but as we have native cattle that possess all the requisites for labor, and some of them in a high degree, that can be obtained at less price than any blood stock, and which are considered better adapted to our cold climate and common fare than the Short Horns, they are not, of course, in demand for labor.

We have made a few scattering remarks as to some of the peculiar properties of this celebrated breed of cattle, and our columns are open to our readers for the expression of their views, whether they are in accordance with ours or not.

Chain of Beings.—Bitumen and sulphur form the link between earth and metals—vitriols unite metals with salts—crystalizations connect salts with stones—the amianthus and lytophites form a kind of tie between stones and plants—the polypus unites plants to insects—the tube-worm seems to lead to shells and reptiles—the water-serpent and the eel form a passage from reptiles to fish—the anas nigra are a medium between fishes and birds—the bat and the flying-squirrel link birds to quadrupeds—and the monkey equally gives the hand to the quadruped and to man.

FOURTH AGRICULTURAL MEETING

AT THE STATE HOUSE, FEB. 4TH, 1851.

Gen. Dearborn, of Roxbury, in the Chair—Subject "Thorough Draining and Subsoil Ploughing."

Mr. Asa G. Sheldon, of Wilmington, begged leave to make a few remarks not directly to the subject, for discussion. He said that there had been various improvements in farming, and amongst the greatest was that of the plough, by which the team was shortened and more performed, and he hoped this rule would be applied to our discussions, and the speeches of half or three-quarters of an hour shortened down to 10 or 15 minutes. He remarked that a farmer may soon tell what he knows that is important, but it takes him a long time to talk about what he does not know. Mr. S. then proceeded to the subject. About ten years ago, he drained a swamp, and in winter he applied a compost, one load of manure mixed with two loads of gravel. He obtained good crops of grass; and the land had continued productive with very little expense in manuring. He had not filled his ditches, as he thought it was best to proceed to reclaim more land, and fill up by and by, when more at leisure. The last piece of swamp he reclaimed, he let the ditch banks remain over a year, then spread them over the land, using no other manure. He had good crops of grass.

Mr. Whittaker, chairman of the committee of arrangements, said that it was the design of the committee to limit speakers to 15 minutes, and he made a motion to that effect, which was carried.

Dr. Hogan, recently from England, remarked that he had been 13 months with Mr. Smith, of Deanston, when he was making experiments in draining and subsoiling. At first his drains were made broad and shallow, but this was not effectual, as the water would spring up between the drains. He then deepened his drains, which proved a remedy for the evil. Mr. Smith did not subsoil until two years after draining, that the land might become consolidated. These processes greatly improve the quality of crops, as those grown on dry land are superior to those raised on wet land; and after land is drained the dew will afford much more nutriment to plants, as it has but little effect on wet land. Dr. H. showed a pattern of a plough for under-draining, by which a piece of soil is cut on each side by two cutters, and then risen up and displaced by a part of the plough that follows, leaving a hollow or drain, some distance below the surface.

Mr John C. Moore, formerly of Scotland, had prepared an article on this subject, which was in the course of publication, and he read it to the meeting. He was acquainted with Mr. Smith, renowned for his great improvements on this subject. He drained lands that were moderately moist three feet deep, and they would settle only a few inches, but in very wet lands he made his drains four feet deep, and the land would generally settle about one foot. In this way there is room for the drain, and for surface ploughing seven inches, and subsoiling twelve inches, without interfering with the drains. In Scotland it is customary to subsoil at every rotation of seven years, and after the first operation, it is easily done. Mr. Moore said that there was great advantage in underdraining even gravelly soils, as the rains and snows contain fertilizing properties, the great part of which often run off; but when the lands are underdrained, the water runs down, and enriches the soil. In proof of this, he gave the views of a friend who had much experience in draining gravelly soils. He thought that the running down of the water into the soil tended to the disentegration of the stones and greatly increased the crops. The drains should be three feet deep, and forty feet apart.

Col. Newell, of West Newbury, said that he had subsoiled about fifteen acres, some loam, and some gravelly soil. He found a very great advantage in subsoiling a stiff soil—moist, but not low land. He thought his crops of grass were doubled by this process. He ploughed the surface soil about seven inches deep, and subsoiled about ten inches deep This mode was better than to plough twelve inches deep, as he had practised, and in this way the manure would do more good, as he had to manure a less depth. As the land was not very wet, the dead furrows answered for drains. As these lands were too moist for tillage, he could not tell what effect the subsoiling would have on corn, potatoes, &c. He had not seen much advantage in subsoiling gravelly soils; our climate is very different from that of England. Here, we generally suffer from drought; there usually from too much rain.

Dr. Gardner said that he had read and listened to much on thorough draining as practised abroad; but very few in Massachusetts are able to incur the expense, as many would have to mortgage their farms if they did. A cheaper mode must be pursued at present. Besides the pecuniary advantage in draining, it is of great utility as to health, rendering the atmosphere more pure. He had only one piece of land of about five or six acres that needed draining. It had produced only worthless aquatic plants. He dug a main drain three or four feet wide, down into the hard pan, taking off the water from the springs. The sides of the drain were at an angle of 45°. In the succeeding August, he ploughed eight inches deep, harrowed, rolled, then harrowed and sowed to grass, previously applying twenty loads of compost manure to the acre. He had cut two to three tons to the acre of good hay. A man would better not make expensive improvements, and own his farm, than have it under mortgage.

Mr. Edward Brooks, of Boston, would give his

thanks to those gentlemen from abroad, who had given us the modes practised in other countries. He thought great improvements were making in agriculture; and as to the expense of draining, he had a piece of land, at the foot of a hill, which yielded nothing valuable. He made a marginal drain, then lateral drains. Stones were filled in at the bottom, then potato vines, then filled up with soil. This was done last season, and the soil became firm, so that it would bear a team, which it would not before. It promises well, and was not expensive. When land is well drained, the crops may be started a fortnight earlier, and this is frequently of great importance, as the crops will come to maturity before frost. He considered thorough draining of great importance to the farmers of Massachusetts.

Rev. Mr. Sanger, of Dover, said in regard to raising wheat in Norfolk County, that he was on the committee on small grains, in the agricultural society of that county, and three applicants for premium raised twenty-nine bushels to the acre, and one raised thirty bushels. In Ohio, the average yield of wheat is only fifteen bushels to the acre.

Mr. Lewis Kinney, of Wareham, said that he attended the agricultural meetings in 1838, and caught the fever for farming; and he went on to the Cape, and bought land at $3 per acre, which produced nothing of any value. He ditched it, spread on gravel, manured it, and sowed to grass. The whole cost of improvement was $150 per acre. He first improved 3 1-2 acres, and took a premium of $25 for three tons and sixteen-hundreds of hay to an acre. Again he reclaimed 3 1-2 acres, and took another premium of $25. This land had paid him eight per cent. on the investment.

Hon. Mr. Calhoun, late Secretary of State, thought with Dr. Gardner, that thorough draining is too expensive for farmers. There is a vast amount of land in our State now useless, that might be made valuable by draining and subsoiling. Subsoiling is not attended to in the western part of the State. He agreed with Col. Newell, that we suffer in this country from drought; but not so much from wet as in the old country. We ought to stir up the subsoil, and have a resource of moisture to support crops in a dry time. If farmers can be assured that thorough draining can pay well, they will attend to it. Those farmers who go out into the country to farm for pleasure, and have a plenty of money to spend, should be careful how they give examples which others cannot follow without ruin, as they have no money to waste. Such instances are a great injury to the cause of agriculture. Those who make experiments should give a particular account of all the expense attending them, that others may judge of their value. Farmers are afraid to make expensive improvements, lest they fall into the ditches they make, and drain themselves instead of their lands.

Mr. William Parker, of Sudbury, said that he drained a meadow, and in some cases, cut a ditch twelve feet deep, and he conducted the water to his barn, also to the road side, for the public accommodation; then he conducted it on forty or fifty rods to a reservoir; he then conducted it in iron pipes to a place where it was used as a water-power. The iron pipes cost him $300, yet the whole paid him, well though an expensive operation, and his meadow was well drained.

Dr. Loring, of Chelsea, said that this question was intimately connected with political economy; and though he was not practically acquainted with farming, he could perceive that drainage and subsoiling were very important to the community producing an increase of crops, and produce of a superior quality, as Dr. Hogan had stated. As plants are nourished by salts in the earth, it is of the highest importance that the soil should be in a suitable condition to afford this nutriment, for the free passage of the roots where there is no excess of moisture, which tends to the injury of plants, and to render the crops less nutricious and wholesome as food, both for men and animals. Dr. L. then read some remarks of the late Mr. Phinney, of Lexington, on the subject under discussion; also from the late Mr. Coleman, on the great profit that had been made by draining.

Mr. Cunningham, of Lunenburg, said that he owned a farm on which there was a piece of land, twenty acres, that was useless. He made ditches three feet wide; filled up two feet with small stones, then filled up the ditches with soil. It cost him for the improvement $70 per acre. The land now yields two tons of hay per acre.

The president then gave a history of draining and subsoiling, and assigned reasons for their slow progress. He also made general remarks on the subject of agriculture, showing the great improvements that had been made, and were making among us; the vast amount of our agricultural productions as appeared by the late census, and the capability of our soil, if well managed, of yielding a still far greater amount.

For the New England Farmer.

A CHINA HEN.

Mr. Cole:—I have a Shanghae pullet, hatched last April, from an egg purchased of Mr. Hyde, of Newton Corner. She began to lay the 20th of Nov., and in forty-four days, gave me *forty* eggs. She then, (the 3d of Jan.) began to sit. I removed her nest, and on the 11th, she began her second litter, and has laid a dozen of eggs to this day. She is a beautifully formed bird, and now weighs seven pounds. Her mate got lamed, and she was put with a fine Cochin China protector of about her age and weight. On the 22d of Dec., I hatched eight chickens, a cross from this Cochin China and Shanghae pair, and on the 2d of January eight more. These 16 chickens, which are in a light cellar, near my furnace, are all doing well.

If this is a fair specimen of the China hens, for this season of the year, then I go for them. B.

Cambridge, Jan. 24, 1851.

For the New England Farmer.

SUGGESTIONS ON THE PLANTING OF THE POTATO,

AND ITS PRESERVATION FROM DISEASE.

The following suggestions to the agriculturists of the United States, have not been made without experience, study and observation on the subjects referred to; the reader, therefore, will not be troubled with particular and prolex references as to a variety of experiments and calculations. The suggestions given are also made simple as possible, in order to render them plain and practical. Even a partial adoption of the systems suggested, will tend to promote what we so much want. An improved system of agriculture is every day becoming of more importance to a new country, which, in its present social state, may be called largely peopled.

Knowledge and science in agriculture will be tantamount to an increase of the produce of our soil, if brought to the aid of industry; with an improved sytsem of agriculture, the United States are capable of sustaining an unlimited increase of population. In the bountiful arrangements of nature, every thing has its aim and end; and practical farmers must go to work with the aid of science and skill in the cultivation of the potato, and increase the general fertility and produce of the land, establishing a judicious system of restorative, in place of exhaustive husbandry; let all departments of agricultural science be promoted, so as not only to keep pace with, but get the start considerably of the increase of population.

The potato is originally a native of South America, whence it was carried into Europe by the Spaniards, in the latter part of the sixteenth century; it was unknown in Great Brittain or Ireland, till introduced into Ireland by Sir Walter Raleigh, from Virginia, in 1534; and from a few roots grown in his garden at Zoughal, all the potatoes now cultivated in England, Ireland and Scotland are believed to have sprung. All varieties of potatoes, like most other plants, are subject to disease, but the cause of this malady has not been satisfactorily accounted for. The diseased plant exhibits a distorted and incomplete formation, which I believe to arise from the tuber being unable to supply the young shoots with sufficient nourishment, and expeperience has shown one that the only sure preventative of disease is to change the seed every year, and to adopt a scientific system of culture and preservation.

Great failures have taken place in the potato crops within the last few years, in every part of Europe. The failure has been greater in some districts and soils than in others, and in some places I have seen it confined to portions of the field only. Many persons have written upon this subject. The failures have been ascribed to the seasons, to late planting, to early lifting, to heating of the seed, to the seed being injured by cold, to the potato having degenerated in its vegetative powers, &c., but all is mere conjecture; yet it is satisfactory to know that the evil may, in almost all cases, be remedied by a change of seed every year, and planting in a scientific way.

The potato is deficient in the gluten which wheat possesses, and the ratio of its nutritive quality may be considered as four to one. Nevertheless the potato is highly nutritive, and meal made from it does not differ essentially from arrow-root, tapioca, and sago. When mixed with wheat flour, it renders bread lighter, and easier of digestion; and forms an excellent food for children, and people of weak stomach, which proves the importance of the preservation and culture of this valuable root.

I have directed my attention to the cultivation and preservation of the potato since the year 1845. Knowing the medical, surgical and chemistry professions, gives me an advantage over none-professional men in my research and observations relative to this important subject.

In the month of Sept., 1845, I was professionally employed by a landed proprietor in England to examine into and advise him as to the culture and preservation of the potato. I directed him to select his seed from the middle sized potato, and to have them spread out every fine day on some dry ground, under the action of the air until the potato turned green; this process I inspected myself, which took about one week. Then I had the potatoes stored on hurdles, with a current of air through them. In the month of February following, the seed was planted whole within thirteen inches in the drills, and the drills 30 inches apart; it grew well, and in the month of July the potatoes were ripe and fit for the market; there was no disease or failure whatever in the seed so prepared, other seed not so treated was a total failure on the same farm.

In the month of Sept., 1849, I selected 100 bushels of potatoes in Scotland, and pursued the same system as to their preparation before their removal to England, and I superintended the planting of them in the month of March, 1847, and had them put in the drills whole; they were very prolific and free from disease, and were ripe in the month of August. Good stable dung was used in their culture, as well as in the culture of other potato seed not exposed to the action of the weather; and those not so prepared were a failure, though cultivated in the same field, and planted on the same day. The system recommended and adopted by me in the years 1845, 1846 and 1847, has been continued by this gentleman in subsequent years, and he assures me that it has been successful every year since.

The trouble of changing seed from one part of the country to another, and preparing them as I now describe in the month of September, before the nipping frosts sets in, is not so expensive or formidable that it cannot be overcome by agriculturists, and it is my opinion that those who follow these suggestions will see the utility of the system, and feel convinced that this remedy is more simple, practical and less liable to objection than any other I know, or have yet heard of.

I should recommend to store potatoes intended for consumption on hurdles, or on lumber slats sufficiently close not to allow the potatoes to fall through, yet so far apart as to allow a current of air under, and through the potatoes.

Boston, Jan. 22nd, 1851. J. Hogan.

Remarks.—The growing of potatoes, as recommended by Dr. Hogan, has been considerably practised in England, and with good success. In this

country but little attention has been given to the subject, nor has the changing of the seed been attended to of any consequence, as a preventive of the rot.

For the New England Farmer.

HEALTH.

Heaven never granted a richer boon than health; and, without it, all other blessings are comparatively valueless. Yet it is often lightly esteemed and carelessly thrown away, and *never* fully appreciated until it is gone. I have seen the mistress of a splendid mansion, surrounded by every luxury which wealth can command, lying upon her couch, pale and miserable, fretful and unhappy. Within her reach were the most delicate viands and exquisite fruits, yet she could partake of none. Health was no longer hers. She had parted with it for the sake of gratifying her vanity, by wearing thin shoes, to display the beauty of her foot, and now, when consumption was preying upon her, she repented her folly, but it was too late; and though she would willingly give all that she possessed, the priceless treasure could not be recalled. The thin, ghastly-looking gentleman, who reclines in his luxurious easy chair with his gouty foot upon a pillow, sighs and groans in anguish and thinks of the many weary nights of pain, when the bed of down and the silken covering could bring him no repose. How he envies the plough-boy who whistles on the green fields, whose step is elastic and whose heart is light and gay at his toil, while his sleep at night is sound and refreshing.

What is wealth to the invalid but a bitter mockery which can yield no happiness. Then prize the rich boon of health, ye who possess it, and lift your hearts in gratitude to God, even though your lot may be one of poverty and toil. E.

For the New England Farmer.

LOSS OF THE POTATO.

The agitation of this subject cannot fail to elicit much valuable information. Because there is no one prepared to come forward and explain at once, all the incidents connected with the decay of the potato, some are disposed to say, the public are no wiser for the descussion. One thing, at least, I think can be asserted with confidence, that there is *more than one cause* for the decay of the potato; that what is called *the rot*, is an entirely different affection from what is called *the blight* or *the rust*, upon the potato; the blight or rust invariably begins first upon the vines, giving them a discolored and frost-bitten appearance—followed in some instances with the decay of the *tubers*—and in some, without any such decay. A remarkable instance of this occurred the last season, in the extensive fields of potatoes cultivated by Gov. Hill, at Concord, N. H., on which were raised 1800 bushels of sound potatoes; 1000 of which he now has in good condition. In the month of August, about three weeks before they obtained their full growth, they were all at once struck with a blight, that gave them a dark and frost-bitten aspect, and checked their growth, and of consequence cut short the quantity anticipated; nevertheless they so far matured as to be gathered, and to be, as they now are, of much value. This affection upon these potatoes could not have been such as has been experienced in many other places, where the potatoes have decayed and become extremely offensive, soon after they were gathered. No one can question the accuracy of Gov. Hill's statements; for there is no man in N. England who has been more observing, or who has sounder common sense in explaining what pertains to the interests of the farmer. I take it for granted therefore that the *rust* that spread over his potato field, was a different species of annoyance from that which is generally termed the *potato rot;* and the use I would make of this fact is, to encourage farmers in descriminating all the peculiarities of the injuries that happen to their crops, so that they may be assigned to the right class. So long as our observations are general and indefinite, there will be little or no hope of defining the cause, or of applying a remedy. In the diseases affecting the human system, it is not uncommon that very different affections pass under the same name; as for instance *fever* or *consumption*, but no intelligent physician would presume to prescribe for either of these complaints, without knowing the constitution of the patient, and the peculiarities of his situation. The same care and knowledge is needed, in prescribing for vegetable phenomena.

My experience is too limited to have great confidence in my own judgment, but still I cannot but think, that much can be done to remedy the inconvenience complained of by careful attention to selecting seeds, free from taint if possible, and to place them in ground properly manured, and best adapted to their healthy growth.

Danvers, Feb. 1, 1851. J. W. P.

FARM ACCOUNTS.

A friend has sent us a leaf from the coming transactions of the Essex Agricultural Society. We extract the following from an Essay on Farm Accounts. We have not the author's name yet.

The young farmer who expects to enrich his land by some magical process, will be as much disappointed in his expectations as he is ignorant of the process of improvement. A mere theory, even if clearly defined, is idle and useless if unattended with practical observations; and the more practical information a young farmer can acquire, the deeper versed he becomes in the mysteries of his profession—those magical secrets, which enable his more experienced neighbors to bring home money from market. The lawyer finds the mysteries of his profession in almost innumerable volumes of Digests and Reports—the mariner is guided by the science of previous navigators, as laid down in books and on charts—the soldier learns how to manœuvre large bodies of men by reading accounts of successful campaigns—the statesman gleans wisdom from volumes of debates—and the editor seeks the mysteries of catering for the public taste, in old files of popular journals. But where can the young farmer go for dates and details? He may pick up an old Almanac, containing a few memoranda of the domestic life of the writer's cows, and the time his goose commenced her incubation. And some meagre details, thus preserved, convince him that a Diary, kept by any practical farmer in his vicinity, would be a more valuable text book than Loudon's gigantic Encyclopedia.

Washington, as we are informed by Dr. Sparks, kept a diary after he had exchanged his victorious

sword for a pruning-hook, and noted each day's work with minute care. Subsequently, when called to the Presidential chair, we are told that, "He left with his chief manager at Mount Vernon full and minute directions in writing, and exacted from him a weekly report, in which were registered the transactions of each day on all the farms, such as the number of laborers employed, their health or sickness, the kind and quantity of work executed, the progress in planting, sowing, or harvesting the fields, the appearance of the crops at various stages of their growth, the effects of the weather on them, and the condition of the horses, cattle, and other live stock."

Many other distinguished citizens of our republic have since followed the example left by the "farmer of Mount Vernon," and have testified to its benefits. Their recorded praises would occupy pages, and we will simply copy the opinions of one, who, by his moral worth, his purity of character, and his fidelity to the public interests, secured a place in the hearts of his constituents and friends—the lamented Daniel P. King. In a statement made by him to this society, (see Transactions for 1845,) on the management and products of his farm, he says, "I have long kept a sort of diary in which I have noted the employments of each day, the time of planting, hoeing and harvesting, the amount of crops, the cost of animals, current receipts and expenditures, &c. The advantages of keeping a journal, to a farmer, are many. By turning to the pages of past years, he will be reminded of work which should be done in its season; he will see where he has erred, and profit from his experience; he will know where his money, sometimes difficult to account for, goes."

THE GERMAN PRUNE.

Ripens about the 20th of 9th month, size large, common specimens measuring four and a half inches around, egg-shaped, but bulging prominently on one side; suture invisible; color purple, with a deep-blue bloom; stalk green, half an inch long; smooth; adhering firmly to the tree, and inserted in a small circular cavity that is filled by it; flesh adhering to the skin firm; sweet, pleasant, dry, and of rich deep-yellow color; stone free, flat, pitted slightly, prominently convex on one side, with fluted edges, and nearly an inch long.

The above description of a valuable fruit is made up from specimens now in hand, and among its other good qualities, it adheres well to the tree until ripe; high winds disturb it very little; it is not very liable to rot, consequently it can be dried to advantage. Larger quantities are raised in the valley of the Rhine for this purpose, and form no inconsiderable item for exportation. It also bears carriage without injury, and hence is an available fruit to market people who live at a distance from market. Two or three hundred bushels found their way to the Philadelphia market, from the Pigeon Creek District in this county during the past three weeks, and readily commanded $2 a $3 per bushel.

The tree is thrifty in growth and will come into a bearing state in four years from the sprout. It is hardy in every respect, a great bearer, requiring only the ordinary attention to preserve the fruit from the curculio, and an annual crop can be depended on. It blossoms late and thus escapes the frequent untimely frosts that peaches and other early blossoms are subject to. It attains a large size, and lives to a good old age. Hitherto it has been propagated entirely by suckers, and its cultivation has not extended far beyond the district where it was first introduced. It is believed that this fruit could be profitably cultivated upon an extended scale; drying and boxing it for market similar to the imported article. Your readers can be assured that no one will regret planting a couple of these trees on the sunny side of his dwelling, for ornament as well as for fruit. A. B.

Chester County, Pa., 1850.

Phil Dollar Newspaper.

CHEMISTRY FOR FARMERS.

Chemistry is an important guide to the farmer, and he will succeed best who understands and applies, in tilling his land, the important information furnished by that science. There is not so effectual a barrier to agricultural improvement as for farmers to continue their old customs purely because their forefathers did so. But prejudice is fast dying away before the rays of intellectual illumination, and "nature's noblemen"—her farming community—may be found in many sections of the country, who have seceded from the supposed infallibles of those now departed—and who have drank at the fountain of knowledge flowing through the vineyard of reason and philosophy; and they have now arrived at the haven of law, cause, and principle. See its results in the halls of Congress—hear the immortal mind speaking through the husbandman in tones that shall exert an undying influence in the four quarters of the globe.

In the cultivation of the soil it must never be forgotten that animal manures require admixture of milder materials to mitigate their force, for some of them communicate a disgusting or offensive quality to vegetables. They are charged with imparting a biting and acrimonious taste to radishes and turnips. Potatoes and grapes are known to borrow the foul taint of the ground. Millers observe a strong, disagreeable odor in the meal of wheat that grew upon land highly charged with the rotten excrements of cities. The like has been observed in tobacco raised in cow-pens; and stable dung has been accused of imparting a disagreeable flavor to vegetables.

The same effects may be illustrated in the animal kingdom. Ducks are rendered so ill tasted from stuffing down garbage, as sometimes to be offensive to the palate. The quality of pork is known by the food of the swine; the bitterness of partridges has been ascribed to the buds on which they live; and the peculiar flavor of water fowl is rationally traced to the fish they devour. Thus, a portion of the elements of manure and nutrimental matter passes into the living bodies of animals, without being entirely subdued; for example, we can alter the color of the cow's milk by mixing madder or saffron in the food; the odor may be affected by garlic; the flavor may be altered by giving the animal pine, or wormwood; and lastly, the medicinal effect may also be influenced.

There is no doubt but that the most wholesome vegetables are changed by rank manures, so as to hasten their decay. For example, several farmers in this State have within a few days informed me that potatoes "dressed" with manure, generally decayed first.

Hence you will see the importance of mixing lime, and other earths, with the manure. These should be turned over two or three times a year—by this means it will be perfectly assimilated. In manuring the land, should the soil prove light, lime, chalk, plaster, and marl are the best agents to amalgamate with it. In clay soils, sand and carbonaceous earths are proper. In all cases the land should be ploughed deep, so that the soil that has been once subjected to cultivation may be turned down to recover its equilibrium.

Burning generally improves all kinds of land—the flavor of all kinds of grain, fruit, and vegetables are also improved by burnt earth and vegetable ashes.—*Dr. Dadd's Address before East Somerset Ag. Society.*

Mechanics' Department, Arts, &c.

EVERY FARMER HIS OWN MILLER.

This morning I found a note on my table, to wit:—"You are respectfully invited to attend at Prime & Colstocks's sash factory, at 10 A. M., to-day, to witness the operation of Clark's Patent Combined Flouring Mill." I did attend, and the observations of my attendance are here placed at your service.

The mill occupies a space of 4 feet square by 5 feet high, boxed in; the grinding, separating and screening are all worked by one perpendicular shaft. The lower stone revolves and has no gutters on its face or grinding surface. The flour is thrown out by centrifugal force, and is brushed through a wire-gauze screen; this extracts all the glutinous and farinaceous matter from the wheat, while it leaves the bran clean and coarse. On timing it I found it ground at the rate of 4 bushels per hour, (Mr. Clark says it can grind 5 bushels per hour;) I would call the flour extra superfine; I judge from the feeling and appearance of it, but more particularly from eating some of it, baked into bread: it tastes equal to the best Rochester superfine. That it turns out the fullest ratio of flour to wheat, I am satisfied from the cleanness of the bran. Although I cannot comprehensively describe the minutiæ of the bolting (screening) operation, I am prepared to say it is done by an ingenious but truly scientific process. Every one who witnessed its work to-day was astonished at its perfect success, and I think Mr. Clark himself was. The mill is portable, it can be hauled on a one-horse wagon, and I am informed can be furnished for $200. If, as Mr. Clark tells me, it is easily kept in good going order, it will certainly be a great acquisition to the farmer's convenience and independence, if it does not entirely revolutionize the old method of flour-making. Mr. Clark contends that the farina and gluten should come from the mill separately, which is the case in this mill, as the two substances are very different in their consistency.

I deem it unnecessary to say more about it now, as Mr. Clark will shortly have it fully illustrated by engravings and a description, when it will be more fully understood. JOHN WISE.

Lancaster City, Pa., Oct. 22, 1850.

Scientific American.

A FINE BLACK VARNISH FOR COACHES AND IRON WORK.—Take two ounces of bitumen of Palestine, two ounces of rosin, and twelve ounces of umber; melt them separately, and afterwards mix them together over a moderate fire. Then pour upon them, while on the fire, six ounces of clear boiled linseed oil, and keep stirring the whole from time to time; take it off the fire, and, when pretty cool, pour in twelve ounces of the essence of turpentine.—*Scientific American.*

ECONOMY IN BUILDING MATERIALS.

Let us examine whether it would be economy for the farmers to use stone, brick, and iron almost exclusively in building. In most parts of the United States, buildings can be made of wood far cheaper than of any other material. I suppose that a barn built of wood, for instance, which would cost $300, might cost $1,000 if made of stone, brick, and iron. The interest on the excess of cost, $700, at 7 per cent., is $49 per annum, a sum sufficient to build a new frame barn every six years. Would it be economy to expend the $700 in building a barn of imperishablo materials, notwithstanding it might "last a century," or even untold centuries? I fully believe that iron might be economically used in some cases, for building in cities, but I doubt the economy of substituting it for wood, in farm buildings, in a country where wood is so cheap as it is in the United States. It is nevertheless true, that "farmers and others of this country, too frequently build for temporary use." It is still more true, that those do not study economy who, as is very often the case, "build themselves out of house and home." I fear that this would still more often be the case, if farmers generally undertook to follow the advice of Mr. Cooke, and "discontinue the use of all kinds of lumber hitherto employed in the construction of houses." Much more might be said upon this subject.

Ladies' Department.

For the New England Farmer.

MAKING SAUSAGES.

MR. COLE:—Sir,—Although it is a little past the season for making sausages, I send you my receipt for making them, which you can publish if you think it worthy a place in your paper.

When I cut my pork for salting, I remove the bone and rind from the sausage meat, and pack it a convenient thickness, on a smooth board, and lay it away to freeze. When I find it is frozen through, I take a fore plane, set rank, and plane it to shavings, then chop a very little and it is ready for the seasoning, which is, to every 20 lbs. of meat, 8 ounces salt, 2 ounces pepper, 3 1-2 ounces sage, 2 1-2 ounces summer savory, and one teacup of ginger. With or without the summer savory as suites the taste. A SUBSCRIBER.

Rycgate, Jan. 27, 1851.

RECEIPT FOR CHAPPED HANDS.—Melt together equal parts of tallow and white wax; to this add as much olive oil as will give it the consistence of shaving cream, when cold. A few drops of the oil of roses will greatly improve it.

MUTTON BROTH.—Put into a two-quart saucepan one pound of mutton chops, cleared from fat, one onion, half a dozen corns of black pepper, and

three pints of cold water; let it warm gradually, when it boils, skim it, cover the pan close and set it over a gentle fire till the chops are cooked, which will be (if the meat is not too fresh,) in three-quarters of an hour.

STIRABOUT.—Boil one pound of rice in five quarts of water, one hour. Then stir in one pound of oatmeal, and salt to season it, and boil a few minutes. Eat with milk, sauce, or molasses. This is a favorite dish in Scotland.

A DIMINUTIVE PLANT.—A homœopathic phial will hold a dozen of duck weed plants, root, stem, fruit, and everything.

ACKNOWLEDGMENTS.

Of John Washburn, Plymouth, Peck's Pleasant apple, very fair, and of excellent quality. He remarks that this variety, with him, usually yields good crops of fair fruit. There are some cases in which this fruit does well, but generally it is only a poor or moderate grower, and the fruit is often inferior in appearance. Even in Rhode Island, where this variety originated, it is not estimated so high as formerly. Also Tolman Sweeting, very fair specimens. We have very different accounts of this fruit in New England, some cultivators speak highly of it, others say it fails. Mr. W. says that it succeeds finely with him. There are more of this apple in our market, early in winter, mostly from the West, than of all other sweet apples. We hear the Danvers Winter Sweet apple highly recommended all over the country, and so it has been for many years, yet we seldom see a barrel of this fruit in this market, though good sweet apples are in demand throughout the year.

Of Dr. E. S. Kelley, Newburyport, very poor specimens of several poor varieties of apples, knurly and decaying. Mr. K. says this is a fair (if fair can be in deformity,) specimen of what he bought for two barrels of fine Danvers Sweet apples, of a man in Topsfield, whom he met with at the cattle show, and paid him $2,50 per barrel. There is not in the lot before us a single specimen of the true kind. It is a hard case to be thus cheated, especially in the way of good fruit; and it is harder still to seek redress by the tedious and expensive process of litigation, and be compelled to pay a counsellor ten times as much for his services as the value of the article in question, and perhaps be doomed to pay as much more as it would cost to buy land, set out a large orchard, and bring it to a productive state. It is a hard case to be cheated and a still harder one to go into what is called a court of justice for redress, where you are sure to be *fleeced* to a large extent, whether you get the case or not. We ought to have courts in which just awards will be readily and cheaply made.

Of L. H. Spear, Braintree, Vt., a large fine apple, nearly round, slightly oblong: pale yellow ground, mostly covered with red; flesh very tender, pleasant, and of fine flavor. Mr. S. intimates that this may be the Murphy apple. We will not decide on this point, as the Murphy is but little known in this region, though it is the place of its origin. This specimen from Mr. S. is superior in appearance and quality, but he observes that it is not a great bearer. In recently acknowledging the reception of some fruit from Mr. S., the initials of his name are W. M. by mistake.

NOTICES OF PUBLICATIONS.

THE HORTICULTURIST.—This work continues as beautiful and interesting as ever. It treats of the various subjects of horticutture, among which, pomology is a prominent feature, and of rural architecture and landscape gardening, for which the author is distinguished. Luther Tucker, Albany, N. Y., publisher; Jos. Breck & Co., Boston, agents. Monthly, $3 per year.

HOVEY'S MAGAZINE OF HORTICULTURE.—The author of this valuable work is among the most diligent pomologists of the age; he is constantly searching up new fruits, and trying new and old, and instituting close investigations with a view of comparing different varieties, and regulating the confused nomenclature of fruits. Flowers, in all their variety, as well as the most valuable vegetables receive particular attention in this work. Published by Messrs. Hovey, Boston. Monthly, $2 a year.

TRANSACTIONS OF THE PLYMOUTH AGRICULTURAL SOCIETY, from Horace Collamore, Esq., Pembroke, to which we shall refer again.

REPORT OF THE HORTICULTURAL EXHIBITION, UNDER THE ESSEX INSTITUTE; from Dea. S. P. Fowler, of Danvers.

THE WESTERN AGRICULTURIST is an able and interesting work, published monthy, at Columbus, Ohio, at $1. W. W. Mather, Secretary of the O. S. Board of Agriculture, editor.

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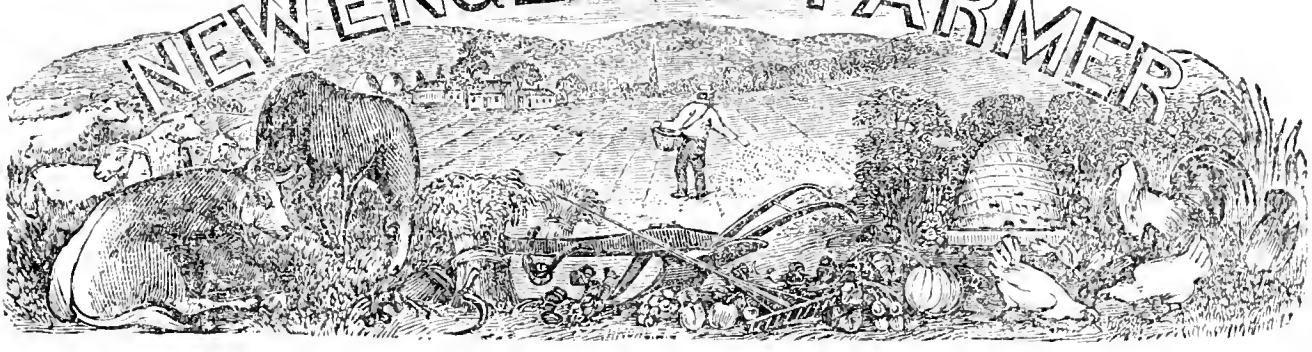
NEW ENGLAND FARMER



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, MARCH 1, 1851. NO. 5.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

WORK FOR THE SEASON.

March is a busy month, as the farmers not only find that it brings its common share of work, but this is the peculiar season for preparation for the campaign that is about opening.

Fuel.—Every farmer that has not already procured sufficient fuel to last him one year, should attend to it immediately, and if for want of snow or other causes it cannot be hauled at present, let it be chopped and split, that it may season.

Care of Stock.—If cattle and horses usually used for labor, have but little to do at this season, as is the case with some farmers in New England, they should be kept in good condition, and have moderate exercise, as high feeding and idleness produce weakness, and engender disease.

Animals with young should be kept in good, but not high condition. To keep them in very high flesh is as dangerous as the opposite extreme, poverty. If they are fed on dry food, and become bound or costive, a few roots, or bran mashes, will correct the evil. But they should have but few roots, as a liberal supply will cause a flow of milk, prematurely. After a cow has calved, it is better not to give her cold water. An old method and a good one of preparing the first pail of water, is to throw into it a shovelful of embers. This will warm it, and give it a slight alkaline quality, which is useful. It is better to give warm water for two or three days, especially if the animal appears to be rather feeble. The same course in regard to sheep would be a good one. Frequently for want of attention, the ewe is in a feverish habit, which greatly reduces the quantity as well as the quality of the milk.

Swine require particular attention; their house should be dry, clean and warm. They should have access to pure soil, such as yellow loam. A little charcoal is very acceptable to them, and a change of food is desirable. Those with young should be separated from others several weeks before farrowing; they should have a plenty of room and a good shelter. Also a moderate, but not a large quantity of litter. To prevent a sow from devouring her offspring, give her a comfortable house, and a chance to take exercise in the open air, and supply pure loam, charcoal, and occasionally raw apples, potatoes, carrots and parsneps. In fine, keep her in good health. When it becomes warm, let her run at large.

Implements.—Many farmers make and repair their own coarse implements, carts, &c., and this is the proper time to attend to these things, that they may be ready when the time for action arrives, which is near at hand. The success of a farmer depends much on having all his tools ready in due season, and having the best of every kind. With a good implement a man can do twice as much labor as with a poor one.

Seeds, &c.—Every farmer and gardener who intends to improve their crops by collecting superior seeds, tubers, and plants, should attend to this now, that everything may be ready in due season, that there may be no loss by delay in waiting for these things in the season of planting, or loss of time in procuring them in a more busy season.

Trees and Scions.—Cultivators should look over their notes and memorandums and see what they want in this line Scions may be cut at any time in this month. Lay them in a tight moistened box, with moist saw dust or moss at the bottom; or moist mats or cloths will answer. Lay moss, a cloth, or mat, moistened, over the scions, and set the box in a cool place in the cellar; and if dark, the better. Do not apply water to the scions, as they are often injured by keeping them too damp or wet.

Preparing Seeds.—It is rather late to prepare seeds of fruit trees that have been kept dry, but it may be better late than never. If apple, pear, or quince seeds are moistened, and put into damp loam, and put where they will undergo the changes of freezing and thawing, which are common in this month, they will probably vegetate, though

not so readily as those prepared in season. When seeds are put into moist loam or sand early in winter they do not need to freeze. Soak peach stones a few hours and then put them into moist loam. Crack the stones, and take out the seeds, at the proper time, and plant as you would corn.

Catterpillars.—By examining the lower branches of apple trees, near the extremities, on a bright morning, the eggs of catterpillars may be seen in clusters on the branches, which may easily be taken off with the fingers. They should be destroyed. By a crook, the length of a common cane, almost every limb on which they are found may be drawn down within convenient reach.

Pruning.—We consider this a very unfavorable season for pruning, and we introduce this subject for the purposes of a caution, as so many select this month for this purpose. Very small twigs may be cut from trees at any season in the year, but large limbs should not be cut off in spring; the sap oozes out, the wood turns black, and often cankers and decays. If grape vines were not pruned in fall, the sooner they are attended to in spring the better, on account of their being liable ta bleed when pruned late.

Buying Hay.—It is a hard case for the farmer to buy hay, but he must do it sometimes. Hay that is only moved a mile or two is worth much less than if fed directly from the mow. To avoid this evil as far as possible, move hay on a damp day, and pack it down hard in a close mow, and in using it, take the hay from one side, or pull it out so as not to continually expose a new surface to the air. We have known some farmers to pull all of their hay out at the side of the mow, with a hay-hook, as it would spend better from less exposure.

Fences should be kept in good condition around fruit trees, mowing fields, and woodlands, as cattle are very destructive to them in the spring. They prune trees too roughly, and sometimes too much; their poaching upon the soft grass lands is more injurious than their feeding; and in the woodland they devour the most luxuriant shoots.

Bees should be kept shaded until the snow is off, and it is sufficently warm for them to go forth with safety. If the sun shines on the hive it will revive them and invite them out when too cold, and as they meet the cold blast they will fall on the snow or cold damp earth, and they cannot recover. In this way millions are lost.

Sowing Grass Seed.—When the land is in good condition this is a good season for sowing clover seed. It may be sowed on the bare ground, or on the snow, if the land is so level, and free from washing that it is not liable to be carried out of place by water. Herds grass and red top sowed in a good soil, in March, will generally produce a pretty good crop the first season; but it is better to sow these grasses early in fall. If that favorable season has been neglected, it is best to sow now.

PLANT THE BEST.

It should be an invariable rule with every cultivator to plant and sow the best varieties of vegetables. It costs no more to cultivate a valuable kind than a poor one. In nearly all the crops that we cultivate, there are various kinds, possessing different properties, and it is important that the farmer get the best kind that is adapted to his soil and situation.

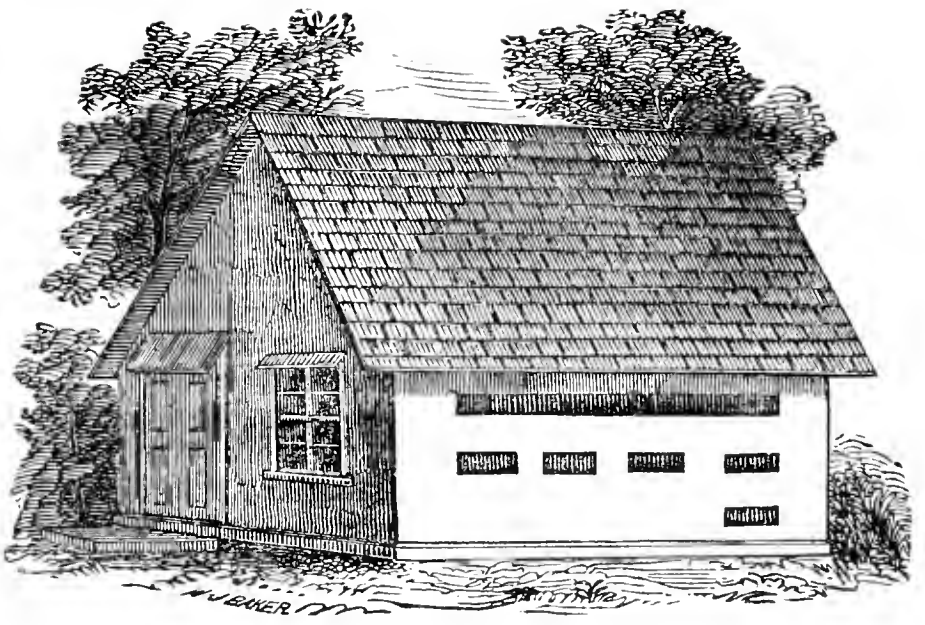
In the beginning, a high price may be demanded for a valuable kind of grain, or other vegetable; but a small quantity may be purchased to begin with, and soon it will be so extended, that the extra cost will hardly be perceptible. Allowing that one dollar extra be paid for a half peck of very superior grain. In two years it would probably produce 100 bushels; and thus the extra cost would be only one cent on a bushel, and, perhaps, far better than this, there might in consequence of the excellent variety, be ten per cent. added to the crop, which would pay ten or twenty times the extra cost, besides the superior value of the 100 bushels.

A great deal is said of the potato rot; and if nothing was said on the subject, every farmer would know the great destruction of crops and the heavy loss by this malady from his own experience and observation. Now every cultivator of this once valuable root should see what he can do by way of an improvement. He should procure several varieties of what appear to be the best and the most hardy against the disease. In this way, he may save about all his crop in common seasons of the rot; and when it is very severe, as was the case last year, he might save enough for his own use, and a surplus to sell at a high price. A mere trifle expended in this way will supply a farmer in a short time with all the seed he needs for his farm.

We have many varieties of Indian corn. Some early, others late: some with large ears and large stalks, others with compact ears, small cobs, and fine fodder. Some varieties contain a large amount of oil, and are good for fattening; others abound in starch, and are superior for some dishes of food. Every farmer should procure the best kinds, such as are well adapted to his climate and soil, and to the purposes for which he intends them.

In beets, carrots, onions, and parsneps; in squashes, pumpkins, in cucumbers and melons: finally, in almost every species in the extensive catalogue of vegetables there are varieties possessing different qualities. They differ in quality, production, earliness, &c.; and it is of great importance to select the best, regarding the adaptation of the kind to the purposes of the particular objects of the cultivator.

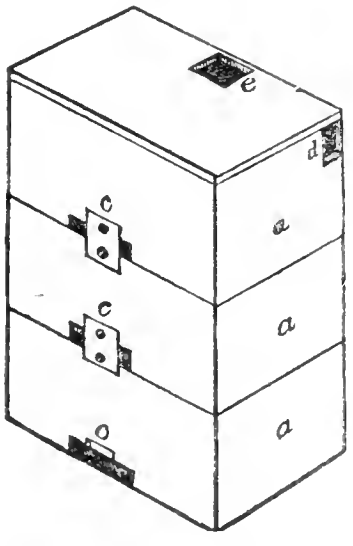
The present is a suitable time for farmers to examine into this subject, and furnish themselves with the best seeds in due season, for soon will come the time for action, and there will not be so convenient an opportunity to attend to this business.



APIARY, OR BEE-HOUSE.

GILMORE'S PATENT APIARY.

The house may be made plain and cheap, or ornamental, as the proprietor desires. It is eight or ten feet wide and of any desired length The cut of the house represents the front open; but it may be closed when necessary. The hives set back about their width from the front. The black spaces in front show the openings for the bees, corresponding with the doors in the hives. At the end of the house is a door opening to a passage in the rear of the hives, for the purpose of inspection, feeding, applying or removing boxes, &c.



FRONT VIEW OF THE HIVE.

This cut represents a front view of the hive, which is made in three equal sections, with slats between them, at the upper part of each section, about the width of laths, and one-fourth of an inch apart. The slats sustain the honey in the under section, when the section above is removed. The object of these sections is to allow of the advantage of removing the top section, when the hive is nearly full, which section in such a case is generally well filled with honey, and contains but few bees, and supplying the deficiency by adding an empty section underneath. In this way surplus honey may be obtained, the bees kept constantly at work without swarming, and they are supplied with new comb, which is very important, as bees are more healthy and active in new comb, and the young brood is larger and more vigorous, as old combs becomes partially filled from every new brood.

These hives are so constructed and arranged that bees may be conducted from a hive at any section on either side, and thus form new colonies without swarming. They may also be conducted from the upper story or tier of hives down through the floor into a hive below. Or if swarms in the usual way are wanted, the bees will swarm by limiting them as to room.

In the rear of the hives, in the house, boxes are attached to the hives, which can be removed conveniently, and empty ones put in their place. At the same place, arrangements are made for feeding the bees, so that robbers cannot get the honey or food offered them, unless they come through the hive.

This apiary is so arranged that it seems to afford every desirable advantage for keeping and managing bees, and it can be done with the greatest convenience.

Mr. Gilmore has had many highly favorable testimonials from many intelligent persons who have tried his plan of managing bees; and from agricultural socities and other associations he has received liberal premiums. He received a premium of the N. Y. S. Agricultural Society, at their show at Albany, and he has received several premiums from the Am. Institute.

Mr. W. A. Brigham offers rights of this Apiary, for certain sections of country, as may be seen in our advertising columns.

FIFTH AGRICULTURAL MEETING

At the State House, Feb. 11, 1851.

Lieut. Governor Cushman in the Chair,— Subject, "Meadow and Grass Lands."

The chairman made a few appropriate remarks on the first start of these agricultural meetings, and on their utility. He also made some general remarks on agricultural improvements. He said that in his part of the State, ploughing was done better, in consequence of having superior ploughs; crops were better and more abundant, and housewives made better butter and cheese. He alluded to agricultural papers and the great influence they had in enlightening and elevating the farming community. There was a time when the farmer was not respected like the lawyer, the doctor or merchant, but now he ranks with them, or is at the head. This results from the education of farmers as well as other classes. The motto now is, "improve the soil and the minds." The chairman then announced the subject, and made some remarks on its importance, and suggested various topics for consideration.

Hon. Mr. Gray, of Boston, as one of the trustees of the State Agricultural Society, proposed that Dr. Brooks, who had studied the veterinary science in Europe, would deliver two or three lectures on the anatomy of the horse before these meetings, if agreeable. The subject was referred to the committee of arrangements.

Hon. Mr. Brooks, of Princeton, said that his experience was confined to common grasses. He had tried lucerne, but it failed, as the frost threw it out of the ground. We have herds grass, red top, and red and white clover, and we cannot probably make any improvement by the use of other grasses. It is said that we can get two crops of orchard grass, and we can get two crops of herds grass or southern clover, but there is no advantage in it. One good crop is sufficient. The second crop is not valuable. We hear of large crops of three or four tons of hay to the acre, but they are not profitable, as the hay is not so good. Two tons to the acre is sufficient, and as much as is profitable. More money can be made by raising two tons of hay to the acre than by larger crops. Grasses grow naturally in our pastures, and they are of good quality. In Worcester county, plaster will generally produce a good crop of clover. Nothing is better for a pasture than white clover. It fattens well, and makes rich milk. Herds grass is better than clover for hay.

Rev. Mr. Sanger, of Dover, said that the value of grass was not in proportion to the quantity. In large crops the quality was not good. He was pleased that farmers' wives made better butter than formerly, and he would enquire whether this was the case with farmers' daughters, as there had been some complaint in this respect.

Mr. Brooks said that you might feed crops, as well as animals, to a certain extent with profit, but beyond that there was a loss. A pig will grow faster than he eats up to eight or nine months old, then he will eat faster than he grows. A calf forced to a great growth is not a valuable animal. Trees are less valuable for a very rapid growth in the nursery.

Mr. Parker, of Framingham, said that he purchased a farm in that town, on which there was a pasture, which had been ploughed, manured, tilled, and laid down to grass without being cropped. His neighbors said that it would fail, but by the use of plaster he had kept it in excellent condition; yielding abundant crops of white clover. He agreed with the gentleman from Worcester county, that two tons of hay should be the maximum crop, and one and a half-ton the minium crop. No farmer should cultivate more land than will yield one and a half to two tons to the acre. He said that his land was an elevation, and a moist, deep, rocky soil. He supposed that he sowed 300 lbs. plaster to the acre.

Hon. Mr. French, of Braintree, remarked that near the sea, where cattle do not need salt, plaster will not generally do any good, but fifteen or twenty miles back, where cattle need nore salt, plaster is generally useful. He thought our whole system as to grasses was wrong; we ought to plough more, manure less, and let our lands lie to grass only one or two years, and then repeat a rotation of crops. He recommended half a bushel of herds grass, a bushel of red top and 6 lbs. of clover to the acre.

Mr. Andrews, of Montague, proposed for consideration, that in his section, plaster was not good for a series of years, without the application of other fertilizers.

Hon. Dr. Gardner, from Bristol county, said that the gentleman from Worcester county cautioned farmers against raising too large crops of grass, but in his section of light soils the great difficulty was to get two tons of hay to the acre. The best modes to obtain good crops, are to apply compost manure, and plough deep. He did not subsoil, but he regarded deep ploughing highly important to the production of good crops. He could not perceive how a large farm could be managed, if the land was in grass only one or two years, as it would be mostly in tillage. He would recommend taking up no more land than can be managed well. He recommended more grass seed to the acre than had been named. He would sow one and a half bushels of red top, 16 lbs. of clover, and more than half a bushel of herds grass. In his section ashes were the most profitable manure for grass lands, and the leached was equally as good.

Hon. Mr. Sprague, of Duxbury, said that his land was dry, and he was troubled for good pasturage. He cut his hay on a meadow. In the fall he turns over the sod, manures well, and sows down

to grass. Sometimes he sows as late as October. If he sees the grass start well, it succeeds, and he generally gets two tons an acre the next season. He used seaweed or kelp as manure for grass lands. He had found no benefit from plaster.

Mr. Brooks said, that by raising large crops he had reference to farming with high manuring.

Hon. Amasa Walker, of Brookfield, observed that he purchased a piece of pasture land that had probably been pastured 75 years, without manure, and it was nearly exhausted. He applied plaster, and it brough in white clover, and produced fine crops. The farmers in New Braintree apply a little plaster to their pastures annually, and they have the very best of pasturage. Plaster costs but little, and it should be applied several years in succession.

Mr. Proctor, President of the Essex Agricultural Society, said that in Ipswich, the main business of farmers was to raise hay, and in some seasons 2000 tons were sold from that town; whether it was all raised there he could not tell. In that town the best farmers harrow their grass lands after mowing and sow grass seed. Others subsoil their lands, without disturbing the surface, and then manure and sow to grass. In his neighborhood, the late Mr. King was very successful in improving light lands. He turned them over, manured, and re-seeded. This he often repeated. He got one and a half or two tons to the acre, and his light lands became very profitable. About Marblehead, manure from the beach was used for grass lands, with good effect. They produce continuous good crops without tilling. Mr. Stone, of Marblehead, fed four cows for three months on five acres of pasture land, and he received a premium for his butter. Plaster had been applied in Nahant with good results.

Subject for the next evening, "The best kinds of Cattle for New England."

As the President, in his remarks on the various agricultual journals, named several among us, and spoke of their extensive circulation and utility, without ever alluding to our publications, while he spoke of others with a much more limited influence, we would remark that we consider it highly desirable for a public speaker to be sufficiently acquainted with his subject to do it justice, avoiding partiality or neglect.

We had a specimen of a similar character last winter, in which a publisher's statement of his list was exhibited at the meeting, and we have known publishers to represent their list several thousand higher than reality.

☞A London ship-builder challenges the world to build a swift sailing vessel. He does not care what the tonnage may be. The challenge has been published in the London Times. Some of our ship-builders will surely take him up and beat him out and out.—*Scientific American.*

AGRICULTURAL QUESTIONS.

At the second Legislative Agricultural Meeting the following resolve was passed.

Resolved, That a committee of two be appointed, whose duty it shall be to prepare appropriate questions on the subjects successively discussed in the Legislative Agricultural Meetings, which the secretary shall cause to be published from week to week for investigation by the farmers of the commonwealth, or for discussion at the agricultural meetings next year.

Under this resolve Prof. W. C. Fowler, of Amherst, and Gen. Caleb Cushing, of Newbury, were appointed a committee to prepare the questions.

Agreeably to the preceding resolve, the committee have forwarded the following questions.

No. 1.—Subject, *The Potato Disease.*

I. Does the disease extend to the whole race or only to that part which has been cultivated?

This question can be answered by investigating the state of the plant in those regions where it is said to grow spontaneously. If the desease is constitutional and extends to the whole race, then there would seem to be no remedy. If it extends only to the cultivated part, then the proper way will be to obtain seed from those plants which grow spontaneously.

II. If the disease pertains only to the cultivated portion of the race, does it extend to the whole of that portion, or only to certain varieties? If certain other varieties are free from the disease or less liable to it than others, then they should be carefully sought and planted.

III. As a remedial process, has the experiment been fully tried of planting seed from several successive generations of the plant, instead of the tuber?

IV. As witnessed from year to year does the disease commence with the vines, or with the tuber?

V. Is the disease attributable to an atmospheric influence analogous to that of malaria in the human race? and if so do some exposures suffer more than others?

VI. Has the mode of cure recommended by Baron Liebig and D. Klotzsch, namely, that of cutting or pinching off the top of the vines, been thoroughly tried in our country?

VII. What are the effects of charcoal, sulphur and salt when used as remedial agents?

VIII. Does climate have an influence in some cases to prevent and in some to produce disease?

IX. Does excessive dryness or excessive moisture, whether in the ground or in the cellar, have an influence to produce disease?

X. Is the disease attributable to some soils rather than to others? and to some manures rather than to others?

XI. Is the plant subject to different diseases or to different types of the same disease?

XII. Have experiments been made as to the val-

ue as esculents and the economy of production of those tubers, which are used in common with the potato in its native climate, such as the yam, yucca and the camote (or sweet potato)? And what is the result of experiment on that subject?

No. 2.—Subject, *Thorough Draining and Subsoil Ploughing.*

I. What experience have you had of the benefits of draining land, and over what period has it extended?

II. What soils, and under what general conditions of altitude and quality, have you experimented upon?

III. What depth, width of trench, and space between drains, does your experience recommend; and what *material* for forming drains would you approve—keeping cheapness and eligibility in view?

IV. At what price, per rod, did you sink your drains; and are you aware whether any cheaper or more speedy mode could be adopted—and, if so, what?

V. What has been the *general* and what the *special* effect of your experiments—in modifying the influence of climate, and in enhancing production?

VI. What are the comparative advantages of draining *thoroughly*, over *imperfect* drainage; also in contrast with its neglect?

VII. Can you bring reliable statistics to bear on the question of profit or loss from draining?

VIII. What have you found to be the comparative advantages of covered drains and of open drains?

IX. What soils derive the greatest advantage from subsoil ploughing?

X. What is the proper depth for subsoil ploughing; and how often in the progress of years should the process be repeated?

XI. How do you account for the fact, that subsoil ploughing is beneficial?

XII. Does the depth to which the common plough should go depend at all upon the subsequent use of the subsoil plough?

For the New England Farmer.

IMPROVEMENT OF WET LANDS.

Mr. Cole:—The subject of draining is almost entirely overlooked or neglected by most farmers in this country. Having of late taken the subject under consideration, it has induced me to examine many English writers on the subject, and compare their views and practice with those of our own country. I have come to the conclusion that the best and most fertile lands in this country are laying waste for want of draining. In travelling through the several counties, I have observed the high lands cleared of trees and brush, while low lands and swamps are totally neglected; in many cases where they can be drained with little or no expense.

The way draining should be conducted, it will in my opinion pay well for the labor, as well as contribute an abundance of new and fertile soil to the owner, wherever there is a swamp that has an outlet sufficiently low so as to have fall enough for the water to run off. The draining may be done in this manner; first, dig a ditch along shore on each side of the swamp, three or four feet wide, commencing at the lower end; the mud should be all taken to the barn-yard for manure; let two carts be used; two men can dig and put the mud into the cart as fast as a teamster can take it to the yard or compost heap; and by digging a good channel by the edge of upland, all of the springs are cut off, and the meadow or swamp will become almost dry, and the muck will be worth enough to pay for all of the labor.

After the side or shore ditches are dug and the water taken off from the fountain, then if the swamp or meadow is fit to cart on, a ditch may be dug through the centre and the mud carted off; but if it is not fit for a team to go on, the mud should be thrown out of the ditch into piles, so that it will keep dry, and enable it to be got off in good sledding, when the meadow is frozen, in the ensuing winter. If that does not drain sufficient, small ditches may be made from the shore ditches to the centre ditch, from one to two feet wide, filled with brush, covered over with mud. After this is done, most meadows or swamps will be dry enough in the summer to plough or harrow in herds grass seed.

If the mud is deep and there is not consistency enough, it would be well to cart on sand or gravel, if it is to be had without carting too far. But most of the swamps or low lands can be reclaimed without anything being done except draining and breaking up the soil and sowing in grass seed. In all cases all bushes and wild grass roots must be totally destroyed, which can easily be done either by ploughing or digging in the fall, and the winter will kill them (the roots;) then next summer harrow or hoe in the grass seed with oats, and a good late crop of fodder will be sure and safe. The next season there will be a good crop of English hay, from one to two tons to the acre, without manure, and this will continue until the wild grass returns; then it must be ploughed and dug over again, as it was in the first place. The ditches should be cleaned out when they get clogged within by mud or any other substance, so as in no case let the water become stagnant, for if the water is suffered to stand on low land, rushes and wild grass will always be troublesome.

The ditching can be done either in the summer, fall or winter. When the mud is deep, the winter is the best time, as the team can go on better then, without injury either to the cattle or meadow, unless there is too much water; in that case the mud must be thrown out in the fall, and be carted off in the winter. By doing this the soil will be returned to the high land from whence it has been washed down, enriched with rotten wood, decayed leaves, and other vegetable and mineral substances, which have mixed together, to make the best of compost if mixed with lime and barn-yard manure, well dug over. Yours, &c., S. A. Shurtleff.

Spring Grove, Feb., 1851.

To Cleanse the Hair.—It is recommended to use a little soda in the water instead of soap.

For the New England Farmer.

EXPERIMENTS WITH PERUVIAN GUANO AND BARN COMPOST.

MR. COLE:—Having several years ago experimented with Guano (of such quality as could then be procured,) with results unfavorable to the article as a fertilizer, it was with little faith, and that founded principally upon the great reputation of Peruvian Guano, that we undertook the following experiments.

The Guano employed on this occasion was obtained directly from Peter Harmony Nephews, of New York, Peruvian government agent for the sale of it. We were thus satisfied of its genuineness. The experiments were conducted with care, and their results much surprised us.

One part Peruvian Guano and three parts of dry loam, constituted the Guano compost mentioned below.

FIRST EXPERIMENT.

On the first of September, 1849, upon land in good tilth, we sowed rye broadcast, (intended for soiling in the Spring,) at the rate of three bushels to the acre. The first of April following its appearance was unpromising and sickly, insomuch, we feared it might prove a failure.

April 8th, 1850.—We applied to a portion of the field, Guano compost, at the rate of three hundred and twenty pounds of Guano, (value seven dollars) to the acre. The ground was moist the snow having just disappeared. In a few days the beneficial effects of the Guano were manifest. Those portions of the field to which it had been applied becoming greenest, tallest and thickest, which characteristic they maintained to the end of the season.

May 28th.—We cut green one square rod of Guanoed rye and another square rod of unguanoed, lying side by side, and weighed them carefully,

Weight of Guanoed square rod, -	105 lbs.
" Unguanoed, - - -	60 lbs.
Return for Guano applied, per rod, -	45 lbs.

a gain of more than two-thirds.

July 23d.—We reaped at maturity one square rod of guanoed rye, and the same of unguanoed, side by side, and weighed the bundles.

Weight of Guanoed bundles, - -	44 lbs.
" Unguanoed, - - -	35 lbs.
Gain for Guano, - - - -	9 lbs.

In September, we threshed these bundles and weighed the grain.

Weight of Guanoed grain, - -	16 lbs.
" Unguanoed, - -	10 lbs.
Gain in grains per rod, - - -	6 lbs.

A gain of six pounds of grain in one rod, is equal to sixteen bushels to the acre, calculating fifty-eight pounds to the bushel. Valuing rye at eighty cents a bushel, these sixteen bushels are worth twelve dollars and eighty cents. Valuing rye straw at seven dollars a ton, the three pounds per rod, (see difference between six and nine in the two tables above,) or four hundred and eighty pounds per acre, are worth $1,50. Thus we have,

Value of 16 bushels of rye, - -	$12,80.
" 480 pounds straw, - -	$1,50.
Return for seven dollars worth of Guano,	$14,30

SECOND EXPERIMENT.

This was made on grass. The land had not been ploughed for many years, nor manured for three years, but was moderately fertile.

April 1st, 1850.—We applied the Guano compost to a portion of this grass, at the rate of three hundred and twenty pounds of Guano (value seven dollars) to the acre. Along side, at the same time, we top dressed another portion with barn compost (cow droppings and dry peat, equal parts, well composted in the barn) in the proportion of sixteen loads to the acre, valued $1,50 per load, or twenty-four dollars for the sixteen loads. The grass on the guanoed portion soon surpassed that on the top dressed portion in verdure, became tallest and thickest, and remained so until mowed.

July 14th.—We mowed a square rod of each of these portions, side by side, and on the 16th weighed the products. They were only two-thirds dry, owing to wet weather.

Weight of Guanoed rod, - - -	62 lbs.
" top dressed, -	42 lbs.
Gain by Guano in one rod, - -	20 lbs.

Nearly fifty per cent. greater yield per acre with seven dollars worth of Guano, than with twenty-four dollars worth of barn compost. The aftermath was also greenest and thickest on the guanoed portion.

THIRD EXPERIMENT.

This was also made on grass. Land rather light and dry. It had been stocked to grass four years, and had not been manured for three years.

April 11th, 1850.—We applied Guano compost (three hundred and twenty pounds, or seven dollars worth of Guano to the acre,) during a light fall of snow.

July 16th.—Mowed two square rods side by side, (one had been guanoed, to the other nothing had been applied,) and weighed them green.

Weight of Guanoed rod, - -	60 lbs.
" Unguanoed, - - -	32 lbs.
Gain by Guano per rod, - -	28 lbs.

Nearly one hundred per cent. gain, aftermath green and thick.

FOURTH EXPERIMENT.

Also on grass. A border of low meadow which had been valueless, was ploughed in 1848, and sowed down to grass the 1st of September, 1849. Before sowing down, gravel had been scattered upon the surface, and barn compost at the rate of thirty loads to the acre, had been spread and harrowed in.

April 12th, 1850.—Applied Guano compost, (three hundred and twenty pounds of Guano to the acre,) to a portion of this border.

July 22d.—Mowed two square rods, side by side, and weighed green grass moist with dew.

Weight of Guanoed rod, - -	115 lbs.
" Unguanoed, - - -	62 lbs.
Gain by Guano per rod, - -	53 lbs.

Nearly one hundred per cent. The straw was fine on the guanoed portion, and the aftermath much the heaviest, some of the herds grass coming to maturity a second time

FIFTH EXPERIMENT.

This was made on Indian corn for soiling. Land in good tilth.

June 6th, 1850.—We ploughed under the whole field, barn compost at the rate of thirty loads to the acre, and harrowed deep.

June 8th.—Furrowed deep for planting corn in drills. Into a portion of the burrows we dropped barn compost at the rate of six loads to the acre, (value nine dollars); we then dropped Southern corn at the rate of two and half bushels to the acre and covered. Into another portion of the furrows we strewed Guano compost (three hundred and twenty pounds of Guano per acre,) covered it lightly with earth, then dropped Southern corn at same rate as above, and covered.

June 16th.—The guanoed rows were well up, the manured rows scarcely visible. During the whole season the guanoed rows kept the lead and excelled the manured rows in verdure, height and size of stalks. Two heavy gales of wind in July prostrated the whole field. The guanoed portions were the most injured, and about the middle of August before the stalks had attained their full size we were obliged to cut them. We weighed, green, a square rod of each of the rows, side by side.

Weight of square rod of Guanoed rows,	450 lbs.
" Manured, - - -	365 lbs.
Gain for Guano per rod, - - -	85 lbs.

Several other similar experiments were made, some of which showed even more surprisingly the effects of Guano, but these are the only ones sufficiently complete to publish.

They all confirm the great reputation of Peruvian Guano. The value of this substance compared with other fertilizers cannot at present be determined, but it may be considered the cheapest in use.

President Fillmore, in his late message to Congress, draws the attention of that body to the Peruvian Guano trade, as a subject of importance to American Agriculture.

The annual consumption in the United States, is fifteen thousand tons, the demand principally for the Middle States. Many worn out plantations in that section have been made productive by Peruvian Guano.

Were this agent to be more extensively employed in New England, it no doubt would yield abundant returns, for it is peculiarly qualified to fertilize her cold and exhausted soil. If Peruvian Guano has failed, in some hands, it has arisen probably from want of knowledge or care in the use of it. It is also notorious that spurious and worthless articles are sold for Peruvian Guano.

These experiments will be continued and their results communicated to the public.

JOSIAH KEENE.

North Providence, R. I., Feb., 1851.

REMARKS.—We have accounts of various results from the use of Guano. In some cases it has been highly profitable, in others it has produced no perceptible effect. As suggested by our correspondent, we havo no doubt that Guano has often been used injudiciously, and frequently a spurious kind has been obtained, for a great deal of Guano sold is adulterated. In addition to these principal causes of failure, the season is sometimes unfavorable from drought, and occasionally there is a want of adaptation of the manure to the soil and crop.

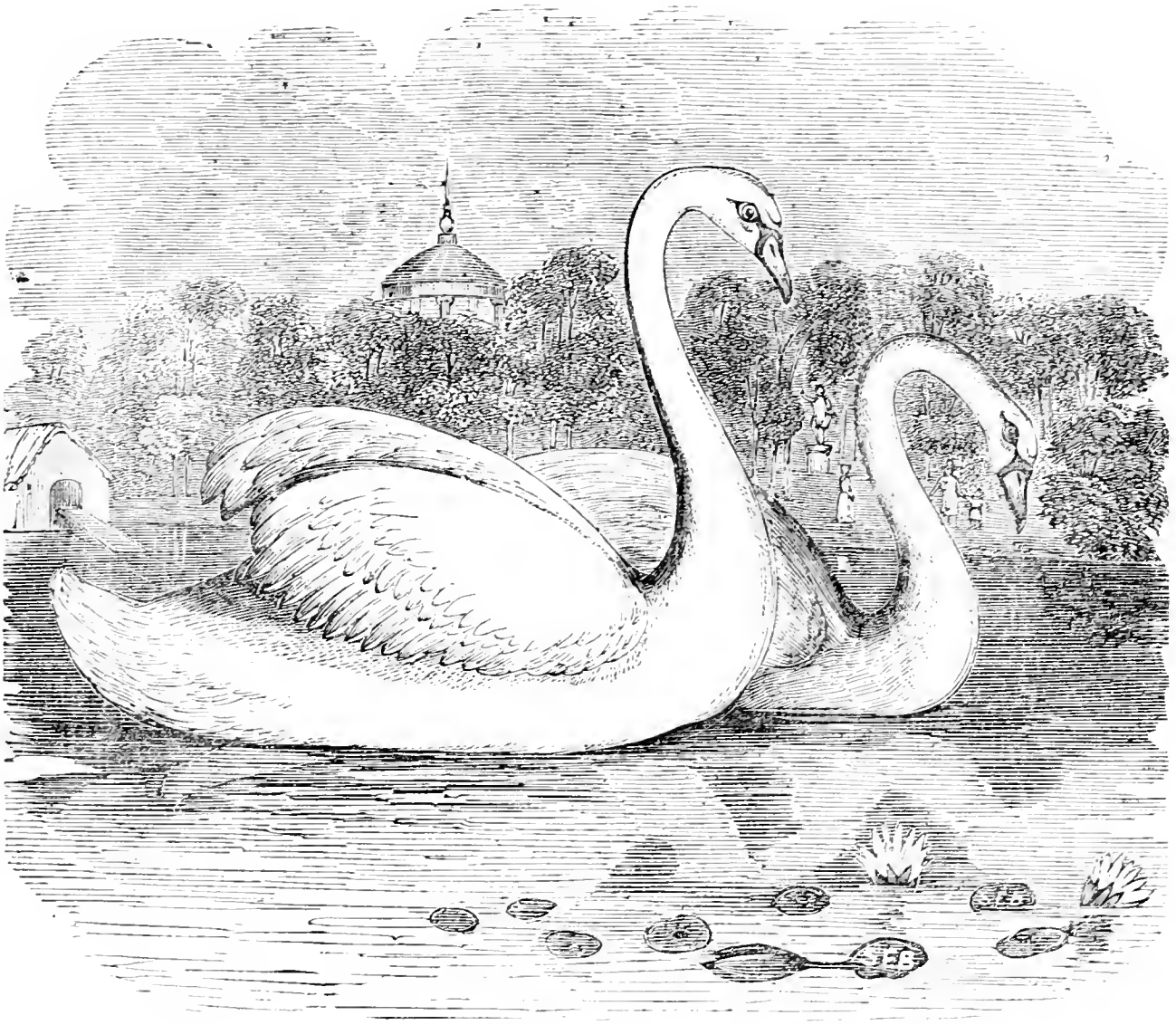
We trust that some cultivators will persevere in their experiments until the use of Guano is reduced to a system, and its just value ascertained, for it is highly desirable that we have our resources for fertilizers enlarged, and that we have some manures that can be had in abundance and are profitable so as to be convenient in transportation and application. We advise experimenters on Guano to be particular, and note the exact results, as Mr. Keene has done. Let us have something more than vague guessing.—ED.

REDUCING THE FOOD OF CATTLE BEFORE GIVING IT.

As I have just concluded the experiments you wished, I hasten to forward you the results, which are as follows:—Two horses in good health, in daily work, and as nearly as possible equal in size and age, were selected for the experiment. They were each allowed 5 lbs. of oats, 42 lbs. per bushel, and a sufficiency of good hay, of which they consumed about 17 lbs. per diem each horse. The only difference in the feeding consisted in one horse having the oats thoroughly crushed, and the other being allowed the oats uncrushed. On the fourth day of the above mode of feeding, the solid excrements of each horse were examined. 100 parts of the dung from the horse fed on crushed oats were found to be deprived of all the nutritious matter contained in the food, and to consist of woody fibre, mixed with the animal secretions and some salts; while 100 parts of the dung from the horse fed on uncrushed oats, were found to contain 1-4 per cent. of nutritive matter, consisting of starch and gluten, which had not been acted on by the stomach, mixed with the ordinary constituents of the solid excrements of the animal—this arising from the inability of the horse to perform perfect mastication, and must vary with circumstances, such as age and rapidity of feeding. The same horses were then fed with cut and uncut food, consisting of hay cut into chaff, and hay uncut. At the expiration of the third day, the excrements were examined, but no chemical difference in their composition was detected; the food, in both instances was found to be equally exhausted of its nutritive matter. The shorter period occupied by the horse in filling its stomach, and consequently greater amount of rest obtained, and the means of mixing food and preventing waste by cutting it into chaff, requires no observation from me, but will be material points in this mode of feeding.

A. GYDE.

AMERICAN YELLOW BIRD.—This bird is very common in the middle States, and partakes much of the nature of the Canary. If placed near a Canary they will acquire many of their notes. It should be an old established singing Canary, otherwise they will take the Yellow-bird's song to the detriment of his own. They should be fed with yellow and hempseed; two thirds of the former. A leaf of lettuce, cabbage, or a piece of apple is of service.



WHITE SWANS.

For the New England Farmer.

WHITE SWANS.

Mr. Cole: — These truly splendid and most ornamental aquatic birds are but little known in the New England States. The species which is bred in confinement is the *Cygnus olor*, or mute swan. These birds have no voice or notes. The only sound they make is a hiss or rather a loud breathing. They are not domesticated, and can only be prevented from escaping by "pinioning," i. e., by amputating a part of one wing. They are migratory, and, like the wild geese, in the spring of the year they pass to the high northern latitudes to breed, and returning in autumn, pass the winter on the sea-coasts, and in lakes and large ponds, subsisting on the aquatic vegetation, seeds and insects.

When kept in confinement, swans thrive best in shallow and muddy ponds or sluggish and muddy streams. Ponds and streams of clear water do not suit them.

Swans are beneficial in consuming all decaying aquatic weeds, the spawn and larvæ of water insects. The green slime which is so unsightly in sluggish waters is favorite food for them. They eradicate water-weeds, and keep the waters in which they are confined free from them, and, by consuming all putrescent matter, prevent the generation of the miasma so deleterious to the human race.

Some writers have expressed a doubt whether swans would breed in the New England States on account of the severity of the climate. The habits of the swan and wild goose in freedom are alike. That wild geese do breed in confinement in the New England States no one doubts. Then, why will not swans do the same? That swans can, without difficulty, be kept at all seasons of the year, is abundantly proved by the experiments of Mr. John Giles, of Providence, R. I., and Mr. G. Thompson, of Bridgeport, Ct. These gentlemen have kept them for several years. Mr. Giles has had to contend with great difficulties.—Mr. Thompson is more happily situated.

Mr. Giles resides in the city of Providence. The land improved by him is composed of sand, so loose and porous that it is ever dry. A more forbidding and uncongenial situation for keeping aquatic fowls cannot easily be found. But few men would have attempted to have kept any aquatic fowls on such a place, much less, the extensive and varied collection possessed by Mr. Giles.

Swans, notwithstanding their indomitable love of freedom, sometimes exhibit much gratitude and affection for their keepers. Those belonging to Mr. Thompson, of Bridgeport, show these traits

towards their owner in an extraordinary degree. Mr. Thompson informed me, that, in no instance, has he ever been able to pass the enclosure in which his swans are kept without being recognized and saluted by them, although he has so disguised himself that recognition seemed impossible.

Swans prefer food that has lain a day or more in water. If fresh cut grass is thrown into their ponds they will not eat it until it has become so soft that they can suck it down; grain thrown into the pond is usually left untouched until it has been softened by the water. Dry and hard food of any kind is not agreeable to them. Swan keepers usually have boxes or troughs placed in the ponds or streams covered by water, into which, from time to time, is put the grain for the swans. All weeds, garden refuse, and vegetable offal thrown into their pond, will be eaten by them after it has been so soaked as to become soft. Should the swans have a brood of cygnets, it will be necessary, if the body of water in which they are kept is of small extent, to throw into the pond or stream, daily, quantities of grass and vegetable matter as well as grain for them, as the cygnets grow with astonishing rapidity.

Swans do not breed until the fourth year, consequently it is for the interest of swan-keepers to procure an old pair at triple the price of a pair of cygnets. The risk of loss by death is much greater with a pair of cygnets than of old and well seasoned swans.

During the breeding season and while the cygnets require the care of the old ones, the male swan is exceedingly cross, not only to strangers but to all other fowls. If the pond or body of water in which swans are kept is small, no other water fowl should be allowed in it, as a blow from the wing of a swan is sufficiently heavy to kill, at once, the largest goose. No domestic water-fowl can out-swim the swan. Two or more pairs of swans cannot be kept in the same enclosure.

At the commencement of the breeding season, a quantity of straw or coarse hay and small dry brush and sticks should be placed near the water frequented by the swans, to aid them in procuring materials for building their nest. If there are no trees or shrubbery on the borders of the stream or pond, a small house or rustic arbor should be made close to the waters' edge, in which the swans will build their nest. When the nest is commenced, it is dangerous as well as unwise to go near the swans. Do not on any account meddle with the eggs. The number usually laid by an old swan is from twelve to fifteen. The incubation lasts about six weeks. While the female is on the nest, the male is keeping guard, sailing backward and forward in short tacks, ready and willing to attack any and every thing that approaches, be it man, beast or bird. During incubation a liberal and constant supply of food should always be kept at the place where the swans have been usually fed, that the female may readily and quickly satisfy the cravings of hunger, and that there may be as little interruption as possible of her labors.

The cygnets when first hatched are of a grey color, and do not acquire the snow-white plumage until more than two years old, neither does the knob become fully developed, nor does the bill acquire the bright orange color until they are nearly three years old.

A pair of swans accompanied by a brood of cygnets floating in a handsome well-kept sheet of water is perhaps the most ornamental appendages that a person living in the country can have. They are not only ornamental but lucrative. Cygnets will always command a large price and meet with a ready sale. They can be as easily raised as wild geese. A pair of cygnets will produce as much money as a dozen pairs of wild geese. Cygnets must be "pinioned." This must be done in the month of August, or early in September. If it is not done, in the latter part of September the swan-keeper will be left to regret their departure, and will learn that "delay *is* dangerous."

This operation is easily performed and without the loss of much blood. There are two places at which the wing may be severed, viz: the wrist and the elbow. The bird to be pinioned must be held firmly by the assistant, the operator after having pulled out the feathers which cover the joint at which the amputation is to be made, with a sharp knife will cut the skin and flesh beyond the joint so as to allow for the contraction of the skin and musceles that the bone may not be left bare, then finding the joint well, with the knife or a sharp chisel separate it, taking care not in any manner to injure the bone. The cygnet on being released will at once go into the water and remain for some hours with the injured wing immersed. In a day or two the wing will be healed.

Pinioning at the wrist does not entirely deprive the swan of the power of flight. I recommend that the amputation should always be made at the elbow, as then the bird cannot fly.

In the season when the ponds and streams are covered with ice, swans must be liberally supplied with water, and their food must be fully saturated with water, as they require more than any of the other kinds of ornamental or domestic birds.

Yours truly, S. Bradford Morse, Jr.

A WORD TO YOUNG MEN.

Wishing and sighing and imagining and dreaming of greatness, said William Wirt, will not make you great. But cannot a young man command his energies? Read Foster on decision of character. That book will tell you what is in your power to accomplish. You must gird up your loins and go to work with all the indomitable energy of Hannibal scaling the Alps. It is your duty to make the most of your time, talents and opportunities.

Alfred, King of England, though he performed more business than any one of his subjects, found time to study.

Franklin, in the midst of his labors, had time to dive into the depths of philosophy, and explored an untrodden path of science.

Frederic the Great, with an empire at his direction, in the midst of war, and on the eve of battle, found time to revel in the charms of philosophy, and feast on the luxuries of science.

Napoleon, with Europe at his disposal, with kings at his ante-chamber, and at the head of thousands of men, whose destinies were suspended on his arbitrary pleasure, found time to converse with books.

☞ "Cabbage," says the Edinburgh Review, "contains more muscle-sustaining nutriment than yan other vegetable whatever. Boiled cabbage and corned beef make fifty-two as good dinners in twelve months as a man can eat "

SIXTH AGRICULTURAL MEETING

At the State House, Feb. 19, 1851.

Mr. Proctor, Pres. of Essex Agricultural Society, in the Chair,—Subject, "The Best Cattle for New England."

The chairman remarked that he was called upon unexpectedly to preside, and was not prepared to address the meeting. He announced the subject for discussion, and said that it was of great importance, as some farmers gave most of their attention to cattle. As to our native cattle, some contended that we had none, as all had been originally imported; but they might as well say that we have not a native race of men, possessing peculiar properties. Now shall we improve our native cattle, or reject them and take the foreign breeds? But few of these foreign cattle can be found in the country, and farmers cannot supply themselves with them without paying high prices. Col. Pickering, who was distinguished for correct observation, thought that our native cattle were the best for our climate and feed. They are good for the stall, for labor, and for ordinary purposes. The Durham breed is good where raised particularly for beef.

Mr. Asa G. Sheldon, of Wilmington, said that for oxen and beef, the Durhams were very good, and a cross with them and the native, was good. Their beef was not superior, but they produce more beef according to the feed than other breeds. He never saw a good cow of the Devon breed, and for labor, they are rather deficient; they want putting up in the team. He preferred a more active race for labor. Our native cows are as good as any. He had not generally been successful in crossing them with the Ayrshire. He has one very superior cow from this cross. Finally he cared nothing about the breed; he would choose an animal for its good points, as he would judge of a piece of machinery; no matter who made it; he should choose it for its construction and workmanship. A cow should have a long tail, hazle eyes, small flat horn, full bosom, good chest, back ribs wide apart, bag well forward and dark, not long, nor long teats. He had a cow with long bags and teats, and when laying down she so pressed her legs and feet on her teats that they were so much injured that he sold her less by $25; and after he sold her, she was injured in this way so that she cut through the side of the teat.

Dr. Hogan, of Boston, said that it was necessary to have cattle adapted to the climate. He thought that of the foreign breeds the Welsh cattle were best adapted to New England. They are of a medial size. Mr. Prentice, near Albany, has some fine imported animals of large size, but in that region the soil is more fertile than in New England. Large cattle will fail on short feed. Another good breed is the Polish.

Prof. Fowler, of Amherst, would make some suggestions as to the failure of foreign breeds. Some fine animals had been imported at great expense, but they had not answered the expectations of their owners. Men generally degenerate by colonization, so it may be with cattle; there may not be suitable adaptation to climate, feed, soil, &c. But by a long course of years, a foreign breed may be improved even on our own soil, where at first they degenerated. In this way our native race may have been improved after they become acclimated. He remarked that long since some fine foreign cattle were brought to Guilford, Ct., where the race had continued pure, and they were fine animals. They resemble the Devons.

Hon. Mr. Brooks, of Princeton, said that a great improvement had been made in the cattle of that county by a bull imported by Gov. Gore about 50 years ago, which resembled the Hereford race. He remarked that the Herefords and Devons were races and would produce their like, but the Durhams, Ayrshire and others were only breeds, and their progeny often differ from the parents. For nearly 30 years he had raised heifers from the finest native cows, and he had crossed these with the Ayrshires, and he generally got excellent milkers. Durhams are not so good for milk as the Ayrshires. The Devons are not so good milkers, nor so good for work as the Ayrshires. The Ayrshires are hardier and better feeders (less difficult about their food) than the Devons and are more spirited. Mr. B. then presented a memorandum showing the expense of raising heifers, by which it appeared that he could sell them so as to make 16 per cent. profit on his investment. By keeping them till four years old, the income on the cow paid all the expense of raising her, excepting $10 53. Some of his neighbors got an income of $50 on each cow, making a clear profit of $25. In answer to a question, he said that if heifers came in at two years they were not so large, but will give more milk, and be more profitable than those that come in at three.

Hon. Mr. Sprague, of Duxbury, lived near Daniel Webster, and that gentleman has no good milkers, though he has various breeds of foreign cattle. But he has fine oxen.

Mr. Brooks said that he did not raise heifers from good milkers, but from a male which is from a good milker. The good properties of the female descend through the male, and his progeny will exhibit the traits of the grand-dam.

Hon. Mr. French said that it was an object to get a breed adapted to the farm. He found that the heifers he raised were worth more than those he bought, because they were at home, while others were strangers. He had had the Durhams, and after trying them four years, he sold them. As milkers, they were a failure. He suggested that we had not the true Durham stock, as it was not like that which he had seen in other States.

The Ayrshires are hardy, and many do well with a cross, but the pure breed do not give a large quantity of milk. He preferred the North Devon breed; as he can get as much milk from them as from the Durham or Ayrshire.

Colonel Newell, of West Newbury, said that at Lexington the Ayrshires gave more milk than the Devons. The reason that English stocks fails in this country, is, that we do not give them good feed. The bull imported by Admiral Coffin, had made a great improvement in our stock. He had raised good cows by a cross of the Ayrshires with the natives. The Ayrshires give better milk than the Durhams. In his section were a cross of the Aldenny; six quarts of the milk would make a pound of butter.

Mr. Brooks, of Boston, was pleased to hear the quality of the milk of the Ayrshires spoken of. They do not give a large mess, but it is rich. Cows that give much do not give rich milk.—Cattle should be adapted to the climate; they may be brought from Devonshire, Eng., where they graze the year round, to our cold climate, and fail for want of hardiness.

The chairman remarked that the Polled or Hornless race of cows were superior, twenty years ago; some were brought to Danvers from New Hampshire, and they are among the best cows.

Hon. Dr Gardner, spoke in favor of the hornless cows, as he had found them to be superior. He presented a letter from a gentleman of North Carolina, ordering some of this breed, as he did not consider others worth a transfer. He considered them the best of all cows. He spoke of their being free from the barbaric appendage called horns; and Dr. Gardner named this as an advantage. Mr. Brooks said that it was an easy affair to have hornless cattle, by shaving off the horns when they were calves.

Dr. C. T. Jackson, will preside and address the next meeting. Subject for discussion—"The cultivation of Corn and other Cereal Grains, and the most successful method of protecting them against the depredations of noxious Birds."

For the New England Farmer.

THE ELEVATION OF AGRICULTURE.

Mr. Cole:—Every middle-aged man must have observed, that within the last twenty or thirty years, farming—in this country, and perhaps in the whole civilized world—has made more rapid advances towards the goal of perfection, than in any other equal length of time. Farming has become elevated in every sense. In fact, it has outstripped many other professions; and if ever it deserved the name of "drudgery," such an appellation would now be slanderous. Professions have the power of elevation and advancement in proportion as they demand *thought;* for thought is elevating and will always command respect. Divinity, Law and Physic—the three learned professions, as they are called—rank high because their successful prosecution requires unremitted and profound thought. Callings which do not require rigid application of the mind, will not, in the nature of things, rank high unless they are lucrative, which is not generally the case. In a word, wealth and intelligence command respect, and always will, till some new principle holds sway among men—of which they have never yet had a glimpse.

The field of chemical investigation is as broad as the universe, and only partially and imperfectly explored. Although chemistry is the most abstruse and extensive of the sciences, the curious and useful facts which it develops will always make it an inviting study. Since agricultural chemistry has become generally to be applied to the cultivation of the soil, farming has made a great advance, not only in its power of augmenting the public good, but necessarily in the estimation of all sensible people. Farmers have become more thinking men than formerly; they seem to take more pride and interest in their farms—as what they study in theory they naturally feel a desire to put in practice. Indeed, the study of natural history gives life and interest to every object around us. Not only have farmers grown wiser and improved their vocation, but scientific men have engaged in the calling, and by a united effort, agriculture has been raised from its former humble position, and dignified by a place among the sciences. Agriculture, which may command the highest thought, will any one call drudgery, who would not make a drudgery of everything? True, there are many unpleasant and laborious duties to perform, but cannot the same be said of most other callings? I speak from experience, when I say that farming is generally unpleasant to country-bred young men, as they are naturally thoughtless of their true interest till years give them wisdom. Hence they flee to the city in their youth, but at a more thoughtful age a farm is a pleasant object of attention.

In still another sense besides skill, is farming vastly different from what it was in the days of our forefathers. The farmers, less than a century ago, only had to feed and clothe themselves; now they feed others while others clothe them. In this respect a great revolution has taken place, which has tended to elevate agriculture. While the ancient farmers sought only a livelihood by it, many of the present have engaged in it with an additional view of making money. Hence it is more inviting. Cities and large manufacturing villagers have sprung up with the rapid increase of population, and great demands for the product of agriculture have been made. These demands have been profitably met, and those who lived remote from a good market, have been brought near by the extensive system of railroads, which have pushed them into every part of the country.

The fostering care of government tends greatly to elevate and improve not only agriculture, but all other branches of industry; and if "agriculture is the nursing father of the State," as Vattel asserts it to be, how important is it that this great interest of a country should be attended to! It has been said of Spain, that it is the most fertile and the worst cultivated country in Europe—owing to the many restrictions and taxations which there discourage the husbandman.

With a paragraph from Vattel's Laws of Nations, written nearly a century ago, I close the subject without further comment.

"Another abuse injurious to agriculture is the contempt cast upon the husbandman. The inhabitants of cities, even the most servile artist, and the most lazy citizens, consider him that cultivates the earth with a disdainful eye; they humble and discourage him; they dare to despise a profession that feeds the human race—the natural employment of man. A little insignificant story-maker, or a tailor, places far beneath him the beloved employment of the first consuls and dictators of Rome! China has wisely prevented this abuse; agriculture is there held in honor; and to preserve this happy manner of thinking, every year, on a solemn day, the emperor himself, followed by his whole court, sets his hand to the plough and mows a small piece of land. Hence, China is the best cultivated country in the world; it nourishes an innumerable multitude of people, that at first appears to the traveller too great for the space they possess."

D. W. L.

For the New England Farmer.

CULTIVATION OF GRASSES.

Mr. Editor:—When I saw the subject announced for discussion this evening, I cast my thoughts about for some ideas pertinent to the subject. I presume you have had many more pertinent offered—but as it is the duty of every one to throw in his *mite*, I give you mine, with liberty to use more or less of it, as you may think proper. It contains nothing new—but it may present some views that have not occurred to every one. A child will sometimes propose questions that will puzzle learned doctors to answer.

The cultivation of the grasses occupies a large portion of the farmer's labor in Massachusetts. Any increase of quantity with less labor, would be an object quite desirable. On rich soils properly managed, there is no difficulty in securing abundant crops; generally proportioned to the manure applied. The question is, how can good crops be secured on shallow or moderately rich soils.

A striking instance of successful culture of this class came under my observation, within the last ten years, on the farm of the late D. P. King. The field referred to was situated on a plain adjoining an extensive peat meadow. Mr. King adopted Mr. Phinney's mode of turning over the sod in autumn, applying a full coating of compost manure, and then by the harrow and roller, inserting the seed in autumn. After several repetitions of this mode of culture, he found his best mowing land on this shallow soil. On land that used to yield a crop scarcely worth cutting, he mowed about two tons to the acre. I mention this as an experiment worthy of notice, and one affording encouragement to those who are under the necessity of cultivating soils of ordinary quality—such is more than half the mowing lands that come within our observation. Mr. King was better satisfied with this experiment than any other on his farm.

Perhaps there is no part of the earth, where more attention is paid to the cultivation of grass than in some parts of Essex county. It has come to my knowledge from careful inquiry, that 200 tons of hay are usually brought to the Boston market, by the teamsters of Ipswich. It may be that other neighborhoods yield as much, but I am not informed of any that does. It is an object with those that grow this grass, to keep their lands as constantly in a condition to be mowed as possible. For this purpose, it has been practised by some, to harrow the land after the grass is mown; and sow a new crop of seed without disturbing the sod. How far this practice has succeeded, I am not advised—I know it has been tried. I have known other attempts to encourage the growth of the grass, by the use of a *subsoil plough*, by stirring the soil without turning it over; and then applying a top dressing of compost manure. That such an experiment may be beneficial, done under favorable circumstances, I have good reason to believe. For those who wish to keep their lands constantly in grass, it may be worthy of attention. Some of our best products of hay are obtained from the lands near the sea shore, where material is collected from the beach, and spread green upon the land. The effect of such dressings upon moist lands, is to produce a constant succession of abundant crops—say from 2 to 3 tons per acre, in favorable seasons.

Perhaps there is no part of farm labor that demands more attention, than the reviving of the feed of pastures. Ordinarily, 4 or 5 acres of pasture land are appropriated to the feed of a single cow—when with a little attention, one-half this quantity would support them better. A striking instance of this kind has come within my notice, on the farm of Mr. John Stone, Jr., of Marblehead, who fed 4 cows on 5 acres, yielding an average produce of 1 1-2 pounds of butter per day, to each cow, for a period of three months. A particular statement of this dairy may be found in the transactions of the Essex Society for 1849—from which, as well as from all other experiments by Mr. Stone, much valuable instruction is to be gained. P.

February 11th, 1851.

For the New England Farmer.

THE CULTIVATION OF NATIVE TREES AND SHRUBS.

[*Continued from Page* 47.]

The Sweet Gum or Liquidamber has not, as yet, been discovered in Massachusetts, although Michaux informs us, in his N. American Sylva, that it is first seen on the sea shore, towards the north-east, between Portsmouth and Boston. We have searched the eastern part of Massachusetts to find this tree, but have not as yet discovered it.

That extensive tract of forest in the eastern part of the county of Essex, known by the name of Cape Ann woods, has been supposed by some persons to contain the Liquidamber, and, indeed we should expect to find it here, if it is to be seen, as Michaux asserts, between those two places. But after much search, it has not been found. Torrey, in his Botany of New York, says, the liquidamber is not often seen north or west of Albany, and we suspect that is about its northern limit, and if it should be hereafter added to the flora of Massachusetts, it will probably be found in that part of the State, adjoining New York. The Sweet Gum Liquidamber is so called from the Latin, *liquidum*, *fluid*, and *ambar*, amber; in allusion to the terebinthine fluid that exudes from the tree.

The Sweet Gum affords a liquid balsam, which when pure, is of the consistency of honey, of a yellowish color, of a pleasant balsamic oder, which is seldom used in this country, but has a place in our medical botany. It is exported from Mexico, and has long been in use in France to perfume gloves.

The quantity of gum produced in this country from the liquidamber is quite small, except in its most southern parts. By boiling the branches, a small quantity can be obtained from the trees, growing in the Middle States. The liquidamber is a very interesting and beautiful tree, with a height of seventy feet. It is distinguished for its dark green and shining star-like leaves, which are fragrant, when bruised, and in autumn, after the first frost, assume the most brilliant colors. It is found in moist woods and swamps, but it is said to accommodate itself to a dry soil.

The Sweet-scented Crab is a small tree, ten or fifteen feet high, and not to be found growing in a state of nature, in Massachusetts, but first seen at the north in the western part of New York, which is probably not far from its northern limits. It is an interesting tree in a garden, and is distinguished for its beautiful rose-colored flowers, diffusing a delicious odor all around, and its green fragrant fruit. It is propagated from seed, or by grafting it upon the stock of the cultivated apple tree.

The Persimon, American Date Plum, is found as far north as the southern part of the State of New York, and rises to the height of thirty feet. It is sufficiently hardy to withstand our winters, in a garden affording some protection, and produces a roundish fruit of a reddish color, very astringent, until bitten by the frost, when it becomes quite soft and luscious, like a plum. It is a dicecious tree, bearing its male and female flowers on different plants. One tree in the southern States often yields several bushels, and Torrey says the ripe fruit, after having been frozen and thereby rendered palatable, is often seen in the New York markets.

The Papaw is a small tree, ten or twelve feet in height, found in the southern part of New York, which appears to be its northern limit. It is distinguished for its long and narrow leaves, and its smooth, finely polished silver-grey bark. Its fruit, when ripe, is three inches long, and one and a half thick, of a yellowish color, and esteemed by some persons. It is said that it will grow in Massachusetts, in a sheltered garden.

The Buffalo Berry, although found in the western States, is perfectly hardy in Massachusetts, and would probably succeed farther north. It was sent from Missouri several years since, by Mr. Nuttall, to the late Messrs. Winship, of Brighton, who first cultivated it, and brought it into notice. It is a small tree, desirable in a garden from its early flowering, and in autumn for the rich clusters of red fruit completely covering its branches, of the size and appearance of currants. These berries, when touched by the frost, are palatable, and make a good preserve. The Buffalo Berry is found to be one of those few trees that are dicecious in its habits, and consequently it becomes necessary, in order to obtain fruit, to procure plants of the different sexes and plant them ten or fifteen feet apart. They can be obtained in the nurseries around Boston. The generic name of the Buffalo Berry is the Shepherdia Argentia; one other species is found in Vermont, the Shepherdia Canadensis, and was supposed by the late Mr. Oakes to be found in no other State in New England. We have it under cultivation, and do not discover any thing peculiarly interesting in it, This Buffalo Berry is found in the western States, and on both sides of the Rocky Mountain. It will grow in any soil or situation, and is produced by suckers from the roots or by seeds.

The Virgillia or Yellow Wood is a very handsome low tree found in Tennessee, with drooping raeernes of white flowers, resembling in form those of the laburnum. It is found to be hardy in Massachusetts, and prefers a light sandy soil.

Danvers, Feb. 6, 1851. S. P. Fowler.

[TO BE CONTINUED.]

Mechanics' Department, Arts, &c.

ARTESIAN WELL.

A Paris correspondent of the National Intelligencer says:—"The famous Artesian well at Kissengen, in Batavia, commenced eighteen years ago, and which it was feared would have to be abandoned as a failure, has just given the most satisfactory results. The town is located in a saline valley, nine hundred and eighty-four feet above the level of the Baltic sea. Last June the boring had reached a depth of eighteen hundred and thirty-seven feet, and several layers of salt, separated by a strata of granite, had been traversed, when carbonic acid gas, followed again by granite, was found. Finally, on the 12th inst., at a depth of two thousand and sixty-seven feet, perseverance was rewarded by complete success. A violent explosion burst away the scaffolding built to facilitate the operations, and a column of water four and a half inches in diameter spouted forth to the height of 98 feet above the surface. The water—clear as crystal—is of a temperature of sixty-six Fahrenheit, and is abundantly charged with salt. It is calculated that the annual product will be upwards of 6,600,000 lbs. per annum, increasing the royal revenue by 300,000 florins, after deducting all expenses.

TIMBER-PRESERVING WORKS.

The Rochester Democrat states that an establishment for *Payneizing* timber is to be erected in that city, and that Mr. Rice, one of the gentlemen engaged in the enterprise, is now in New York to procure the necessary machinery. The process of Payneizing is described as follows:—

The timber is first placed within the cylinder, and steam is admitted until both cylinder and timber (the former being hermetically sealed) are thoroughly heated. The steam within is then suddenly condensed by an application of cold water on the exterior of the cylinder, ejected from perforated pipes. A partial vacuum is thus formed, and a small portion of sulphate of iron in solution is thrown upon the timber from similar pipes within. A powerful air pump is then set to work and a vacuum of 27 or 28 inches is obtained. More of the solution is admitted to fill the vacuum so formed, and a force pump, with a pressure of 100 to 150 lbs. to the inch, is applied, and kept up for 15 or 20 minutes, to allow the solution to filter through the wood. The same process is repeated in order to infuse a solution of muriate of lime. The two solutions no sooner come in contact, than the one decomposes the other, forming sulphate of lime, an insoluble salt, which permeates the pores of the wood.

This method of preparing timber is in no sense an experiment. The English Government has

adopted it to a great extent, in dock-yards; and many public works in England are constructed in whole or in part of Payneized timber. For plank roads it must be invaluable, as well as in ship-building, and other branches of the mechanic arts where the chief value of wood consists in its durability.

BROWN'S HARNESS MACHINE.

Darius C. Brown, Esq., of Lowell, Mass., of the firm of D. C. Brown & Co., has, says the Boston Cabinet, been engaged more or less, for some five years or thereabouts, in study and experiments, having reference to the perfecting of a machine for making loom harnesses. Mr. Brown's machine is very simple in construction, of comparatively trifling cost, and is operated by the small power of a lady's foot upon a pedal, while she is tending it. At one and the same time, a lady tends the machine, as it is making the harness, and gives motion to its operation. It is calculated, from known data, that harnesses can be made upon this machine as good as those made by hand, and at a considerable reduction of price. The firm, now using the machine, furnish harnesses, made of Merrimac twine of various sizes, at two and one-fourth cents per forty eyes or beers. As the machine makes harnesses from twine instead of yarn, it is readily seen that it differs essentially from Vogle's machine. And though the harness is made of twine, yet the eyes are made without knots, above and below them, in this respect, resembling the harnesses coming from Vogle's machine, and not resembling those made by hand.

SMITH'S RAILROAD ALARM.

Mr. Charles A. Smith, of Batavia, has invented an apparatus for ringing an alarm bell upon railroads, by which an alarm can be given at a station, a curve or crossing, when the cars are a mile distant from the point. By this means collisions may be prevented at places where two opposite trains cannot be seen by each other until too late to check the speed. This is effected by placing a spring so that the wheels of the cars pass over it. To this spring is attached a wire which may be extended for any distance upon poles, like the telegraph wires, the opposite end from the spring being attached to a bell, which will give the alarm. A model of the invention may be seen at the store of R. P. Orchard and R. W. Whitehead, in the Waverly Block, who have become the patentees. It has been examined by many gentlemen connected with the railroads, who are much pleased with its operations. The patentees are about to put one of the machines in operation upon the Rochester and Buffalo road, a short distance west of this city. It is simple and effectual, and will no doubt come into extensive use.—*Roch. Dem.*

☞ The Flax manufacture seems likely to receive an important impetus. Mr. O. S. Leavitt informs the Tribune, that flax can be procured in the unrotted state, the very condition required for producing fine linen at least cost, for about two cents per lb. Then, by the use of his machinery, flax can be broken out for about two cents per lb. more, producing clean unrotted flax for less than four cents per lb. Consider that cotton in its raw state costs from 14 to 15 cents per lb.—*American Artizan.*

Ladies' Department.

WAS IT PROVIDENCE?

BY MISS SEDGEWICK.

Take, for example, a young girl, bred delicately in town, shut up in a nursery in her childhood—in a boarding-school through her youth, never accustomed either to air or exercise, two things that the law of God makes essential to health. She marries; her strength is inadequate to the demands upon it. Her beauty fades early. She languishes through her hard offices of giving birth to children, suckling and watching over them, and dies early. "What a strange Providence, that a mother should be taken, in the midst of life, from her children!" Was it Providence? No! Providence has assigned her three-score years and ten; a term long enough to rear her children, and to see her children's children; but she did not obey the laws on which life depends, and of course she lost it.

A father, too, is cut off in the midst of his days. He is a useful and distinguished citizen, and eminent in his profession. A general buzz rises on every side, of "What a striking Providence!" This man has been in the habit of studying half the night, or passing his days in his office and the courts, of eating luxurious dinners and drinking various wines. He has every day violated the laws on which health depends. Did Providence cut him off? The evil rarely ends here. The diseases of the father are often transmitted; and a feeble mother rarely leaves behind her vigorous children.

It has been customary in some of our cities, for young ladies to walk in thin shoes and delicate stockings in mid-winter. A healthy, blooming young girl, thus dressed in violation of Heaven's laws, pays the penalty; a checked circulation, cold, fever, and death. "What a sad Providence!" exclaim her friends. Was it Providence, or her own folly?

A beautiful young bride goes, night after night, to parties made in honor of her marriage. She has a slight sore throat, perhaps, and the weather is inclement; but she must wear her neck and arms bare; for who ever saw a bride in a close evening dress? She is consequently seized with inflammation of the lungs, and the grave receives her before her bridal days are over. "What a Providence!" exclaim the world. "Cut off in the midst of happiness and hope!" Alas! did she not cut the thread of life herself?

A girl in the country exposed to our changeful climate, gets a new bonnet instead of getting a flannel garment. A rheumatism is the consequence. Should the girl sit down tranquilly with the idea that Providence has sent the rheumatism upon her, or should she charge it on her vanity, and avoid the folly in future?

Look, my young friends, at the mass of diseases that are incurred by intemperance in eating or drinking, or in study, or in business, also being caused often by neglect of exercise, cleanliness, pure air; by indiscreet dressing, tight lacing, &c., and is quietly imputed to Providence! Is there not impiety as well as ignorance in this? Were the physical laws strictly observed from generation to generation there would be an end to the frightful diseases that cut life short, and of the long list of maladies that make life a torment or a trial. It is the opinion of those who best understand the physical

system, that this wonderful machine, the body, this "godly temple," would gradually decay, and men would die as if falling asleep.

NOTICES OF PUBLICATIONS.

From Hon. J. W. Proctor, President, of Essex Agricultural Society, the Transactions of that Association for 1850. It contains the annual address, reports of the committees, statements of applicants for premiums, assays, &c., forming a large collection of valuable matter, from which we shall make selections for publication.

From Hon. Marshal P. Wilder, President of Norfolk Agricultural Society, the Transactions of that Society for 1850. It is of the same general character as to subjects as the preceding work, and it will also receive further attention.

An Introductory Lecture at the Opening of the Female Medical College, of Pennsylvania, by J. S. Longshore, M. D. The author of this address, in his preliminary remarks, speaks very judiciously on the various *systems*, *isms* and *pathies* of the day. He then proceeds in an able and interesting way to show that the healing art should be, in part, in the hands of females. As public attention is directed to this subject, there will be a strong feeling in favor of female physicians, for this feeling is founded in reason and nature, and it must prevail as the subject becomes investigated.

The Farmer's Guide is a reprint from the popular work of Stephens on farming, with notes by J. P. Norton, Professor of Scientific Agriculture in Yale College. This work is illustrated by numerous engravings. It is very instructive. Fetridge & Co., Boston.

New Guide for Travellers through the United States, containing the Railroad, Steamboat, Stage and Canal Routes, and the Population of the different States, Territories, and principal Cities and Towns in 1850, accompanied by a map. Boston: J. Haven, 86 State Street.

Diary from Rev. Solomon Spittle. This little work illustrates the great evils from the disgusting habit of using that nauseous weed—Tobacco.

Western Horticultural Review. This is a monthly periodical of 48 pages to each number. It is very ably conducted by Dr. John A. Warder, and embellished with handsome engravings. In point of valuable matter and the execution of the work, it ranks with our first horticultural journals. Will the publisher please send us number one?

Rev. Aaron Foster's Address to the farmers of the western part of Franklin county. It is a very interesting and spirited production.

Address of Gen. Lewis Cass, before Kalamazoo Agricultural Society, Oct., 1850. This is a very able address, evincing the extensive research and close investigation of a nice observer.

ACKNOWLEDGMENTS.

From Henry A. Willis, Fitchburg, a box of Willis's Russet Apple. They originated in Sudbury, Mass., on the farm of Hopestill Willis, hence their name. Mr. Willis says that this variety is a good grower and good bearer, but it bears mostly in even years. They generally keep till April or May. This apple is of medial size; rather flat; very fair in appearance; of a yellow russet color; the quality is very good, having a pearmain flavor.

From Rev. L. Matthews, Cornwall, Vt., specimens of fine apples; rather large; roundish; yellow with red cheeks. This fruit is very fair and handsome, and the quality good. Such fruit would bring a good price.

From Edwin Stanton, Essex, Vt., a box of fine apples. The tree bears every year, and the fruit keeps till June. This fruit is large; roundish-conical; bright greenish yellow, with numerous large brown specks. It is of a mild pleasant flavor. The fair appearance of this fruit, and its good quality, would make it a good article in the market. We do not know the name.

From John Wilson, Bradford, Vt., russet apples, a native of that place. It bears largely every year, and the fruit keeps into spring. The form of this fruit is the same as the American Golden Russet; the size is smaller; the quality is good, but not quite equal to the Russet, which is noted for its tenderness and excellent flavor.

From John Raynolds, Concord, (one of the publishers) some fine specimens of Baldwin Apples; also English Russet Apples; but this is not the English Russet of the books, but a russet from an English tree set in Concord more than 100 years ago. This fruit is large; roundish, slightly conical; mostly brown russet, and occasionally patches of yellow, and red or scarlet, seldom a red cheek. The flesh is very tender, mild and pleasant.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

The Farmer is devoted exclusively to Agriculture, Horticulture, and their Kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office

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☞ Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year. ☜

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, MARCH 15, 1851. NO. 6.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

HOT BEDS.

The preparation of hot beds is a very important part of the market gardener's system, for by them he is able not only to bring several species of plants to perfection, even in winter, and early spring, but he starts a great many plants that are to be perfected in the open air. In some cases a small space in a hot bed will be sufficient to start a large number of plants, the cost of starting which is a mere trifle compared with the price of the crop in the market. Therefore the gardener can well afford to incur the expense of this artificial mode of forwarding plants, and watch them with constant care, for weeks, and even for months, when necessary.

The mode pursued by the market gardener will answer, on a small scale, for the farmer, or any one who would grow vegetables for his own use. A friend has suggested that he can give a good method of making a farmer's hot bed, without glass and with very little trouble. He will oblige us by sending it soon. The hot bed system of forwarding plants, and of perfecting many in the cold season, is practised to a large extent in this vicinity. Some commence their hot beds as early as November, and perfect plants which they have started in the open air in the fall; and they keep hot beds in operation through the winter and spring. But we would not advise a person who has no experience in producing artificial heat for plants to commence early in the season, but begin in the spring and gain experience before going into the business extensively, and in a season of difficult management for the unexperienced.

Generally a location slanting to the south has been considered most eligible; but experience dictates that the slope should be rather to the south-east, to take the morning sun. A tolerably steep slope is best, but a level surface will answer for the location, and many are under the necessity of using such. A hill or mountain on the back side is an excellent natural barrier against cold winds, but for the want of these it is desirable to have a close wall or fence of good height.

No matter as to the soil of the situation chosen for hot beds, as a soil must be made, and suitable kinds for the different plants. For instance, for radishes, sand or sandy loam; for lettuce, a rich soil with a good portion of well decomposed manure.

A good size for sash is six feet long, by three feet wide. The length is from front to back, and a long continuous hot bed is made, and these sashes are laid by the side of each other to cover it. Each sash has four small bars running lengthwise, which gives five rows of glass, six inches wide. There is no cross work, but the panes of glass are lapped, and as the sash slants considerably, the water runs off, as on a shingled roof.

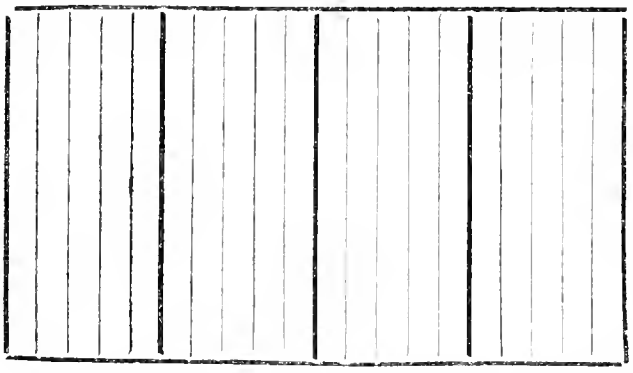
The glass generally used is six by four inches. This is less liable to break than a large size. Some use a still narrower size, remarking that notwithstanding the increase of bars in such case, there is heat enough. But a narrower size would cost more both for sash and glass.

In making a hot bed, it is better to dig down so as to have it mostly below a level with the surface of the earth, as it will be less liable to be affected by the changes of weather. The frame of the hot bed should be made of planks or stout boards; and the front and back should be just far enough apart for the sash to cover them well. The front plank should be about six inches lower than the back. This will give a descent in the glass of one inch to the foot.

The pit in the frame should be about two and a half feet in depth. When the hot bed is made in winter there should be one and a half feet of clear manure placed in the bottom; and this manure should begin to ferment before put into the bed, and put in hot. As the weather grows milder, one foot will be sufficient. On this should be placed a soil and manure adapted to the plants to be cultivated, as we have already named,

and the depth depends on the kind of plants to be started. For lettuce, about six or eight inches of soil; and for radishes, eight to twelve inches.

A bed with 20 sashes is long enough for convenience, on account of crossing over. The following rough sketch, made with the printer's materials, represents a bed with four sashes. The large lines represent the sash, the smaller ones the small bars between the sash frames.



In severe cold weather it is necessary to cover hot beds with straw mats; and yet in the coldest weather the beds must be generally opened a little daily to let off the foul air, and sometimes to allow the superfluous heat to escape. The greatest danger is from too much heat, especially when there is a hot sun and the beds fresh; with the heat from below and from above, the plants are liable to be killed suddenly for want of air.

In beds for winter use, it is necessary to put hot manure down on the outside of the frames of the hot bed, else it will become comparatively cool, near the sides.

The digging of the pit, and the filling in of manure and the soil on it, should be so regulated that when the whole is completed, the glass in front will be about four inches above the soil; and the surface earth in the hot bed should have a gentle inclination to the front. If the glass is placed higher, there will be less heat, and a deficiency in front, which is the cooler part.

We are informed that Mr. Cephas Brackett, of Brighton, manufactures sashes for hot beds; or furnishes the sash glazed. The usual price of sash, of the dimensions we have given, is 80 cents each. The cost of glass is from $1,50 to $6 for 100 square feet, according to quality. Tolerably thin glass answers well with care, and it is light to handle.

TIME FOR TOP DRESSING GRASS LANDS.

Mr. James Howes, Dennis, inquires whether it is best to draw and spread manure on mowing lands in spring or fall. A great deal has been said and written on this subject, and as different practices have resulted from different opinions, numerous experiments have been made.

The question seems pretty well settled, that the fall is the best time for top dressing grass lands. The manure should be applied so late that there will be but little heat to induce fermentation and carry off the fertilizing gases. The manure being applied in the fall, it becomes fine and well decomposed by the frost and storms, without much loss, as the season is cool, and it soon becomes available to the plants, and is not liable to waste from the hot sun late in spring and summer.

But in applying manure in the spring, it frequently becomes late before the land is firm enough to admit of carting the dressing, and the most suitable season for the preparation of the manure, after applied, to render it available to the crop, is passed before it can be applied in the spring, and before the manure becomes well decomposed, we have hot sun and lack of rain, and much of the fertilizing properties are wasted on the air, or the manure becomes dry and hard, and so remains through the summer.

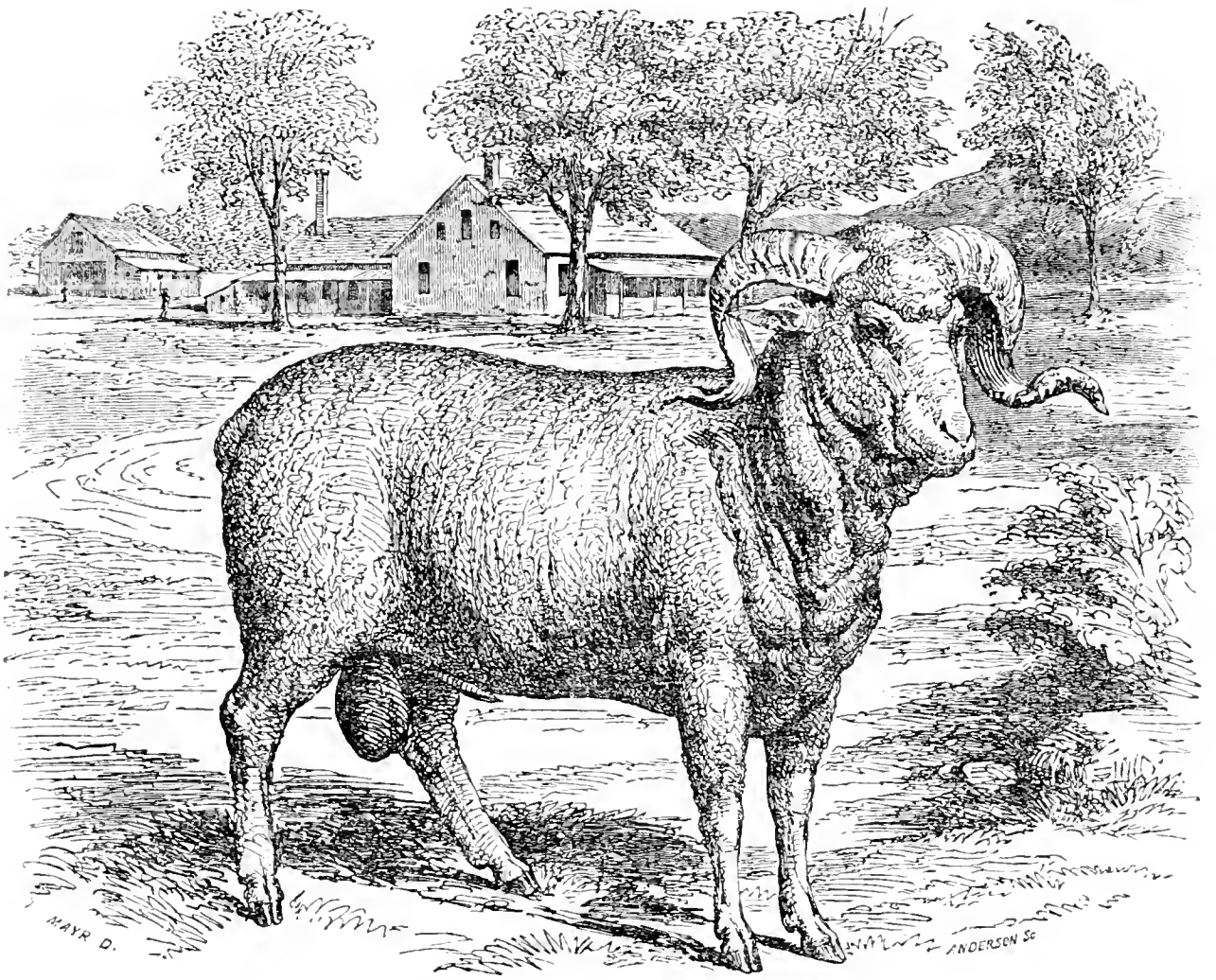
A few farmers have contended that the best mode of application is to haul the manure on the land late in the fall, and drop it in small heaps, and spread it as early in the spring as it can be done. The object is to prevent waste by washing. We have practised this mode with good success, on rather wet lands, where sometimes from heavy rains the water would flow over the land, and in receding would carry off the manure in solution, if not in a body. Whether it is desirable to pursue this course on lands not liable to wash or to be overflowed, we cannot tell, but we offer the subject for consideration.

In England, after the experience of ages, it is determined that the best season for top dressing grass lands, is immediately after the crop of hay is taken off: but that is a country of more rain and less hot sun than our own. We have known seasons here of frequent rain, and less sunshine than usual after haying, and manure that was applied immediately after the crop was removed was soon protected by a luxuriant second crop of grass; and in such seasons, this period of applying manure has proved to be the best.

CELERY.

We are requested to quote the prices of celery. We would reply that there is but very little of this article sold in this market, and the prices are transient, varying every few days. It would be like quoting the prices of cucumbers, melons, and other transient vegetables and fruit. If we collect the prices one day, and send them to our subscribers the next, the prices would be very liable to rise or fall 50 per cent. before they could bring their produce to the market.

☞ A new building material has lately been introduced into Pottsville, Pennsylvania. It is a brick fifteen by thirty inches, so made as to promise almost equal durability of stone, at one-third the cost.



PREMIUM BUCK BONAPARTE.

Bonaparte.—The best fine wooled buck exhibited at the Fair of the American Institute Oct. 11, 1849; the property of S. C. Roe, Esq., Chester, Orange County, N. Y.

The above cut represents Mr. Roe's prize buck Bonaparte, which received the first premium for fine wool, a silver cup. It was bred by S. W. Jewett, Esq., of Weybridge, Vt., from a pure bred merino ewe which has sheared in six annual fleeces, thirty-six and a half pounds of wool, well washed upon the back.

Bonaparte was sired by Napoleon: the property of A. L. Bingham and S. W. Jewett. Napoleon was bred by John A. Tainter, from a ram and ewe imported by him from France in 1846. Napoleon's first fleece clipped in May, 1848, at fourteen and a half months growth, was 22 1-4 pounds; and his second fleece, cut in June, 1849, at thirteen months' growth, was 23 1-2 pounds; in 1850, at twelve months 23 pounds. The aggregate of his three fleeces weighed 68 3-4 pounds of unwashed wool.—*Copied from Transactions of American Institute, for* 1849, *for N. E. Farmer.*

☞ A small farm, well tilled and manured, will give a greater profit than a large one with the same labor and manure.

PEAT CHARCOAL.

In reference to some articles which we have published on the utility of peat charcoal for manure, we have an inquiry as to the mode of making it, and whether it is burned in the same way as wood when it is converted into charcoal.

The article which we published, to which reference is made, was doubtless from a foreign paper. We have not known of any cases of making peat into charcoal, yet peat is used extensively in this country for manure. It is dug and exposed one year or more to the various changes of the weather and to frosts, which tend to decompose it; and then it is generally made into compost with animal manure, or used in the barn-yard or barn cellar, where it absorbs the liquid manure and becomes decomposed, and the acid which abounds in peat becomes nutralized by the alkaline salts in the manure. When animal manure is wanting, after exposing the peat for decomposition, mix with it lime or ashes, which will destroy the acid, and aid in the decomposition and preparation of the peat for manure. Can any of our readers communicate the mode of making peat charcoal, and the advantages, if any, from it?

SEVENTH AGRICULTURAL MEETING

At the State House, Feb. 25th, 1851.

Dr. Charles T. Jackson in the Chair,—Subject, "Indian Corn and other Cereal Grains."

Dr. Jackson said that he would call the attention of the meeting to the structure of a grain of Indian corn, *Zea maze*. This grain is a native of this country, and it is cultivated very extensively. It belongs to the class of grasses. The silk of corn is the styles, each thread coming from each kernel of corn. The polen or dust falls from the spindle and passes through the silk to the grain. If you cut off or tie up the silk or spindle, there will be no grain.

He had not time to enumerate the different varieties of corn, which were very numerous. An analysis of corn is not reliable for purposes of practical utility, unless the variety is named, as there is a great difference in different kinds of corn.

Dr. Jackson then called the attention of the meeting to figures of various grains of corn, showing the proportion of gluten, starch, and the chit, which abounds in phosphates. The Tuscarora corn was nearly all starch. This is used mostly in its green state. The chit of this corn is larger than usual. He then directed attention to the White Flint corn, considerably cultivated in Rhode Island. A large part of this, on the outside of the starch, consisted of gluten, which abounds in oil, hence it is excellent for fattening. This variety had a considerable portion of starch, and the chit is less than that of the Tuscarora. The Pop corn consisted almost wholly of gluten, hence its snapping properties. When it becomes heated the oil explodes and passes off in gas. One barrel before popped makes 16 barrels. The Rice corn contains more gluten than any other variety, and it is used only for popping. Some kinds of it make 25 barrels from one, by popping. Those kinds of corn that contain a large portion of gluten keep much better than those that abound in starch. As the potato, from which starch has been made, is failing, we must rely on corn to supply its place.

Corn abounding in gluten, or oily matter, is not good for horses, nor for man. In making bread of it, it becomes necessary to add rye meal, that there may be sufficient starch to induce fermentation. For extemporaneous cooking, such as Johnny cakes, flapjacks, &c., Tuscarora and other kinds composed mostly of starch are the best. In answer to a question, Dr. Jackson remarked that popped corn was nutritious and easily digested. It was a mistaken notion that it would swell in the stomach, as it was swelled to its fullest extent in popping. As corn grows most naturally, starch abounds more in corn as we proceed to the South, till we get into South America, where it is about all starch; and as we proceed North, the gluten becomes more abundant. There is a large quantity in the Canada corn.

Indian meal exported to England becomes musty, and when the grain is kill-dried, it becomes bitter, and it is not well ground in England. A gentleman of this country sent to his friend in England, corn in ears, and it was ground in a suitable mill, and the bread and other dishes made from the meal were much admired. With proper management, we may export Indian corn, or meal, to a large extent. A great deal of alcohol is made from corn, but it is mostly used in the arts—in preparations of burning fluid, of vinegar for the preparation of white lead, &c.

Dr. Jackson then proceeded to the consideration of growing of Indian corn, what manures were required, and what the plant took from the soil that was not returned to it, when the crop was sold off. He showed by the analyses of this grain, that it contained large proportions of the phosphates of lime, magnesia, and potash. In all analyses there was a large portion of phosphoric acid. This shows what ingredients should abound in the manure which we apply to the soil. Bones contain a large portion of phosphorate of lime. It is better to dissolve them in sulphuric acid, and then make the manure into a powder by adding ashes.

Vegetables possess the exclusive power of drawing nutriment from the soil, and preparing or manufacturing it into food for animals and the human race. They even convert stones into food. The phosphates are the most important ingredients in our manures. They abound in barnyard manure, and in Guano. The liquid manure from an animal is worth as much as the solid manure. The better way is to add substances to absorb the liquid manure, and apply it to the soil instead of the liquid form. By preparing one part of plaster to 19 parts of peat, a large quantity of liquid manure may be absorbed and rendered a solid portable substance. He would use lime as a decomposer. When added to right soil, it rendered it inodorous, but it should be covered with peat to preveut escape of ammoniacal gases.

Hon. M. P. Wilder stated that in regard to the use of the phosphates, Prof. Mapes analized the soil of a piece of land that would not produce corn, and he found it deficient in phosphates, which he supplied in a cheap manner, and then he obtained a large crop of corn from that land. He thought that with skill in manuring, we might raise wheat in this State with profit. Col. Wilder then presented for distribution several small packages of the Troy winter wheat, which he had received from the Patent Office; he also read an account of it, showing that it was a hardy and productive va riety. [We have some of this variety from the Patent Office, which we will give to any who are disposed to try it.]

Hon. Mr. Brooks, of Princeton, read a paper

which he had prepared, showing the profit in raising corn in the Eastern, Middle and Western States, and also the profit when it was converted into pork, allowing four pounds of corn to make one pound of pork; and it appears that the greatest profit, per acre, whether the grain was sold or converted into pork, according to average prices, in different sections, was in the Eastern States. Mr. Brooks remarked that we could also raise wheat in New England with as much profit as in the West.

Rev. Mr. Sanger, of Dover, who was one of the committee on grain crops of Norfolk county, showed from his observation that good crops of corn and wheat were raised in that county.

The president announced that Hon. Amasa Walker, Secretary of State, would preside at the next meeting and open the discussion. Subject,—"Profits of Farming."

On motion of Rev. Mr. Sanger, voted that the thanks of the meeting be presented to Dr. Jackson for his very valuable and instructive lecture.

Voted that the meetings in future commence at half-past seven o'clock.

ISABELLA GRAPES.

We have an inquiry as to the management of the Isabella Grape so as to make it profitable; complaint is made that the fruit rots and falls. This rotting and falling of Isabella grapes is peculiar to the kind. It is too late for our climate, seldom ripening well; and it is also very liable to a blast which destroys the foliage, and then the fruit rots and falls. In one village, in this vicinity, there were in our opinion 100 bushels of Isabella grapes, last year, and the whole of them not worth so much as one peck of good ripe fruit.

A warm location will promote the ripening of grapes, and a sheltered place, as in a city, village or forest, will guard them, in some measure, from the blast, which generally comes in what are called *out* winds; or those blowing from the water. A hill, mountain, or forest, or any other barrier on the south-east, in this region serves, in some measure, as a protection against blasting storms.

BONES FOR MANURE.

In answer to various inquiries on this subject, we would remark, that Ruggles, Nourse, Mason & Co., are agents for the sale of wet bone, and they generally have it on hand. This is the sawdust, produced by sawing bones in water, where they are manufactured into various articles. It is drained and partially dried, and then packed into barrels and sent to market. As the saws with which the bones are cut up are very rapid in their revolutions, this preparation of the bone is very fine.

In Roxbury, Mr. Nahum Ward has a mill for grinding bones, and he probably has a constant supply of crushed bones. As to the crops to which bones should be applied, they have been used to only a small extent in this country, and we have but few reports on their effects. In England bones are used more for the turnip crop, than for any other. Some years ago, about twenty-five bushels were used to the acre, and this was considered equal to a moderate dressing of compost manure. For a few years past, the farmers in that country have generally practised dissolving bones in sulphuric acid, and about one-fourth part as much is used to the acre. When dissolved, they are in so fine a state, that they are readily available to the plant; but when crushed, the largest pieces are some years in decaying and becoming food for plants.

In burning bones a considerable part of the fertilizing properties are destroyed or driven off; but we cannot say what proportion.

SUBSOILING FOR ORCHARDS.

We have an inquiry whether it will pay the cost to subsoil the land for an orchard on clayey hills. We think that on almost every soil, excepting low wet lands, where the trees should be set on the surface, that subsoiling for trees will be profitable. Some roots run down and draw up nutriment and water from the subsoil; and there is a great advantage in having the soil well pulverized so that the roots can penetrate it freely. The cost of subsoiling an acre is small, but we cannot go into an exact estimate unless we have the price of wages where the work is to be done.

A good team of four oxen and two hands will subsoil nearly or quite an acre a day, if the soil be favorable. As to the kind of fruit trees that will be most profitable, we cannot answer definitely so general a question. To decide on a subject of this nature, it would be necessary to know to what market the fruit is to be sent, and then learn what kinds are most cultivated, in order to cultivate those fruits to which but little attention is paid.

DOMESTIC PRESS.

This neat little machine consists of a frame, occupying not more room than one square foot, and a tin cylinder within the frame, which holds a few quarts, with holes on the sides at the bottom. Into this cylinder is placed whatever is to be pressed, and a cover or follower is put in and pressed down with a screw. It is very convenient for pressing various kinds of vegetables, and it will be found a valuable addition to the kitchen utensils and machinery.

This press is manufactured and sold by Wm. R. Fuller & Co., South Canton, Mass. Sold also by Ruggles, Nourse, Mason & Co., Quincy Hall, Boston. Price $1.

For the New England Farmer.

GRASSES FOR PASTURE.

Mr. Cole:—The remarks of your correspondent in the last No. of the "Farmer," on the "Cultivation of Grasses," are illustrative of the necessity which the practical farmer is under of bestowing more attention to this important branch of agriculture. The fact that four or five acres of pasture is required for the support of one cow, very strikingly proves that bad farming in respect to pasture land is worse than no farming at all, since an equal breadth of uncultivated meadow, with its wild indigenous herbage, will afford as much nutritive food for grazing animals as many fields that have come under the so-called improvements of modern culture.

Ten acres of good nutritive pasture, is better than twenty acres of bad; for while the animals increase in weight on the one, they diminish in weight on the other; and a pasture which is merely sufficient to keep animals alive, is insufficient to sustain animals that are daily producing fatty substances, in the shape of milk and butter. In some kinds of grass the quantity of nutritive matter is small compared with others; and many plants which abound in our pastures contain an excess of saline matter which is highly injurious to cattle and sheep, and when eaten by them in any considerable quantity, render the animals subject to disease. The following extract from an accurate observer on this subject will serve to illustrate this fact, and many similar cases have no doubt come under the observation of your readers. They tend to point out the importance of a mixture of such grasses as possess some difference in the qualities of their nutritive matter, and also show that the bitter extractive is efficacious in correcting the over-succulency or laxative nature of green food, without the aid of dry vegetable matter.

"Two fields were sown down for pasture; one with white clover only, and the other with white clover and a variety of the natural grasses. The two fields were depastured with sheep. In the field of white clover, a considerable quantity of the common cocksfoot grass grew on the edge of the fence; from its very unfavorable situation, it was of very harsh quality and consisted almost entirely of culms. In a few days the sheep went to this grass and ate it down entirely, though there was a profusion of the white clover. In course of time the sheep became affected with the disease termed *red water*, of which several died. But in the adjoining field which contained the natural grasses, cocksfoot grass, rough stalked meadow grass, rye grass, foxtail grass, and white clover, the sheep were not affected with that, nor any other disease; and they even left untouched the stems of the cocksfoot grass, which were here of a more succulent nature than those on the edges of the other field, which were so greedily devoured by the clover sheep."

It may here be observed, that if the hard stalks of the cocksfoot in the clover field had been in sufficient quantity, they would most probably have prevented the disease from attacking the sheep; but this could not have been by virtue of the *dry fibre* in the culms only, because the adjoining field where everything was contrary to disease, the sheep rejected the culms altogether. The dry or mechanical action of the culms was here wanting—yet the animals continued healthy, and fattened, because the bitter extractive was in greater proportion to the leaves or herbage, than in the culms or stalks of the grass, which they rejected, and proved also beneficial, though combined with succulent food, which could have nothing of the action of the dry hay, or straw before mentioned.

Almost every farmer has observed the various feeding properties of different fields, and resulting from some cause for which he finds it difficult to accounts. I have known a pasture field, where cattle and sheep could not graze for six days successively, without becoming diseased, but when turned into another field apparently similar, they quickly recovered. The only cause of this extraordinary circumstance, was a probable deficiency of bitter extract and saline matter, which serves the purpose of preventing, to a certain extent the fermentation of the other vegetable matters in the stomach, or in modifying or assisting the functions of digestion.

Many facts might be cited to prove the propriety and benefit of having a variety of the pasture grasses both in hay meadows and pasture fields. The nutritive powers of some are so very small as to be unworthy of culture, or even existence in a pasture, as the Aira Cæspitosa (Tufted hair grass, or Hassock grass of some localities,) the Hordeum Murinium, (Mouse Barley grass,) and various others, which are untouched even by the half-starved animals that graze by the way-side. Some are deficient in nutritive matters, and contain an excess of bitter extractive matter, as some kinds of the Tyme grass; some others may be regarded as nothing better than troublesome weeds; and the only question with the farmer should be, how to exterminate them; for instance, the different kinds of Holcus, or Couch grass, all of which are impoverishing and troublesome weeds in a pasture; and on nearly all light arable land, should be thoroughly eradicated by cropping for a number of years, otherwise the pasture will become worthless, and the fertility of the land become exhausted.

Another important consideration in regard to pasture grasses, is the various periods of their productiveness and maturity. Grasses, like all other vegetables, have their regular periods of vegetation, maturity and decay. Some species of grass are annual, and arrive at perfection in one year, and then die away. As different species of brome grass, foxtail grass, rye grass, oat grass, &c. Other species, in two or three years, attain to that degree of perfection which they never exceed; as perennial rye grass, rough meadow grass, meadow oats tail grass, tall oat-like soft grass, round cocksfoot grass, and others. And some few require more than three years to bring them to perfection. Among these may be mentioned the Meadow Fescue—Meadow Foxtail—Meadow Barley grass—Smooth Meadow grass, and Meadow Oat grass.

The grasses which compose the finest natural pastures are about twenty in number. Many of our pasture meadows contain twice this number of various species of plants; but many of them do not constitute any available food for cattle and sheep, and many more can only be considered as impoverishing weeds. If the best natural pastures be examined at the various periods of the season with care, they will be found to consist chiefly of the following plants:—

Alopecurus Pratensis, (Meadow Foxtail grass.)

Dactylis Glomerata, (Round Cocksfoot, or Orchard grass.)
Festuca Pratense, (Meadow Fescue.)
Phleum Pratense, (Meadow Catstail or Herds grass.)
Anthoxanthum Odoratum, (Sweet Vernal grass.)
Holcus Avenaceus, (Tall Oat-like soft grass.)
Lolium Perenne, (Rye grass.)
Bromus Arvensis, (Field Brome grass.)
Poa Annua, (Annual Meadow grass.)
Avena Pratense, (Meadow Oat grass.)

These afford the principal part of the spring and also a considerable portion of the summer produce.

Avena Flaveseens, (Yellow Oat grass.)
Cynosurus Cristatus, (Crested Dog's tail grass.)
Festuca Duriuscula, (Hard Fescue grass.)
Poa Trivialis, (Rough Stalked Meadow grass.)
Poa Pratensis, (Smoothed Stalked Meadow grass.)
Trifolium Pratense Perenne, (Perennial Red Clover.)
Trifolium Repens, (White Clover.)
Festuca Glabra, (Smooth Fescue grass.)

These yield the principal productive pasture during summer and early part of autumn.

Achillea Millefolium, (Yarrow.)
Agrostis Stolonefera, (Creeping Bent grass.)
Agrostis Palustris, (Marsh Bent grass.)
Triticum Repens, (Creeping Wheat grass.)
Lotus Major, (Birdsfoot Trefoil.)
Medicago Lupulina, (Black Medick, or Nonsuch.)

These vegetate with most vigor in autumn.

From the beginning of spring till the end of autumn, there is not a month but what constitutes the particular season of luxuriance of one or more of these grasses, and hence proceeds the constant supply of succulent and nutritious herbage throughout the whole of the season; a circumstance which never happens in artificial pastures where the herbage consists of two or three kinds of grasses only.

But besides these, there are, as I have said, various other plants, which are generally left untouched by the animals, so long as the herbage is good and abundant; but when the more palatable herbage becomes scanty and bare, they eat from necessity many plants which they would not eat from choice. And when the culms of the ripened grasses are all hard and dry, they eagerly devour anything that is succulent, though such plants are frequently productive of disease.

Respectfully yours, L.

For the New England Farmer.

COLORS IN PAINTING HOUSES.

S. W. Cole, Esq.:—Dear Sir,—Trusting you will forgive an humble friend and subscriber for taxing your patience and good humor, by addressing a few lines to you, which may not be put together in as readable a form as is desirable, I take the liberty so to do.

My object in writing at this time is to enter my protest against the custom of painting houses black, brown, yellow, or any of the other thousand and one unsightly colors which have become so fashionable in the vicinity of Boston within a few years The prevalence of this custom betokens—not only in my humble opinion, but, I doubt not, in the opinion of a large number of your readers,—a lamentable want of good taste in the owners of many of our cottages, country seats, &c., which otherwise would tend to beautify the hill-sides, plains and vallies of eastern Massachusetts. But for this bad taste in regard to color, on the part of the proprietors of these dwellings, how beautiful and inviting would be their appearance, where now a shade of gloom hangs around them, that renders them, in an external point of view, dismal and repulsive.

This deplorable fashion, now so much in vogue, was, I believe, borrowed from old England; and, although she probably has other customs far worse than this which she would be quite willing to lend us, I sincerely hope that we shall not only refuse to adopt them, but we shall soon discountenance the practice in question, that has already robbed so many of our thriving villages of much of their beauty, and that the day is not far distant when *all* our dwellings of wood, of whatever name or situation, shall be dressed in *coats of spotless white!*

Several years ago, when I was a subscriber to the "Boston Cultivator," and you were in the editorial chair, an article appeared in that paper, under the editorial head, which (if I recollect rightly) spoke in strong terms against the practice of painting our dwellings white, and argued at some length in favor of the divers colors to which I allude. Two of the reasons given in that article, why colored paints should be substituted for white, were the following, viz:—Firstly, "They are more durable than white." Secondly, "They are not so injurious to the eyes." Now this may be all true, but allowing it is, I should still be decidedly opposed to the change, notwithstanding its truthfulness. On precisely the same ground, and with equal propriety, perhaps, a gay village belle might promenade our streets, or attend the fashionable parties, balls, &c., arrayed in a dress of shaggy "Canada grey," of the thickness of a board; and every one, I think, would acknowledge that a dress made from such a substantial article would be much more durable than the light fabrics usually worn by young ladies, and I very much doubt whether the admiring eyes of dashing beaux would be very seriously injured by gazing at a "lovely creature" thus bedecked, e'en though she were a *dazzling* belle!

Having given another's reasons why colored paints *should be* used on our buildings, I will, with your permission, Mr. Editor, tell a little story by which the reader may learn why, in the opinion of a worthy deacon, it *is* used. At a business meeting held some two or three years since, in a certain school district, not a hundred miles from Boston, it was voted that the school-house in said district should be painted, and Deacon —— was accordingly chosen to employ the painters, and see that the painting was done as it should be; whereupon the Deacon arose, and in a short speech, desired to be instructed in regard to what color he should have the building painted. Said he, "I want to get it painted the color that will suit the majority of the inhabitants of the district. Perhaps if I should go and get it painted my favorite color, it wouldn't suit another man here, and then, in such a case, it would occasion sneering remarks at my expense. Supposing I should paint it black, for instance, they'd say, 'there, he's been and painted it black; I guess he's mourning for his sins.'" By this it appears that Deacon —— considers that to have a house painted a dismal color, is proof positive that its owner is "mourning for his sins." Now it is all very well for a man to mourn over his sins, but

I think he can do it as acceptably in a white house as he can in a black one. But enough of this.

The decidedly superior beauty of white houses in comparison to colored ones, outweighs all the arguments that can be brought against them, and I hope that many, very many, will ere long be made to see and acknowledge that they have sadly marred the beauty of our New England villages, and apply that magic remedy—*white paint*—which will transform their dismal-looking dwellings into beautiful abodes that will ever greet both its inmates and the passing stranger with a smile of welcome.

Winchester, Jan. 30, 1851. J. W.

Remarks.—We have not time to examine all our previous remarks on this subject; but we should not recommend black, excepting in a few particular cases. So we think our correspondent, on this point, has been combatting a mere shadow of his own creating. This will suffice for the story of the Deacon; and as to the dashing belle, a good substantial dress, in cold weather, would be far more appropriate than a flimsy one, and it would commend her to a man of sense.

We are decidedly opposed to painting so many houses white, without any regard to the size, the style of building, the purpose of the building, the location, or the surrounding objects. The universal rage, that has been in years past for white, without any regard to circumstances, shows a want of good taste, as much as white shows a want of any color.

Now we would ask the reader if there is any beauty in white. It is a mere blank, and no more beautiful than a blank in a lottery is desirable. Colors are beautiful; some alone, and others when blended. But white is a destitution of all colors, and can only be admired for its neatness and purity, having a mere negative excellence, being preferable to a color in bad taste.

In all the beauty of nature, which is great and various, what have we that is extensive that corresponds with a white house, or a row, or village of white houses. Snow is the only thing. Now let a person of good taste travel when the earth is covered with snow, and he sees the hills looming up like white houses, and the plains covered with white; how soon will he tire of the monotony of the scene which had no beauty even in the beginning.

When there are many houses, as in a town or village, we would have a variety of colors. We would not paint every building the same color, from the magnificent churches down to the small schoolhouse, and even the still smaller martin-house. We would not paint a house of a dark color, when it was almost wholly shaded with trees, nor would we paint a house white unless we had a good lot of well arranged trees, some evergreens, to break the glare of a colorless paint. In some cases white, from its glare and prominence, forms a beautiful contrast with the surrounding green foliage. The beauty is in the contrast, not in the white or the green.

Some small houses might look pretty with a warm lightish tint, that would be very improper for a stately public edifice; and some rather dark color might be appropriate for the latter, which would give to the former an unsightly and sombre appearance. Besides, the want of beauty in so much white painting, it is dear and transient. To keep a house well painted with white for a course of years, will cost more than to use colored paints generally. Some colors cost more than white, and others less; but colored paints are more durable.

If houses are painted various colors, without any regard to the circumstances which we have named, and various others that should be taken into consideration; then, indeed, J. W., and every one else, who travels about the country, or at home, has the the disagreeable objects in his view, has reason to complain. This is a very interesting subject, in which too little good taste has been consulted, and we should be pleased to have opinions on it.

We are aware that some philosophers consider white a compound of all colors, as presented when they are all rapidly revolved before the eye; but they appear whitish, not white.

For the New England Farmer.

PLOUGHING IN OATS.

Mr. Editor:—As the season is fast approaching when farmers should be thinking about their work for the coming season, I would respectfully solicit your opinion, as to the best method of getting in *Oats*, where the land is both level and smooth.

Some in this vicinity recommend ploughing them in; but the question in my mind is this; is it doing justice to the land, to plough it as shoal, as we should be obliged to, in order to have our seed at a proper depth from the surface?

I am a new beginner in farming, and have had no experience in raising grain; therefore a few hints from the experienced in regard to the above will be highly gratifying to

Yours, &c, J. Dimon.

Wakefield, R. I.

Remarks.—In sowing the oats before ploughing, and then ploughing them in, would not pulverize the soil sufficiently. A great deal depends on the frequent stirring of the soil, and its thorough pulverization. With due attention to this subject, less manure will be required, and as this article is generally scarce, it is best to economise as to its use, and render the soil more fertile by frequent ploughing, harrowing, and cultivating.

Another objection to ploughing in oats is, that the furrow for this purpose must be shallow, else the grain would be buried too deep; of course the ploughing would not be so deep as would be necessary to produce a good crop. A little extra labor in the preparation for the crop would be more than repaid by the superior yield.—Ed.

HOUGHTON'S SEEDLING GOOSEBERRY.

This valuable Gooseberry was raised from seed by Mr. Abel Houghton some years ago, when he resided in Lynn. It is a cross between our native Gooseberry and some foreign kind. It resembles our natives in its growth, hardiness, and superior quality of the fruit.

The berry is rather small as may be seen in the engraving; oval; the skin thin, reddish brown; the flesh fine, very tender, sweet and of a fine delicious flavor. It is a very superior Gooseberry for the dessert, it is also excellent for cooking, and it is in good condition for this purpose for about four weeks.

As a grower, it excels by far all other kinds that we have cultivated; and as to bearing, every season, nearly all the growth of the previous year is covered with fruit. Last year we had from one to two quarts of fruit, on bushes that had been set the previous year. A plant well set in the spring, in a good soil, will make a large growth the first year, and the next year it will be loaded with fruit.

This variety not only excels in growth, bearing and quality, but it is free from blight which is the destruction of almost every foreign kind cultivated in the country. We know of some gardeners, who, having become acquainted with Houghton's Seedling, have excluded every other variety from their grounds. And we have cultivated a select list of foreign kinds, and their fruit has all blasted, while the Houghton has yielded an abundance of fine fruit. We regard it as not only superior to any kind of foreign gooseberry, but worth far more than all of them for this country of hot summers.

The following article on this subject is from Col. Henry Little, of Bangor, Me., well known to horticulturists for his intelligence and zeal in regard to fruit. We copy from the Bangor Courier.

Very much has been done within a few years past in this vicinity to introduce valuable fruits, and whoever visited the Horticultural Exhibition of ours held in Bangor in September last, could perceive the success that has crowned the efforts of our citizen in its cultivation. Among other fruits 50 of the most valuable varieties of the Gooseberry were imported from England by our firm in 1847–8, and they have been found highly valuable in point of flavor, large size and productiveness. In some locations a few of the varieties have mildewed, and in others they have been entirely free from it. It is said that the mildew may be prevented by covering the ground with hay or straw, or what is still better meadow moss, say three or four inches deep —or salt hay.

After experimenting with 40 varieties for four years part, I have found the *Houghton* decidedly the most valuable, as it never mildews, it exceeds any other in productiveness, a very rapid grower, and is very easy to multiply, for unlike all others in its habit it is inclined to run on the ground like a vine. Wherever the branches are covered with earth the layers take root very readily. The berries are about the size of a cranberry, but of first rate flavor. This variety headed the list of ten which were recommended for general cultivation at the American Pomological Congress, held in New York, in October last.

EIGHTH AGRICULTURAL MEETING

At the State House, March 4, 1851.

Subject, "Profits of Farming."

In the absence of Mr. Walker, Mr. French, of Braintree, presided, and called on gentlemen to proceed in the discussion.

Mr. Barrett, of Belchertown, said that his business was farming, and he thought that by industry and economy, a farmer could provide himself with the comforts of life and gain property. But he must put his hands to the work, and not have too many play-days. Yet he need not work very hard, so that labor would be an evil. He was asked whether farmers were as liable to fail as other classes, and he replied that he had never known any farmer to fail, who paid proper attention to his business; but among merchants and manufacturers, failures were common. He had known farmers to buy land, run in debt for it, erect buildings, stock their farms, and succeed well. The farmer should not till a great deal of land. He must be a man of thought and reflection; he must adapt his crops to his soil, and keep the best of stock. The best kinds of grain should be cultivated, as this makes a great difference in the profit. He must also be a temperate man; and he named an instance of a farmer's failing for want of this virtue; and another failed who devoted his attention to swapping horses. As farmers are now becoming more enlightened, they are more respected, and finally they will rule the country.

Mr. A. G. Sheldon, of Wilmington, said that some others might make money faster than farmers, but where one became rich, 99 were poor. No class on the whole do better than farmers. Their business tends to equality in property. In this section we want more milch cows, and we ought to raise more heifers, as they are more valuable than those brought from a distance. One important item in the farmer's profit is the rise of land.

Hon. Amasa Walker having arrived, took the chair, and presided the remainder of the evening. He said in regard to the profits of farming, that no rule would apply to all parts of the State. One may find one crop the most profitable; another may do better with another crop. The crops should be suited to the soil and location. Certain conditions are necessary in order to succeed by farming. Close personal attention is necessary. One cannot farm to advantage by proxy. Strict economy is necessary, and so is skill in the house; but this is not so essential to success with the merchant and manufacturer. He thought that some kinds of farming, such as keeping cows, required to be carried on largely in order to be profitable. We must observe the changes that are going on and adapt our business to them. Beef should be sold at a season when it is in great demand. The butter should be of the best quality. Fruit is an important subject, particularly apples. There is opening in Europe an extensive market for them; and our climate is well adapted to their production.

Hon. Mr. Sprague, of Duxbury, said that in his section the land was poor, not well adapted to profitable farming. The Rev. Morrill Allen, who is called the model farmer, is about the only man in his region who had gained much property by farming; and he had a salary of $100, which was sufficient to support his family, and he gave his personal attention to his farming. It is a question whether a man, under ordinary circumstances, can buy a farm in Massachusetts, and get as much for his labor as the mechanic. Can a man some 20 miles from Boston make money by farming?

Hon. Mr. Brooks, of Princeton, said that there was a profit in farming, and that every man might make it profitable. He then read from a memorandum the profit which he made on a crop of corn, potatoes, small grains and grass, showing that each crop afforded a good profit. He estimated land at $50 per acre, and labor at $1 per day. He showed that in eleven years an acre of land had yielded a profit of $64. He then read statistics showing that there was more profit in raising grain for market, or making it into pork, in the eastern States, than in other sections of the country. He had made 17 per cent. profit in raising stock. Much depends on management. Hogs should be fed regularly, not so that they will squeal with starvation one day, and with repletion the next, for they cannot thrive in either case. Mr. Brooks said that only two or three cows could be kept with profit, and he named a case in which two cows yielded an income of $100 in a year, besides the skimmed milk, which is worth half a cent a quart to make pork.

Rev. Mr. Sanger, of Dover, said that there was a great discrepancy in the views of the two gentlemen who had preceded him, which was owing to one living in a fertile region, and the other on a sterile soil. But in Duxbury, where the soil was poor, the people were drawing riches from the great deep.

Mr. Brooks replied that a profit might be made by farming on light lands.

Mr. H. C. Meriam, of Tewksbury, said that he was in a neighborhood of good farmers, but all the profit they made was not equal to the interest on the value of their farms. If they would sell their farms they could live better on the interest of their money. As to his own farming, his hands worked early and late, as is usual with those near a market, and yet he could not make his farm pay more than four per cent. on the capital invested.

Mr. Sheldon said that he was pleased that one gentleman agreed with him that there was a profit in farming; and if those who did not find it profitable, would come to his town, he could show them

a woman who could learn them how to farm it with profit. Her husband bought a farm and paid for it lacking $600. His health was poor, and he died, leaving three boys, and the estate in debt about $800. She had cleared the mortgage, repaired the house, and educated the boys; and the farm would sell for 50 per cent. more than it cost.

Mr. Barrett remarked that where a man failed from intemperance, another bought the place, and succeeded well, making a good profit on his investment.

Subject for the next meeting, Agricultural Education. Hon. Marshal P. Wilder will preside, and address the meeting.

AGRICULTURAL QUESTIONS.

No. 3.—Subject, *Grasses and Meadow Lands.*

I. What grasses have you cultivated, and what kinds have you found to be the most profitable for mowing and for pasture, keeping in view quantity and nutritious quality?

II. What kinds of grass are best for different kinds of domestic animals?

III. What soil is best suited to herds grass? What to clover, red or white? What to red top? What to blue grass, &c. &c.

IV. What have you found to be the best time for sowing grass seed, and under what conditions should it be sown, and in what quantity of the sward kinds?

V. What kinds of grass seed can be advantageously sown together upon the same field, and in what proportion?

VI. How at the least expense can the greatest quantity of grass be raised on a given quantity of land for a series of years? This question is intended to bring up to view the comparative advantages of a rotation of crops with manure under the furrow; and of top-dressing; and of fall-seeding, with manure on the inverted sod?

VII. What is the comparative value for fodder of a large yield, say three tons of coarse rank grass, and of a smaller quantity, say two tons, of finer grass raised on the same field without forcing?

VIII. In what stage in the growth should grass be mowed, having reference only to the value of the single crop for fodder?

IX. What effect has feeding off or mowing the aftermath upon the quantity and quality of the crop the suceeding year?

X. What is the value of the aftermath or rowen in comparison with hay of the first crop, ton for ton, for the purpose of nutrition, or of fattening, or of milking?

XI. What kinds of manure are best adapted to meadow land in general, and to the several varieties of grass in particular? Thus Gypsum is peculiarly adapted to clover.

XII. What effect has thorough draining upon meadow land, in improving the grass in kind, in quantity, and in quality?

For the New England Farmer.

REMARKS ON FRUIT.

Mr. Cole:—Much has been said and written on the different kinds of fruit, their culture, their quality, and their value; so much so, that a fruit fever was said to prevail through the country, a few years ago; and now, after it has prevailed and spread over the land, let us see whether the effects of the fever have operated beneficially, or otherwise, upon the country at large. That it operated beneficially to the nurserymen, for a number of years, I presume there is not the shadow of a doubt. That it has operated injuriously, in many cases, to those who purchased the trees, I have still to learn; while those people who *improved* their trees of *natural* fruit, by grafting and budding, I know have experienced a benefit; and those people who, amid all the rage of the fever, have gone on in their former course, and have made *no* improvement in the quality of their fruits, have not been "humbugged," as a Boston paper lately represented people had, who favored improvement.

By the way, Mr. Editor, several circumstances favored the spread of the fever. 1st. In consequence of the temperance movement, there has been, in many parts of New England particularly, *less* demand for cider than formerly, and in numerous instances the farmers have nearly abandoned the use of cider as a common drink, consequently natural or unimproved fruit has *declined* in value, and become unsaleable. 2d. At the same time the *increased* demand for *improved* fruit, in our cities and villages, seemed to second the efforts of the temperance movement, for as the demand for cider *decreased*, the demand for *improved* fruits *increased*, and still *continues* to increase, far beyond the powers of producers of *improved* fruit to supply the demand. This is the case so far as my information extends. The result of this state of things is this; *natural* or *unimproved* fruits, which *formerly* sold at *good* prices, *now*, since the prevalence of the fever, will not sell for one-third of their *former* value; while *improved* varieties of fruit sell readily at former prices, with an *increasing* demand. Thus it will be seen that the *increased* demand for *improved* fruits on the one hand, and the *decreased* price and demand for *natural* fruits on the other hand, prepared the way for, if it did not produce, the "fruit fever," of the last 8 or 10 years.

In corroboration of the above remarks, I will produce some cases that have fallen under my observation; Mr. Daniel B. Morgan, of this town, in 1815, grafted a young and thrifty orchard, of about 100 trees, with some of the most approved varieties of apples he could find. For a number of years, that orchard has been the subject of much comment in the neighborhood, many people saying he had done the orchard more *hurt* than good, by grafting it; that he would not be likely to see as much value as he had cut off in grafting, and such like remarks. Well, time has passed away, during which Mr. Morgan "looked well to the ways" of his orchard; and the last year, being the first bearing season of any amount in his orchard, has fairly settled the question, in that neighborhood. I speak within bounds when I say, that his crop of apples this last season has paid the *whole* expense of grafting and

care, up to this time; and completely silenced *all* opposition to his course of action, in regard to this orchard.

As to prices, Mr. Morgan is receiving 4 times as much per bushel as he would if his orchard had not been grafted; for *natural* fruit has sold from 12 1-2 cents to 25 cents per bushel, and *dull* at those prices; while Mr. Morgan's apples have been sold at from 50 to 75 cents per bushel. On the farm where I reside, 6 years ago, the fruit of all kinds was mostly *natural*, and 15 years ago, such apples, pears and peaches as we *then* raised, would sell at *good* prices; apples, &c., that for the last 5 years could hardly be sold at *any* price, would *then* bring from 2 to 3 shillings, and even more, per bushel, with a ready sale. Within the past 6 years I have had about 150 field trees of apples and pears grafted; quite a number of which begin to bear already. My *improved* fruit this last season amounted to about 20 barrels, and should my trees do *well*, I hope in a few years to have as many as 150 to 200 barrels from those trees I have grafted about the farm.

In addition to this, in 1849 I set out an orchard of 3 acres, with choice apple trees, which appear to be doing well. In my experience, I have had abundant proofs of the *natural stock* or *tree* affecting the *ingrafted scion* in the quality of the fruit; as for instance, when scions of a large kind of apples are ingrafted into *large* stocks, of small, knurly apples, of different taste, color, shape, and quality, from the fruit of the *scions* for a number of years, hardly any one would know the fruit raised on such a tree, it would be so different from the fruit from whence the scion came. My opinion from close observation is this; when the ingrafted scion becomes large enough to draw the whole sap of the natural stock, and the amount of *top* is equal to the roots, or more, then the fruit will *improve* in quality, and become more and more perfect.

Preston, Ct., Feb. 10, 1851. C. B. Ayer.

For the New England Farmer.

SOME OF THE CUSTOMS AMONG FARMERS IN THE LAST CENTURY.

Mr. Editor :—I can write something, perhaps for the amusement, if not for the edification of the young farmers of the present day, how farmers in the back towns from Boston conducted their business in the latter part of the 18th century. The economy of that time among farmers and marketmen was truly wonderful. We did not go to market then as we do now, to fetch produce into the country, but were so vulgar as to carry the good things of the land to the good people of the cities who consumed them. The land in the country towns in the vicinity of Boston at that time appears to have been more productive than at present; I suppose from the circumstance of the soil being in better condition, and new fields constantly coming into cultivation after stripping the land of the forests.

The process of farming then was on what is now called the "skimming principle," very little manure being applied to the different grain crops; the dung-heaps were converted into compost and applied to grass fields, potato fields, or hop-yards. I have noticed several farms of late where eight or ten cows, four oxen, two horses, some young cattle and sheep were kept at that time, now dispensing with oxen, sheep, young cattle, and half the number of cows, retaining a horse which has to supply the place of oxen and horses on the farm, and supply the place of a span for the purposes of pleasure and business on the road; this seems rather a hard case for the poor beast, but he must submit to the burdens of his task-master, not having a faculty, like the Israelites, to complain of cruel servitude and hopeless bondage.

To illustrate the manner of farming soon after the close of the revolutionary war, I will relate my own experience, with observations made at the time on the respectable farmers of my neighborhood. My father owned a large farm, for a Bay State man, well supplied with wood and timber, free from stones and easy of cultivation; he raised corn, rye, beans, potatoes and hops, with beef, pork and poultry for the market. His corn and rye were raised in rotation on the same fields without manure till they "cried enough," and then newer and better soil was selected for a field and treated in the same way, and the old field left in Indian hills or in the state it might happen to be in when the last crop was taken off.

These old fields were left to the mercy of "atmospheric influences" for restoration, even without the indulgence of a little grass-seed for past favors. But I believe ingratitude always receives its due reward, like all other violations committed against the laws of God, whether the offence is committed against land or animals; land will not be cheated nor cannot be deceived like credulous human beings, as many a man has found who made the attempt. These worn-out fields were thrown into common pasture for cattle and sheep to graze upon till they were in some measure restored to a degree of fertility, and then go through the skinning operation again, and so on till all vegetation ceased to grow, except some worthless weeds and moss, and the land consigned to sterility.

But an overruling Providence, without the interference of man, by an active principle of nature soon clothed those sterile fields with a dense forest of pines, which are now the most valuable part of the farm. Then, as now, every farmer wanted money to pay taxes, and for various other purposes, and the only way for him to obtain it was to sell his produce at the highest market for what it would fetch; the highest wood-market at that time was Medford, then called Mystic, about fourteen miles, where wood was wanted for the purpose of burning bricks as well as for fuel. I have been there myself with good hard wood when it would fetch but about two dollars a cord, and received a part or all my pay in groceries; now that sum would not pay the expenses of teaming.

The economy of marketing the lesser articles at that time was truly wonderful. When a lad, I have been about nineteen miles to Boston market with a variety of articles, the productions of the farm, with a bag of hay strapped on top to decorate my loaded animal and restore his exhausted vigor while I was selling off my load. When I arrived at Charles bridge, I put my horse into a free stable and empted my ornamental bag to him, which he received with unfeigned satisfaction; then I took my turn, bearing the "heat and burden of the day," by shouldering my "commodities" and marching to Faneuil Hall Market without being escorted by music, about one mile, with as much consequence and self-complaisance as a valiant knight would on a

journey to visit his mistress. In these marketing expeditions I started from home in such season as to arrive at old Faneuil about sunrise, frequently being on the road nearly all night, long enough now to go a journey to Kennebec river.

The single horse wagon, if known then, was not in use. All my brother marketmen filled their wallets, saddle-bags, and panniers, and with their own weight made out a commendable load for the beast of burden. On arriving at the bridge the burden was shifted from the beast to his rider, and away he hied to market to dispose of his load; this was the custom of the times in my neighborhood. There was but one marketman in my native town who rode in a carriage, and that was constructed of an old chaise, the top being removed and a wooden box substituted. The change which has taken place since 1790 in improvements and inventions calculated to ameliorate labor and facilitate practical operations would tax the credulity of almost any one born the present century.

At the close of the revolutionary war, money was scarce, produce was low and people were poor. The chief object then was to devise means to keep soul and body in the same neighborhood; that being the case, but little interest was felt in making any improvements but what related to the necessities of present physical wants. But as the times grew better and men had more leisure, people began to think more and discover a readier and better way to do almost every thing. As wealth has increased, extravagance, desire and discontent have increased in equal ratio, and whether people are happier now than then is problematical in the extreme. The community have certainly improved in outward appearances; a man might travel from Vermont to Boston and would seldom see a painted house a half-century ago; now, neat, elegant and convenient dwellings line the streets of almost every town. Then the wells of water were made at such distances from the houses that females were under no inducement to practice gymnastic exercises to invigorate their muscular systems. What changes may take place in the coming half-century is seen "as through a glass darkly;" but if extravagance, political strife, intriguing for office, and disregard of moral rectitude should keep pace with other improvements of the age as heretofore, all philanthropists will have cause to dread coming events as portentous to posterity.

Wilmington, Feb. 1, 1851. SILAS BROWN.

For the New England Farmer.

STATE AGRICULTURAL SCHOOLS.

The subject of legislative aid to agricultural schools is one that has been discussed by agricultural writers and speakers, for many years. Of cattle-show addresses this subject often forms the chief material. And so far as I have seen, the arguments are based upon the presumption that the legislature can afford such aid constitutionally and rightfully. Now, I have some doubts of the correctness of this assumption. Most advocates of the measure propose, I believe, something like the following:—The State to turn farmer, purchase a tract of land, erect model buildings, procure model implements, employ scientific and practical instructors, and from the many thousands of farmers' sons in the State, collect a few dozen, who are to go through a prescribed course of instruction and training, to graduate model farmers. Now, I ask, if the right to do all this is conceded to the State, where is the legislature to stop? Will it grant special aid to the farmer, and deny it to the carpenter, the printer, the machinist, the tanner? or, will it be more consistent, and establish model breweries, tan-yards, printing offices, founderies, and a thousand and one other State shops? To my mind this proposition of State Agricultural education, is just as absurd—because it involves the same principle—as the demand of the French people, that government shall furnish them employment.

The State provides for the education of the sons of farmers, in common with those of all other professions, not only in the rudiments of knowledge, but in those higher branches of science which are supposed to be so essential to success in farming. If an acquaintance with chemistry, geology, botany, or even the dead languages, is important to the agriculturist, has not the State done all it can do, to open the door to him for its attainments? Must our democratic idea of education be abandoned, and the old European system be adopted,—the "class," "grade," or "rank," theory? instead of our inestimable "common" schools, and equally common colleges, are we to have one school for farmers, another for mechanics, a third for the professions—one for Protestants, another for Catholic children?

I am aware that to this, for a reply, it may be said, the State has patronized schools of Law, Medicine, Theology, and Fight. But is not all such class legislation going out of fashion? These four professions once claimed privileges, that are boldly denied them in these our days. Other professions—even the once vulgar laborers—come forward and claim the notice of law-makers. And I must repeat the question,—If agriculture is to be placed among the favored professions, by granting it peculiar favor, when is the legislature to stop? If one of my boys adopts the "ancient and honorable" business of farming, will the State furnish him the means of "scientific" knowledge of his profession, and leave the other, who prefers to exercise his skill as a mechanic, untaught?

I happen, Mr. Editor, to be both farmer and mechanic. My days are spent in a shop, in the city; my nights and holidays on my farm, in the country. I may be set down as a dull farmer,—far behind the age—but I venture the assertion, that, *science is needed in the shop, and money on the farm.* Hoping the legislature will govern themselves accordingly, I shall remain for the present,

A MECHANIC AND FARMER.

Winchester and Boston, Feb., 1851.

For the New England Farmer.

CUSTARD SQUASH.

MR. COLE:—The kind of squash which Mr. Raynolds raised, is an old acquaintance. I raised them fifteen years ago. The seeds came from Palermo, and it is, without exception, the richest flavored squash grown in New England. They are hard shelled, and when cooked should be boiled in the shell; when sufficiently cooked, the flesh will readily and cleanly separate from the shell. In planting them, the bed should be made very rich with fresh as well as well rotted manure. The plants

should be planted at such a distance from all other kinds of squashes and pumpkins as will insure no mixing of the other kinds, as the hybrids are greatly inferior to the pure squash. I have had them mix with our common pumpkin. After the plants have started, let the ground be "mulched" with straw, shavings, tan or coarse hay.

Yours, &c., S. Bradford Morse, Jr.

For the New England Farmer.

HOW TO MAKE GOOD BUTTER.

Mr. Cole:—On the 59th page of the "Transactions of the Essex Society," (in the statement of Mr. C. P. Preston, of Danvers,) is the remark—"that during the summer months, with the cream at a temperature of 62°, butter can not be produced as hard as is desirable, nor of so good quality, as as when churned at a lower temperature." This is said to have been ascertained after a fair trial, with repeated experiments. What is the best temperature of cream for churning, is not distinctly stated. I learn generally, from Mr. Preston, that in his opinion, in the warm weather of summer, the cooler the cream, the harder and brighter colored will be the butter. To secure this, care is taken to place the cream in a deep cellar, below the common cellar; or to suspend it near the water in a deep well, until the time of churning. The temperature of water in such wells, is generally, I believe, about 48°;—consequently cream thus placed, will be 10° or more below the temperature prescribed, in the use of the *thermometer churn*. This is a variation sufficient to demand careful examination, by all who would produce butter of the best quality. I have often seen (on the farm where I first learned the rudiments of farming,) butter of superior quality, made in very warm weather, from cream that had been suspended in a well until the time of churning. Butter of *prime quality*, will usually command *half as much again* (say 25 instead of 16 cents,) as that of *ordinary quality*. In what manner can the income of the farmer be more certainly increased, than by due attention to the quality of butter produced? In the vicinity of a dense population, the milk produced on a farm is one of the best sources of income. There are several dairies, within my knowledge, where the cows yield a pound of butter each, *daily*, for at least 200 days of the year;—and milk equal to the production of 75 pounds more, during the remainder of the year. This makes the butter produce of each cow, worth at least $50 a year;—and the milk estimated at 2 cents a quart, worth about the same sum. I speak of cows that will average from 10 to 12 quarts daily, during the milking season. Those that will not do this, had better be exchanged for others that will.

On inquiry of Mr. P. how he obtained his cows, he said he usually bought *two year old heifers* from the *country droves*, and then selected the best. He spoke of buying *two*, of similar age and size, that came in to milk at the same time, and gave nearly equal quantities. But on setting their milk separately, one produced 9 1-2 pounds of butter a week, the other only 5 pounds;—a difference, in the butter-making qualities of the milk, of nearly *one hundred per cent.* J. W. P.

☞ Rogues in rags are kept in countenance by rogues in ruffles.

For the New England Farmer.

FOOD FOR MILCH COWS.

Mr. Cole:—In a late number of your paper were some inquiries as to the best food for milch cows. Here, we have sometimes, in plentiful seasons, used Irish potatoes, with very satisfactory results; the quantity of milk is very much increased by their use,—and the general health of cattle improved. They are cooling and loosening in their effects Would be better pounded or crushed to pieces; and adding a little sweet corn meal has also a good effect.

Yours, J. Ferris.

Cincinnati, Jan., 1851.

SMOKY CHIMNEYS AND FIRE-PLACES.

There is only one general theory essential in all chimneys, and that is the apportionment of the throat to the opening or draught of the room; the closer the room the less the throat; always keeping the throat less than the compass of atmosphere admitted into the room. It would be well also to have the fire-place large enough to build in a false wall, &c., which will always place the difficulty under control.

Let the chimney be high enough not to be interfered with by adjoining buildings.

Let the fire-place be large enough to admit filling in.

Let the offset in the back-wall be at least one foot above the upper part of the fire-place opening.

Let the throat be contracted, leaving it largest in the centre, until the difficulty is remedied.

If these conditions are met, it matters little about the size or shape of the flue above. This is proved in the building of furnaces when heavy draught is required.

SWAPPING HORSES.

Think twice before trading off a horse that has served you well on the whole, though he may have some faults. We have known men to swap off horses that had but one or two faults, for others that had a dozen. This generally arises from the bad temper of the owner. A horse refuses to draw before oxen, and he is put off for one that is not willing to draw anywhere. Another is high-spirited, and the women cannot drive him; he is put off for one that cannot be coaxed out of a walk. Another is not willing to be caught in the pasture; he is exchanged for one that is worthless when caught.

A low horse that hardly keeps your boots from the ground, is put off for one that you cannot mount without a block. A lazy horse is put off for one that has no patience to let you be seated in the chaise, before he must go

On the whole, we would not advise farmers to think of changing off any of their stock for slight faults.—*Bloomington Herald.*

PARSNIPS.

This root has long been an inmate of the garden, and was formerly much used. In the times of Popery it was the farmers' Lent root, being eaten with salted fish, to which it is still an excellent accompaniment. "In the north of Scotland," Dr. Neill observes, "parsnips are often beat up with potatoes and a little butter; of this excellent mess

the children of the peasantry are very fond, and they do not fail to thrive upon it. In the north of Ireland, a pleasant table beverage is prepared from the roots, brewed along with hops. Parsnip wine is also made in some places; and they afford an excellent ardent spirit, when distilled after a similar preparatory process to that bestowed on potatoes destined for that purpose." It is an excellent food for cows, and its fattening properties I have already noticed.—*Farmer's Guide.*

Mechanics' Department, Arts, &c.

FLINT ENAMEL WARE.

Some ten or fifteen years ago, Mr. Fenton, a manufacturer of Fire Bricks, &c., at Bennington, Vt., commenced a course of experiments on the liquefaction by heat and intermingling in various proportions, of the flint quartz, &c., used in his business or existing in the mountains around him, with an eye to the production of wares adapted to household uses. In these experiments he persevered, until at last he was enabled to produce a ware combining strength, purity and beauty,—composed entirely of flint, feldspar and quartz, ground together, bolted like flour, then formed into a clay or paste, and moulded into any shape which taste or use may suggest, then covered with a delicate enamel and baked to a consistency exceeding that of marble. The enamel is formed entirely of flint, without a particle of the metallic bases which renders much of the ware now in use always dangerous and often virulently poisonous.

The Flint Enamel Ware, though especially prized by us for its capacity to supercede the enameled wares now used for milk-pans, stew-pans, coffee-urns, &c., is intended to subserve a far wider circle of uses. Among the articles into which it has already been fashioned, are water-jars, stove-urns, mantel and other parlor ornaments, lamps and candlesticks, table-slabs, door-plates, door-knobs, block-letters, daguerreotype frames, inkstands, pitchers, wash-bowls, bathing-tubs, spittoons, &c., &c.

The usual color of this ware is a rich, dark brown, shaded and fleckled or mottled with white and blue, though it is made of pure white when desired. It is harder than marble, and a delicate pitcher may be thrown on the floor with violence without starting the handle. The point of a nail driven smartly against its side with a hammer makes no scratch or dent of any kind. The enamel stands heat perfectly, and all this ware may be, as most of it is, made absolutely fire-proof, so as to be buried in a pit of burning anthracite and come out of the ashes as good as new. Withal it is nearly as cheap as the "stone ware" now in use. We cannot doubt that it will rapidly find its way into very general use throughout the country. The ware is patented, and agencies for its exclusive sale, by counties and towns, are being formed throughout the Union.—*N. Y. Tribune.*

To Engrave on Steel or Iron.—First cover it all over with beeswax, then write or engrave on to it whatever you wish, with a sharp pointed instrument, so that it cuts through the beeswax. Then mix nitric acid and muriatic acid in about equal parts, and put it on the engraving or writing in the beeswax, and let it remain for a short time; then wash it off and scrape off the beeswax, and you will find that the acid has eaten the steel or iron, where the beeswax was cut through, so as to produce the desired engraving in the steel or iron.

MERRYMAN'S BUTTER PREPARING AND PACKING MACHINE.

In speaking of this machine, the St. Louis Republican gives the following particulars:

We have never seen a process for preparing butter for packing so speedy and certain as that of Dr. Merryman, and noticed a few days since in this paper. The machine consists simply of two rollers in immediate contact with each other, and operated by a crank and spur-wheels. They are placed in a vat or trough, and partially submerged in water. The butter passing through so narrow a space, every particle is brought in immediate contact with the water which washes away the butter-milk as fast as it is expressed from the butter. After this it is only necessary to salt and pack it away in close vessels, and it will be preserved sweet and pure for any necessary length of time. The machine is simple and cheap and saves labor, and does not occupy a space larger than four feet by two. With one properly constructed, a single hand can work 12 pounds per minute, or seven hundred and twenty pounds an hour. We think it ought to be in the hands of every butter maker, and are satisfied that no woman who has to labor over butter for hours, seeing that she could produce better results with comparatively no labor, would be without one. For the renovation of butter it would prove invaluable in the hands of butter merchants. Butter of an inferior quality, may, in a few minutes, be made into good table butter.

Remarks.—For those who consider it best to wash butter, this machine may be useful. But we have never seen finer butter than that which has been well worked without water.—Ed. N. E. Farmer.

Ladies' Department.

THE HUMANIZING INFUENCE OF CLEANLINESS.

A neat, clean, fresh-aired, sweet, cheerful, well-arranged, and well-situated house, exercises a moral as well as a physical influence over its inmates, and makes the members of a family peaceful and considerate of the feelings and happiness of each other; the connexion is obvious between the state of mind thus produced and habits of respect for each others, and for those higher duties and obligations which no law can enforce. On the contrary, a filthy, squalid, noxious dwelling, rendered still more wretched by its noisome site, and in which none of the decencies of life can be observed, contributes to make its unfortunate inhabitants selfish, sensual, and regardless of the feelings of each other; the constant indulgence of such passions render them reckless and brutal, and the transition is natural to propensities and habits incompatible with a respect for the property of others or for the laws.

☞ Why did the lady who purchased a dumb-waiter return it? Because it did not *answer*.

THE WITCHCRAFT OF WOMAN.

I want to tell you a secret. The way to make yourself pleasing to others is to show that you care for them. The whole world is like the miller at Mansfield, "who cared for no nobody—no not he, because nobody cared for him." And the whole world will serve you so, if you give them the same cause. Let every one, therefore, see that you do care for them, by showing them what Sterne so happily calls, "the small sweet courtesies of life," those courtesies in which there is no parade, whose voice is too still to tease, and which manifest themselves by tender and affectionate looks, and little kind acts of attention—giving others the preference in every little enjoyment at the table, in the field, walking, sitting, or standing. This is the spirit that gives to your time of life and to your sex, their sweetest charm. It constitutes the sum total of all the witchcraft of woman. Let the world see that your first care is for yourself, and you will spread the solitude of the upas tree around you, in the same way, by the emanation of a poison which kills all the juices of affection in its neighborhood. Such a girl may be admired for her understanding and accomplishments, but she will never be beloved. The seeds of love can never grow but under the warm and genial influence of kind feelings and affectionate manners. Vivacity goes a great way in young persons. It calls attention to her who displays it; and, if it then be found associated with a generous sensibility, its execution is irresistible. On the contrary, if it be found in alliance with a cold, haughty, selfish heart, it produces no further effect, except an adverse one. Attend to this, my daughter. It flows from a heart that feels for you all the anxiety a parent can feel, and not without the hope which constitutes the parent's highest happiness. May God protect and bless you.—*William Wirt to his Daughter.*

☞ 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.

ACKNOWLEDGMENTS.

Of George Hyde, Newton, specimens of the Newtown Pippin Apple. They are not very fair, as to form, and they are becoming discolored mostly over the surface, showing distinctly as we have long contended that this was a very uncertain kind, especially in New England. But to do justice to this fruit, we must say that its quality is very fine, superior to most other kinds. It is not profitable for the market. Also Philadelphia Pippins. This is a small apple, but very fair, fresh and handsome, and it keeps well into summer. The quality is very good. If this should prove to be a good bearer it will be a profitable variety, from its freshness after long keeping. If this fruit is known in Philadelphia it is probably under some other name, as we do not find it in any of the catalogues of the nurserymen of that place.

Of John Washburn, Plymouth, a shoot of the Bigarnean Cherry, set in a *mahaleb* stock. The mahaleb is used as a stock for dwarfs, and the object of Mr. W., in presenting this shoot, is to show that it is not suited to this purpose. This shoot of only one season's growth, is six feet long, and an inch in diameter at the but, and he has had a still larger growth. His tree, which he is sure is the mahaleb, as some of the natural shoots have produced that fruit, is making a prodigious growth, showing that the rapid growth is not peculiar to the scions set on this stock, but the stock itself is remarkably vigorous.

Of Rev. Leonard H. Wheeler, Missionary on Bad River, Wis., on Lake Superior, wild rice, which is peculiar to that region. This grain is of a dark color outside and in; the kernel is longer and less in diameter than the southern rice. It is used for the same purposes. It grows spontaneously around Lake Superior, in the water, in some places where the water is six feet deep. When ripe the Indians pass among the crop with their canoes, and gather it on either side, by bending the heads over their boat, and shaking out the grain. Also a specimen of maple sugar made by the Indians. It is excellent in quality, and fine in grain, but not very white. Another favor in the shape of an ear of Red River corn, of medial size, light color, containing about equal proportions of gluten and starch. This corn was raised by the Indians 500 miles northwest of Lake Superior, in latitude 48° where this grain ripens in two and a half months from planting.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

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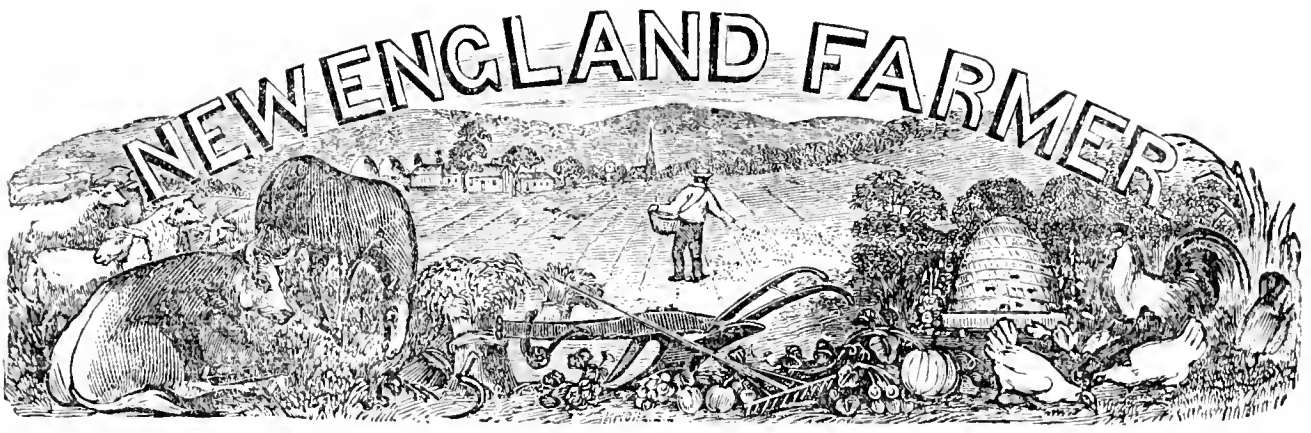


DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, MARCH 29, 1851. NO. 7.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

WORK FOR THE SEASON.

April.—In this month, we frequently have a serene sky, gentle zephyrs, and the warm sun of summer. Anon the storm rages, and then comes old Boreas with his biting blast. A fitful season this. In Maine, we have known it so warm the first of April that our bees gained 12 pounds to each hive in one week. Again we have known recent snows piled so high on the first Monday in April, that people had to go to town-meeting on foot, and the best mode of travelling was on snow-shoes. Another year there was 6 feet of snow in the woods the first of April, and in the open land the snow was so deep and hard, that teams could pass in any direction on the crust, over walls and fences. A few years ago, in this region, on the first day of April, the thermometer was down to zero, and the sleighing was excellent. This is one of the most busy months to the farmer and gardener, and those who have neglected to prepare for work, at a more leisure season, will have a double task in making ready for work and doing it. There is a great advantage in having every tool, and every thing else, in readiness.

ON THE FARM.

Sowing Grain.—All kinds of small grain, excepting buckwheat and millet, do better when sowed rather early, as they are liable to rust when they mature late in summer. But if the land is heavy, and liable to fall hard from heavy rains, it is advisable to sow very early; and some farmers sow their wheat late, in order to escape the grain worm. This is an exception to the general rule, and in some cases the rust proves more destructive to the grain that the worms would from early sowing. Washing wheat in strong salt water, and liming it before sowing, is a preventive of the rust.

Potatoes.—It is a well established fact, that planting potatoes early, and digging them in dry weather as soon as ripe, is one of the very best guards against rot; and there is generally a great advantage in planting on dry, or rather dry soils. Spread the manure. That which is well decomposed is the best. Plant hardy kinds.

Stock should be kept in good condition, and if any animals are weak, they should have extra feed, of meal, roots, &c. They are more liable to diseases in the spring than at any other season. This arises from our long, hardy winters, and feeding mostly on dry fodder. And those animals not well cared for, often suffer for want of water in winter. Sheep are very eager to get to the ground, even before the grass has started. If they are let out where they can get but little abroad, they must have clover hay, meal and roots, for they will not eat common food, after they are turned out, though they get but scanty sustenance.

Fences.—Wooden fences are expensive, and this is too busy a season for making stone walls. Wood must answer a temporary purpose; but in removing stones from tillage, preparation should be made to make walls as fast as possible, for in this way a double purpose is accomplished, the making of a permanent fence, and ridding the land of an incumbrance. Better keep the cattle in the barn, than allow them to roam at large, while the fields and orchards are exposed to their depredations.

Manure, kept in barn cellars, is saved from loss by being mixed with peat, mud, loam, sand, &c. But when it is in heaps, it will ferment, as the weather warms, and in some cases it becomes so hot that a great part is burnt up and destroyed. If lime be added the loss will be still greater. Before there is much fermentation, the manure should be hauled out, and mixed with soil. Peat, mud and clayey loam is preferable for manuring light soils; and gravel, sand, or light loam for wet or moist soils. The soil mixed with the manure, will moderate the fermentation, and absorb the gases which escape from the manure. This may be considered much labor, but manure not applied, in heaps or scattered will waste in warm weather, if not mixed with some absorbing substance. When plenty of soil is mixed with manure, a bushel or two of fresh-

slacked lime may be mixed with each cord, to hasten decomposition. The soil will absorb the gases. If the heap becomes very hot, shovel it over.

IN THE ORCHARD AND NURSERY.

Grafting.—April is a good season for grafting. Cherries, plums and apricots should be set first. They generally succeed well, if set by the middle or 20th of the month. Pears do better if set tolerably early; but if the scions are in good condition, any time in the month or the first of May is in season. Apple scions may be set any time in this month or in May. Young stocks grafted late at the ground, are apt to bleed and fail, and in all cases of late grafting, there will of course be less growth; and for this reason some graft in June, lest the scions grow too rank.

Transplanting.—It is a good plan to take up trees early, before they start, and then if the ground is not dry enough to set them, they may be heeled in, and remain till the soil becomes dry enough to work well. This is better than to set early in a wet soil. It is not important to set early, but the trees should be taken up early.

Pruning.—As this is not a favorable season for this operation, it should be confined to the removal of dead and decaying limbs, small twigs, &c.

Sowing Seeds.—Pears succeed best on rather moist land; but they cannot be sowed on heavy lands early in the season, and if they are delayed, the seeds start and grow so much as to become spoiled. If sowed on dry land, the hot sun of summer usually blasts them. We prefer keeping them back with ice or snow this season, and sowing on moist land. Apples, plums, cherries, and peaches, do well on tolerably dry soil, and may be sowed early. The quince is similar to the pear.

Cutting Back Stocks.—We prefer delaying this operation until the leaves begin to start from the stock, then the strong ascent of sap, that has been invited up by the stock, will start out the bud with greater force than if the stock is cut off before vegetation commences. Many lose their buds, by cutting the stock too early.

IN THE GARDEN.

The subjects that require attention in the garden are too numerous to mention. We will refer to a few.

Peas are hardy, and for early use they should be sowed as soon as possible. Neither frost nor snow will injure them. Early Kent and Prince Albert are among the very earliest and best kinds. Hill's Early and Early Washington are good varieties to follow, and are nearly as early.

Beans of most varieties are tender, and cannot be forwarded much by very early planting; cold storms, and cold weather blast them. We have planted beans early in April, and again the first of May, and the latter were as early and succeeded best. But in a warm spring, it is better to plant a few rather early, for early use; they may escape harm.

Potatoes.—As the old crop is poor and dear, it is desirable to raise some very early. A few for seed may be started around the kitchen fire, and they should be planted in a warm soil, dressed with a well-decomposed compost manure, or in a good soil without manure.

Corn for early use should be planted early. If killed down by frost it will start again. The early White Jefferson is a very early kind.

Early *Beets*, *Carrots*, *Cabbages*, *Turnips*, and various other plants should be sowed in a warm border as soon as the frost is out of the ground. They are hardy, and when sowed in fall, will start as soon as the snow is gone.

Spinach makes excellent greens, and grows rapidly. Cabbages and turnips should also be set out very early for greens.

Cucumbers, *Squashes* and *Melons*, for early use, may be started early under glass boxes; and in this way Tomato, Cabbage, and Lettuce plants may be started. Plants thus started may remain, or be transplanted, as convenient or expedient.

GRAFTING PEARS.

Mr. Editor:—Owing to the scarcity of pear seeds and pear stocks, nurserymen are frequently tempted to set the scions of the pear on apple stocks. The pear grows as well and vigorously when so placed, as it does in a pear stock, but this vigor is but temporary, and after a few years' bearing, the tree always fails, and can never by any effort be made again to flourish. There seems to be a want of constitution, so to speak, which no attention or care can remedy. To set grafts, therefore, in apple stocks—knowing the legitimate consequences, with a view to dispose of them to the ignorant and unenlightened in such matters, is sheer dishonesty. Purchasers should be particular to inquire whether the stocks are apple or pear stocks, before they buy. The best substitute, probably, for the pear stock, is the root of the pear. These may be obtained in almost any desired quantity when removing pear trees from the nursery. Even the roots of old bearing trees may be resorted to for this purpose, as scions set in them do very well, and generally make good and healthy trees. Next to this the quince stock should be chosen. Although the pear is dwarfed on it, the fruit is improved in flavor, and the trees come into bearing two or three years earlier than when set in the apple or pear stock. As the scion, when so placed, does not develope according to its original nature, the trees make beautiful linings to a walk or border, and may be set eight feet apart. On the quince as on the apple, the pear is comparatively short lived. It endures but a few years, and then as if smitten with some fatal and irremediable disease, fails not only to produce, but to respond to every effort made for its resuscitation, and soon dies. The white thorn gives a good degree of vigor to the pear scion, and is preferable to either of the aforementioned, as being both more hardy and more nearly allied in nature to the pear; but even this ought not to be used only in cases of extremity, and when pear stocks cannot possibly be procured.

Germantown Telegraph.

NINTH AGRICULTURAL MEETING

AT THE STATE HOUSE, MARCH 11, 1851.

Hon. Marshall P. Wilder in the Chair,—Subject, "Agricultural Education."

The President in opening the discussion entertained and interested the meeting with an able and appropriate speech, showing the importance of intelligence and science in all the pursuits of life. He contrasted the condition of the civilized nations with that of savages, exhibiting the great advantages of education, or the power of knowledge. He then took a hasty view of some of the most important discoveries and improvements of modern times, and the wonders that they were effecting. Among educated people, steam, railroads, telegraphs and other agents are at work contributing to their welfare; and may not these or other agents be brought in requisition to aid the farmer in his progress and his labors? May not the chemist prepare materials that serve as fertilizers? There has not been so much progress in agriculture as in other arts. The farmer needs scientific and practical knowledge. We have colleges for the education of our sons for other professions, but no institution to give them instruction in farming, or the sciences that appertain to this calling. Massachusetts has an excellent system of education that commands respect all over the country, and shall she allow other States to excel her in agriculture? Other States are moving in this business. Science asks the chemist what elements the plant contains, and what are in the soil; and whether it is adapted to the plant, or what ingredients are deficient? When the soil is exhausted, indiscriminate manuring will not restore its fertility. Our lands have become exhausted all over the country; even in the once fertile West the crops are diminishing, and some mode must be adopted for the restoration of our exhausted land. In Europe they have been making improvements in this way, and already some lands yield double their former produce. In the breeding of animals a great improvement may be made. Compare the plump fat Suffolk pig, with the old-fashioned squealing lean grunter. All other stock is susceptable of improvement. Our crops may be greatly increased too. At present our produce is decreasing, while our population is increasing. This State imports equal to 2,000,000 bushels of bread stuff. Our agricultural journals are constantly sending forth useful information, and our agricultural societies are also doing much; yet there is a deficiency. The means of a professional education should be within the reach of the farmer. As the Agricultural Commission (of which Col. Wilder is president) had recently made a report to the Legislature, with a plan for a school, the speaker omitted making any remarks on this branch of the subject.

Prof. Fowler, of Amherst, expressed his entire satisfaction at what had been said by Col. Wilder. He referred to some important modern discoveries in chemical science, and their adaptation to purposes of great practical utility, and these cases illustrate a thousand that are applicable to agriculture. In the early stages of society there was no science. The arts grew up first. Then followed the sciences. Now the order is reversed. Science precedes, art follows. There were a few isolated facts which aided the arts. By the classification of facts, sciences have been established. Formerly the arts aided in the formation of science; but now science is rapidly progressing, and it contributes to the improvement of the arts, which now hardly keep pace with the sciences. Knowledge is power in agriculture as in every thing else. What is it that distinguishes Massachusetts but the application of good sense, for which the Yankees are noted, and intelligence and science? Let Massachusetts lead the way in the application of science to the art of agriculture by the establishment of an institution which shall promote the cause of agricultural education. The other States of the Union are looking to her agricultural improvements which shall comport with the ancient renown and her present glory. Let her be true to herself and furnish an example to the whole country.

Mr. Whittaker requested the chairman to present the plan for an agricultural college, as recommended by the Agricultural Commission, which request was complied with. We shall refer to this subject when the report is published.

Mr. Teschmacher, of Boston, remarked that there was quackery in every thing, and a good share of it in what is called agricultural science, and publications generally. To guard against these errors we want a school under competent teachers, where the young farmer can obtain true agricultural science and correct practice by working with his own hands. He was in favor of science and useful periodicals; but opposed to quackery. He spoke of the advantages of science, and stated various cases as illustrations of his position. His remarks on the potato rot went to show that fungus was a cause and not consequence of the disease. Salt and lime were a remedy. Adjourned.

We have a communication from J. W. Proctor on this subject, which is necessarily deferred for want of room.

A LARGE HOG.—Reuben Locke, Jr., Stoneham, Mass., raised a hog, Columbia breed, from N. Y., 20 months old, which weighed 710 lbs. when dressed, and was growing and gained quite rapidly when killed; the skin quite thin and the meat very fine, thickness of pork 4 to 6 in. thick on the back, but held the thickness remarkably well; was killed on Tuesday last week. This hog was 6 ft. long from between the ears to the tail, and girted 6 ft. 5 inches round the body at the fore-shoulder

AGRICULTURAL QUESTIONS.

No. 4—Subject, *Breeds of Cattle.*

I. Of what breed are the cattle now found in Massachusetts and called *native* cattle?

II. How do these native cattle correspond in character and condition with the cognate breed in England descended from the same common ancestors?

III. How far is the present difference between the two breeds attributable to difference in climate, pasturage, and other local facts, and how far to crossing or breeding in and in, or management?

IV. Is breeding in this country conducted as intelligently and thoroughly as in England, and if not, with what difference?

V. How far is it desirable to attempt in any country the naturalization of a breed of cattle larger than the herbage and culture of that country can keep up?

VI. May not difference in quality of pasturage, and especially the open winters and abundance of root-food in England as compared with this country, be the reason why imported Durham and other cattle of that class are not in general favor in Massachusetts?

VII. What is the true relation between the quantity of given descriptions of feed, and the breed, weight and size of the several varieties of cattle?

VIII. What is the effect on the *breed* of cattle of working cows in the plough, as is done sometimes in France and Spain?

IX. Have any experiments been made for the naturalization in the United States of the buffalo proper, either the large one which is found domesticated in Egypt, or the smaller one common in India and China?

X. Have experiments been made for the domestication of the bison or wild cattle of America? And if so, with what results?

XI. Have experiments been made for the naturalization in New England of any of the fine Spanish breeds of neat cattle?

XII. Are the qualities of breed which belong to the best working cattle, the same as those which characterize the best milch kine?

XIII. What is the effect on cattle of geological varieties of soil?

XIV. What is the result (if satisfactorily ascertained) of breeding in and in, or the reverse?

XV. From the improved breeds of imported cattle, which for a generation or two appear to deteriorate, might there not, by careful management after the acclimating process shall have taken place, be raised other breeds which should unite some of the excellences both of the European stock and of the native stock; just as different races of men in a generation become Americanized, while they still bear marks of their national origin.

☞ The estimated value of the public parks and squares in New York city is $8,986,000.

AGRICULTURAL QUESTIONS.

No. 5.—Subject, *Maize, or Indian Corn.*

I. Of what continent and of what region in that continent is maize a native?

II. What is the office of the tassel on the upper part of the stalk, and what is the office of the silk, and how can you produce different varieties of corn on the same cob?

III. Into what two classes is maize divisible, having reference to the proximate principles, gluten and farina?

IV. Of these two classes, which furnishes maize that is most easily cooked? or that is most easily fermented? or that is best adapted to transportation?

V. Of these two classes which is the heaviest, bushel by bushel? Which succeeds best in the North and which in the South?

VI. Which is best suited to make puddings? which to make bread? which has the most oil? which can be used as pop corn? what is the cause of popping?

VII. What is there peculiar in the ultimate elements of the chit as compared with the other parts of the kernel?

VIII. What are the nutritive or fattening qualities of maize compared with wheat? compared with rye? compared with buckwheat or oats? whether by man or by animals?

IX. What are the best means for protecting seed against worms or birds, whether by steeping or otherwise?

X. What is the best mode of cultivating maize, whether by ploughing and hilling or otherwise?

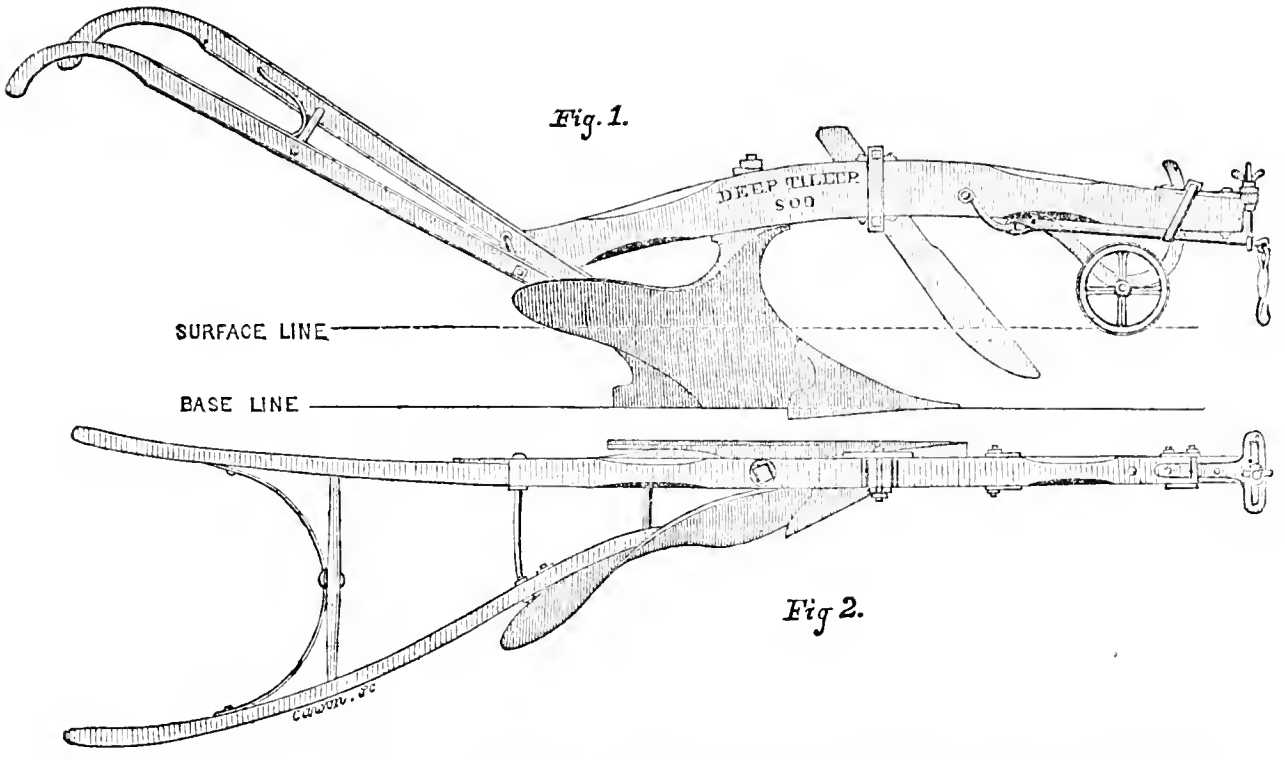
XI. What is the best soil and the best kind of manure for maize, and how should it be applied?

XII. How can you obtain the most fodder from maize, whether by topping or otherwise, without lessening the quantity or injuring the quality of the seed corn?

XIII. Is maize becoming more extensively used as an article of food, and is there an increasing care in selecting, grinding and cooking it, that it may be at once palatable and nutricious?

XIV. Does maize promise to be an important export in commerce, and how is it best prepared for exportation?

☞ A gentleman in England intends to cover a large barn, 110 feet long and 28 feet wide, on his farm at Heavitree, with a glass roof, after the model of the palace of glass. The expense will not be above two-thirds of the cost of slate, and he anticipates several advantages from the novel roof; among others, it may be applied to the drying corn during a catching harvest. The corn can be placed in the barn immediately upon being reaped, by which means it will have the benefit of the sun when it shines, be protected from the showers, and also dried by artificial heat, if required. He will next sow the land with turnip or rape, and so get three crops in one year.



Ruggles, Nourse, Mason & Co.'s Furrow Plough, No. 72—Furrows 7 by 11 and 12 inches.

PLOUGHS AND PLOUGHING.

This is one of the most important subjects that comes under the consideration of the cultivator. A good plough and its proper use seems to be at the foundation of good husbandry. It is the first process, and the main process in tillage. Within a short period ploughs have been so improved that one-half of the labor has been saved, and some have thought that so great an improvement had brought this valuable implement to perfection.

But this is not the case; great improvements are still going on, particularly for the purpose of adapting ploughs to various soils, and to different purposes. Among those who have recently taken a deep interest in this matter is Hon. F. Holbrook, of Brattleboro', Vt., well known to our readers as one of our correspondents; and we have no doubt that his investigations and well-directed exertions in the cause will have a favorable result in facilitating and improving the operations of the farmer.—We copy the following able article of Mr. Holbrook from the March number of the Albany Cultivator, and its utility will be an ample apology for its necessarily great length.

When I began farming, I found that my lands had never been ploughed over four to five inches deep. By long use of the plough, and the oft-repeated pressure of the cattle's feet in furrows of this depth, a hard crust or *pan* had been formed, through which the roots of the grasses and other crops did not penetrate. Not being able by my own reflections to discover any good reason why the roots of my crops should be confined within so narrow limits, and finding that the standard authorities in agriculture almost invariably recommended deeper ploughing, I resolved at once to give the crops a greater range of pasture. Each field, in its regular order, was accordingly broken up six inches deep. The additional soil thus brought to the surface was allowed to remain there, subject to the influences of the atmosphere, and of good cultivation. When the fields were ready for the next rotation, I found the roots of the grasses had extended just as low as I had ploughed, and that, to all appearance, the soil was of uniform quality to the depth of six inches. This state of things pleased me so well that I determined to plough still deeper; and the fields were accordingly broken up seven inches deep. It is true, the appearance of the surface of the inverted furrows was rather suspicious and forbidding; but I had hopes that the agents that had operated so kindly before would act favorably again. They did so; and the crops were satisfactorily increased. At the time for the next rotation, I found the grass-roots had penetrated and formed themselves into net-work just as low as I had ploughed. I had now become well satisfied that deep ploughing was better for me than shallow ploughing; and I have accordingly been slowly but constantly deepening the soil, until portions of the fields bear a furrow nine inches deep; and as many grass-roots will now be seen at this depth as were formerly seen at the depth of six inches. The crops are good; for their roots can now strike deep, and expand, and luxuriate, and gather up nourishment, in formerly forbidden boundaries.

I think it may be said, generally, that deep ploughing should be the rule, and shallow ploughing the exception. It is true, that some soils may never, under any circumstances, bear as deep a furrow as others; then, again, where the surface soil is by nature very thin, and the subsoil is very poor, the process of creating a fertile soil eight inches in depth is a work of time, patience, and skill; and though it be the work of a life-time, it may yet be a very profitable work. But the soil of by far a majority of our farms may be deepened an inch or so at a time, if accompanied by liberal manurings and good cultivation. In other words a suitable range for the roots of our crops

may be obtained in a few years. In no case, however, should the surface plough be plunged into a poor subsoil at hap-hazard.

As soon as I was ready to turn sod-furrows seven inches deep, my ploughs began to be troubled to carry themselves erect and do as good work as at nine inches deep. At eight inches deep they did not do nice work, and at nine inches deep they could not work at all, until I added some contrivances of my own.

About a year ago, I called upon Messrs. Ruggles, Nourse, Mason & Co., and upon stating the difficulties I had experienced with my ploughs, they remarked that there was quite a growing demand for ploughs for deep work; and they at once evinced a most commendable readiness to undertake such a series of experiments, regardless of expense, as should enable them to supply, in the best manner, this demand of an advancing agriculture. They made a plough that gave me satisfaction, for it could turn a furrow a foot deep, and it did not choke under the beam. The making and trial of this plough suggested further improvements, and these in turn led to others. The various experimental trials may be summarily stated as follows:

1. To make a plough to turn furrows ten or twelve inches deep, and to turn them without choking under the beam.

2. To make a plough to turn deep furrows, requiring the least practicable width in proportion to the depth of furrow.

3. To make a plough turn deep narrow furrows, and to turn them on so easy a line of transit as to prevent breaks in the furrow-slice.

4. To make a plough to turn deep narrow furrows on the easiest practicable twist, and to lighten the draught of the plough whenever it could be done without detriment to the best work.

5. To make a series of sizes of ploughs for turning flat furrows, seven, nine, and twelve inches deep, each plough proportionately combining the above specifications.

The experimental trials also led to the production of two sizes of ploughs for adhesive soils, laying lapped furrows at an angle of 45°; and two sizes of ploughs for turning stubble furrows.

Fig. 1 represents a furrow-side elevation of the No. 72, or smallest size of the new flat-furrow ploughs, and Fig. 2, a horizontal plan of the same. In considering the remarks I offer upon the No. 72 plough, it will be borne in mind that plough No. 73, for furrows nine inches deep, and plough No. 74, for furrows twelve inches deep, each possess the same general form and working properties of No. 72. They are each constructed upon the principles of an ingenious scale, the lines of which, as applied to the mould-boards of the three ploughs, are relatively the same throughout.

Fig. 1 represents the handles as long and *raking*, which gives the ploughman a powerful leverage, and an easy and accurate control of the implement; the beam is high, and arches well over the coulter, to permit loose grass or other loose matters to pass off, and the plough to swim clear; the coulter is consequently long, and is made wholly of steel, to give it the requisite stiffness; the wheel, or roller, is nine inches in diameter, to prevent laboring and creaking of the avis, and it is set under the beam, experiments the past summer indicating that a wheel on the side of the beam gives the plough an unsteady movement; a wrench accompanies the plough, adapted to the adjustment of the coulter, roller, clevis, &c.; the draft rod is short, connecting with the beam forward of the coultre, in order to preserve the space under the beam in that region entire; the quadrant or clevis attached at the end of the beam, through the bolt of which the draft-rod passes, is adapted to give the plough any desired *landing* or *earthing;* the mould-board is long, the line of transit over it for the furrow-slice is easy, giving the slice a long, easy, and equal curvature throughout.

Fig. 2, shows the inclination of the land-side, and the coulter has a corresponding inclination. Fig. 2 also shows the position of the beam over the body of the plough. The share and lower parts of the mould-board are narrow, and the mould-board is high, to adapt the plough to deep, narrow work. The share is long, with a raking cut, which gives it an easy entrance into the ground.

Fig. 3, represents pretty well the movement of a furrow-slice 7 inches deep and 11 inches wide, over the mould-board of this plough, and its final position after leaving the plough. The easy transit and the equal flexure of the slice, are noticable. By means of the inclined land-side and coulter, the slice is cut off the land upon a bevel, which very much facilitates its dropping in snugly beside the previously turned slice. It will be observed that the width of cut made by the share is such as to

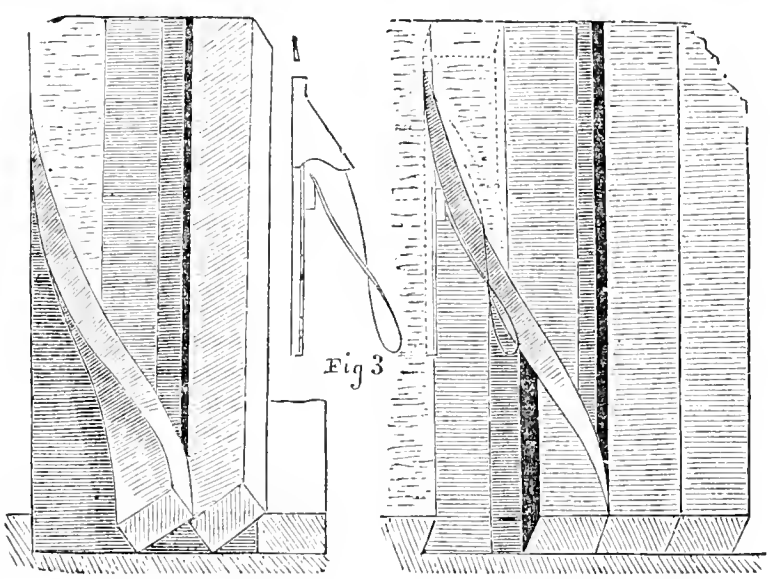


Fig. 5. *Fig. 3.*

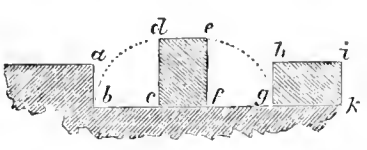


Fig. 4.

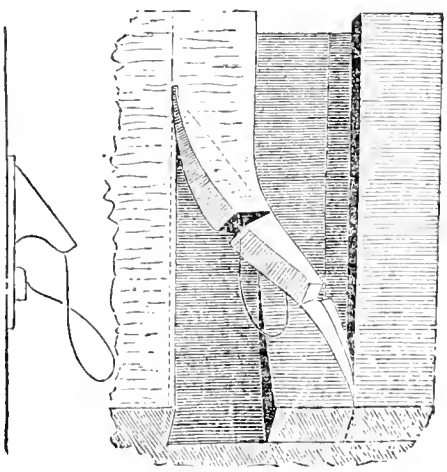


Fig. 6.

leave a good hinge uncut, upon which the furrow holds its proper position at the bottom, while the top is describing a quarter of a circle to reach the perpendicular position, at which position the plough has ripped off the hinge. If the slice were cut entirely off by the share, it would be apt to push off at the bottom so far as to fail of being turned over to its proper position,—in other words, a wider furrow would need to be taken to turn well.

Fig. 4, shows that, theoretically, a furrow cut straight from the land will shut in beside the previously turned furrow. The furrow-slice, c, d, e, f, is cut straight down at a, b, and rising on the corner e, as a pivot, it describes a quarter circle, b, d, and then changing to f as a pivot, it describes another quarter circle, e, g, and shuts in snugly beside the previous furrow, g, h, i, k. But in practice it is difficult to make the furrows do so; they are very apt to ride on the corners, as represented by Fig. 5. With an inclined land-side, and a bevil-cut from the land, this practical difficulty is avoided.

Fig. 6 represents the movement of the furrow-slice over an imperfect mould-board. It will be observed that the plough is too wide on the bottom to take a narrow furrow, and if the attempt is made to turn over a 11 inch furrow, there is no hinge left for it to turn on. The mould-board is so short, and wings over so excessively, that the furrow-slice is cramped into an unnatural movement, and is badly broken. The plough is also too low every way for a seven-inch furrow, and is completely buried. We find in practice that such a plough can only be kept erect in furrows seven inches deep, by constant laborious exertion on the part of the ploughman; that they have a constant tendency to ride the furrow at the point where the mould-board wings over so much; that the heel of the land-side sole is lifted an inch or two from its proper level position in the furrow-channel, and that the plough inclines very much to run on the point of the share. Many of our American ploughs are too wide on the bottom for narrow furrows, too low in the mould-board for deep furrows, (or furrows seven inches deep,) too short for turning any furrows perfectly, and too unsteady in their movements generally.

It is a too common custom with our farmers in ploughing, to strive to get over the greatest possible breadth of land in a day, without regard to the best work. The furrows are too shallow, and they are cut as wide as the plough can possibly turn them, and often even wider, the deficiency in the plough being made up by the foot of the ploughman, or else by the "cut and cover system;" and this gives the plough a very unsteady action; the furrows are very crooked and uneven; they do not match together at all well; the ploughman raves and scolds and whips; he assumes all sorts of attitudes, the team is chafed and fretted, and the whole matter is wrong. It is much harder work both for man and team to plough so, than it is to take nice, straight, uniform furrows. But this is not all the evil. The implements that follow the plough cannot do their work half so effectively as they would do if the ploughing had been accurate and nice,—much less can they do what should have been done by the plough. There is no work in the whole round of husbandry that more demands the exercise of patience, precision and skill, than that of ploughing, —none, where, by the exercise of these qualities, the farmer receives a better reward. That old worthy, Jethro Tull, in his honest enthusiasm used to say, that if land were thoroughly pulverised, manure would not be needed. He stated the case pretty strongly; but it is not stating it too strongly to say, that however well land may be manured, the crops it is *capable* of producing will not be obtained, unless it is well pulverised—unless it is reduced to that state of tilth that permits a free circulation of air and moisture through it. Not the thick heavy clods, but rather the finely pulverised particles form the active portions of the soil. In whatever light, then, we view the matter, thorough pulverisation should be the aim of the farmer. *Deep, narrow* furrows are the best foundation for fine tilth. If the plough has failed to prepare this foundation in the best manner, no implement following in the cultivation can supply the deficiency.

Fig. 7.

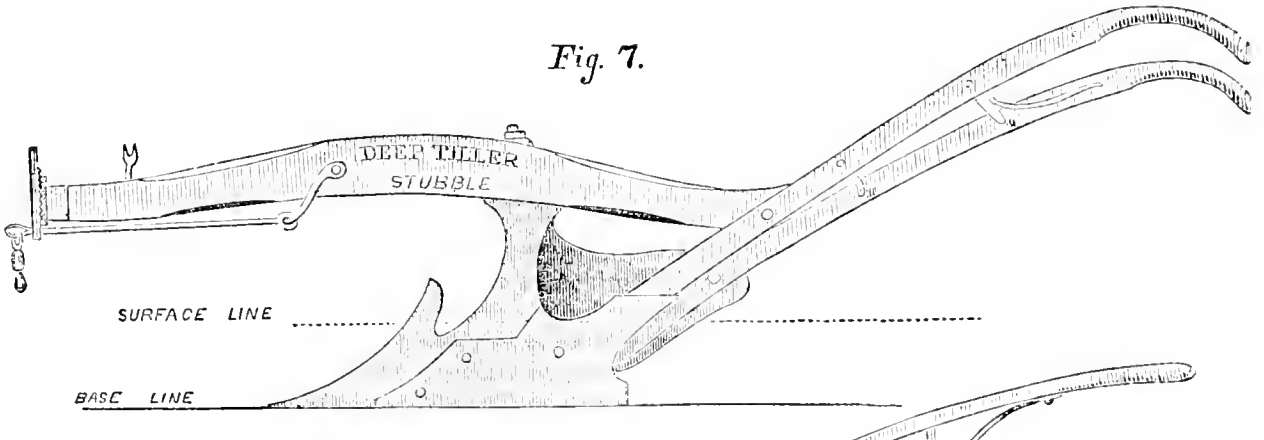
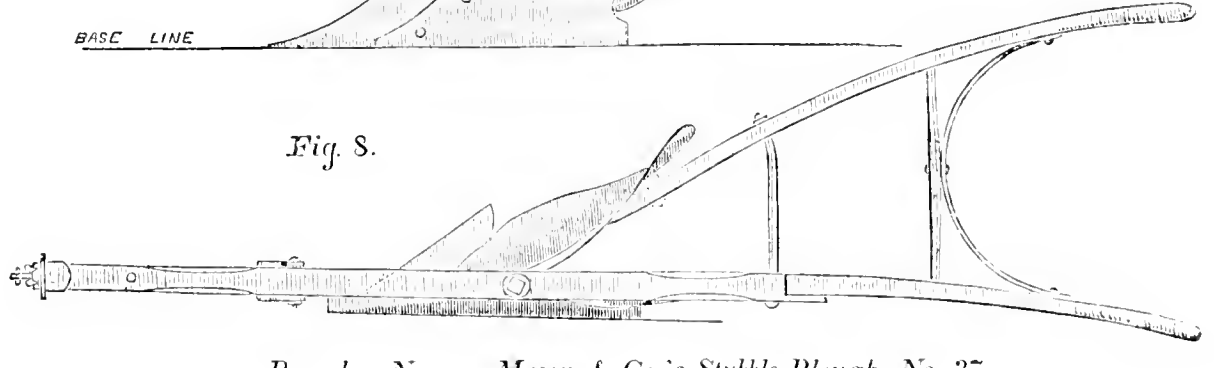


Fig. 8.



Ruggles, Nourse, Mason & Co.'s Stubble Plough, No. 37.

Fig. 7 represents a land-side elevation, and Fig. 8 a plan of stubble plough, No. 37. There is a larger size, No. 38, adapted to deeper work than the plough here represented. The surface line, Fig. 7, shows the position of this plough in a seven inch furrow. The handles are of good length, though shorter than those of the No. 72 plough; the beam is high and arching; it is mounted with a short draft-rod and a dial-clevis, adapted to give the plough a wide range, both in *landing* and *earthing*. The perpendicular height from the base line to the under side of the beam, immediately forward of the standard, is seventeen inches, which enables the plough to make its way among rank stubble, corn-stalks, &c., without choking. The fin-cutter is an excellent point in this plough. By making an easy, clean cut from the land, the furrow is not encumbered with clods of earth rolling down from the land-side, as they are apt to do where the furrow is torn from the land by the breast of the plough. The fin-cutter also lightens the draught of the plough. Fig. 8 shows the form of the mould-board, the position of the beam over it, and the position of the land-side.

Fig. 9 is a pretty good representation of the work of this plough in stubble or old land. It is noticeable that the furrows are nicely laid for the reception of the seed grain; that the furrow-slice is all taken up and forced over to an inverted position and there it stays; and that the furrow-channel is entirely cleaned out for the reception of the next furrow. It is impossible, however, to represent these practical matters exactly on paper; we can only represent them generally.

Fig. 10 represents the work of an approved sward plough in stubble furrows. It is not broad and full enough at the heel to clean out the furrow-channel. Then, too, after the furrow-slice has reached the perpendicular position, there is not force enough in the mould-board to compel the slice to go over to its proper place, and as there is not cohesion enough in the slice to hold it together, a portion rolls one way, and a portion the other. The centre of the furrow on top is therefore the highest, the furrow-channel is half filled up, and the work generally will not compare with that done by the stubble plough No. 37. The stubble plough No. 37 would

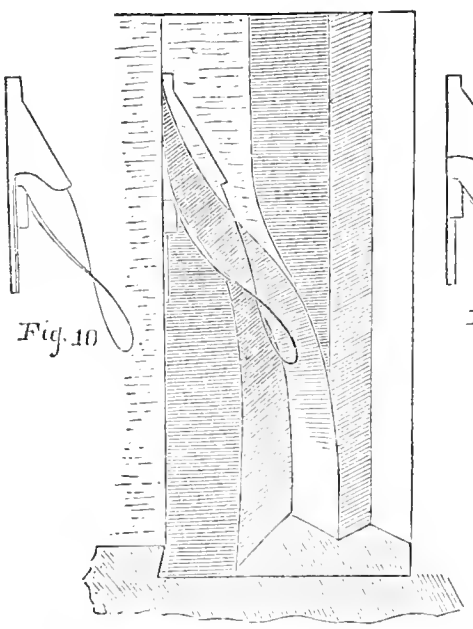


Fig. 10

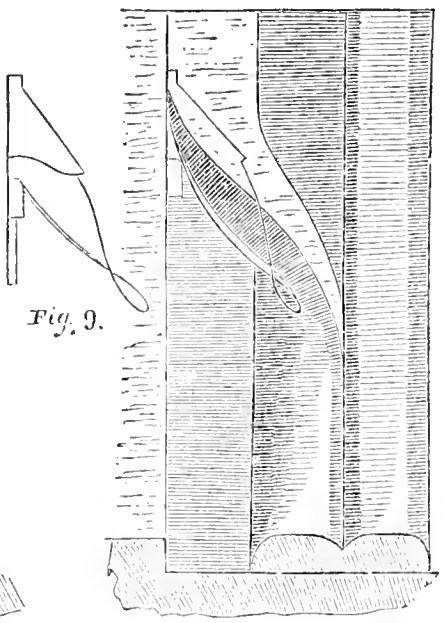


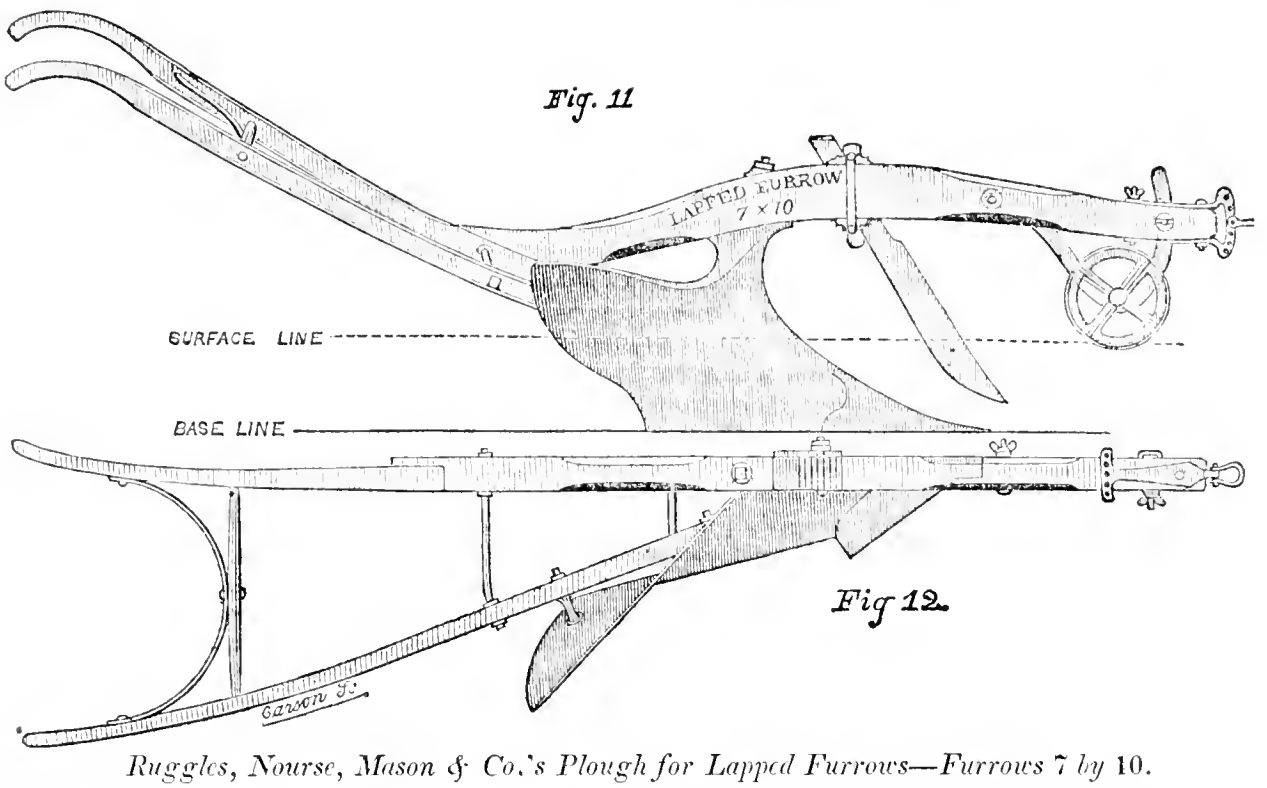
Fig. 9.

not make nice work in sward-furrows; it would break them too much.

Fig. 11 represents an elevation and Fig. 12 a plan of the new sward plough for moist adhesive soils. There is another size, for furrows nine inches deep, of the same general form and proportions with the one here represented. The handles, Fig. 11, are long and raking, the beam is high, giving a space of seventeen inches forward of the coulter, and the plough is mounted with a Scotch clevis, the adjustment for *earthing* being represented in Fig. 11, and that for *landing* in Fig. 12. The general outline of the mould-board is very well represented in Fig. 12. The share is narrow, the wedge-power great, and the back part of the mould-board is adapted to place the furrow-slice exactly at an angle of 45° before leaving it. The land side is perpendicular, and the coulter stands in a range with it.

In considering the forms and proportions of a plough best adapted to the working of stiff heavy soils, Messrs. R., N., M & Co. have thought that plough the best that will cut a perfectly rectangular furrow, whose depth is to its width as two is to three, and lay it at an angle of 45°. The ploughs for stiff lands that they now offer the public, are adapted to work as above specified. They combine the best working properties of the celebrated Scotch plough invented by Small, with the lightness and cheapness of the American plough. The lines of scale from which these mould-boards are fashioned, give the mould-boards a slight convexity of surface, which is considered an advantage in the working of tenacious, unyielding soils; but the lines may be varied to straight lines for medium soils, or to concave lines for light sandy soils. The line of transit for the upper edge of the furrow-slice, is adapted to the delivery of the slice with an unbroken crest. The mould-board presents a uniform resistance to the furrow-slice, and will brighten uniformly over the entire surface, however tenacious the soil may be.

Fig. 13 represents the action of this plough in seven inches deep by ten inches wide. The plough enters the ground very easily, a good hinge is preserved upon which to raise the furrow slice to its perpendicular position, the back part of the mould-board lays the slice at an angle of 45° before leav-

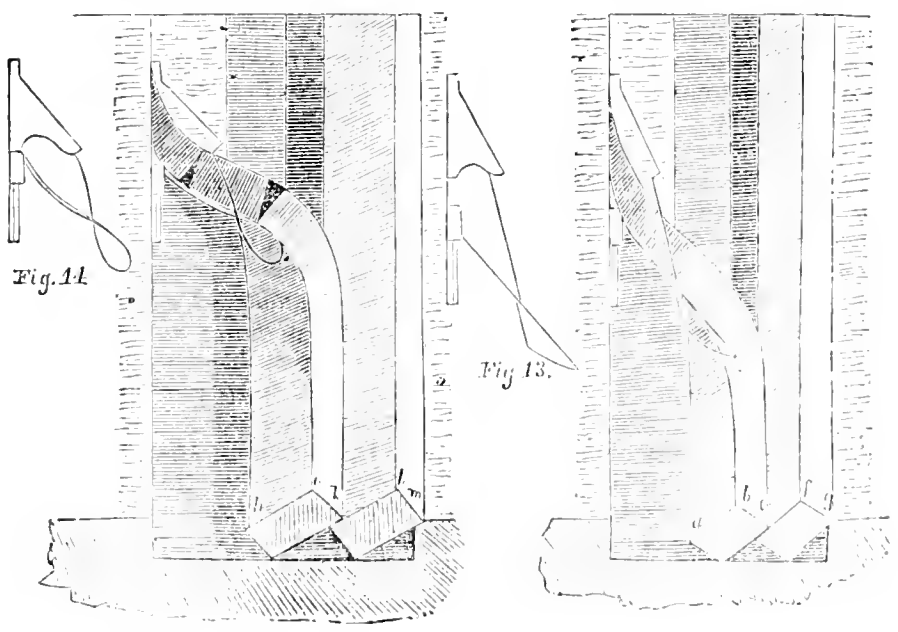


Ruggles, Nourse, Mason & Co.'s Plough for Lapped Furrows—Furrows 7 by 10.

ing it, and the two exposed faces of the slice are of equal breadth,—namely, seven inches.

Fig. 14 represents the action of a plough unadapted to laying proper lapped furrows. The plough is so wide upon the bottom as to require a width of furrow-slice of at least twelve inches, and yet it cannot go more than seven inches deep; indeed it can hardly do that, without crowding over to the left or land badly, and it cramps and breaks the slice very much. But the slices are of unequal proportions. The width is too much for the depth, and consequently, so flat a surface is formed, that if the furrows are to lie exposed for some time to the weather, and if the soil be a stiff adhesive clay, it will run together and bake so much as to render the harrow quite inoperative, and but a shallow seed-bed will be raised. The spaces underneath the furrows are wide and low, and they will be apt to fill with soil, which will prevent a proper circulation of air, and a free passage of superfluous moisture, and the surface will be apt to be wet and heavy.

The triangles, abc, efg, Fig. 13, are of equal sides, and the angles, b, f, are angles of 45°. The triangles hik, klm, Fig. 14, are of unequal sides, and the angles, i, k, are angles of only 36°. If we suppose a series of *sections* of these 7 by 10 and 7 by 12 furrow-slices, each extended to ten rods, for instance, in width, and that they are one inch thick, we shall find upon a calculation of the aggregate exposed surface of each, that the furrow sections, 7 by 10, of equal faces, have exposed 2791 inches of surface to the air, while the sections, 7 by 12, of unequal faces, have exposed 2722 inches; and any one who chooses to extend the calculation and comparison to the acre of ground, will find the balance to be very much in favor of the slices represented in Fig. 13. A like comparison of rectangular furrow-slices, whose depth is to their width as two is to three, and which are laid at an inclination of 45°, with furrow-slices of any other form, or proportions, that are practicable to be laid, will be found to result in favor of those first named;—indeed it can be shown that no furrow-slices but rectangular ones, whose depth is equal to two-thirds



their width, *can be laid at an inclination of* 45°; and since it can be proved that rectangular furrow-slices, whose depth is equal to two-thirds their width, and which are laid at 45°, present the greatest surface to the ameliorating action of the atmosphere; and since it can also be proved that such furrow-slices present in their projecting angles the greatest cubical contents of soil for the harrow to operate on, in raising a fine, deep tilth, or seed-bed, and that such furrow-slices have the best spaces for the circulation of air, and the passage of water, underneath them,—we may conclude that all ploughs, for laying lapped-furrows in heavy adhesive soils, are absolutely faulty in just so far as they fail to cut rectangular furrows, whose depth is to their width as two is to three; and to lay them at an inclination of 45°. I would give unerring mathematical demonstration of these points, were it not that I should be extending an article already too long.

I intended, Messrs. Editors, to have said something about the importance of each radical improvement in the plough, in increasing actually the wealth of the country, not only directly by the increased crops to be derived from improved ploughing, and the direct saving of expense in doing the work, (a good plough, saving time and labor,) but, indirectly, by exciting in the farmer's mind a new degree of pride and ambition to farm it better every way. But my article is already too long, and I forbear.

For the New England Farmer.

EDUCATION OF FARMERS.

I congratulate the farmers of Massachusetts on the introduction of this subject for discussion; and the liberal and enlightened views that have been presented by the chairman of the meeting. They are such as we had a right to anticipate, from one who has done so much, by his own example, to advance the best interests of the farmer.

How shall the condition of the farmer be improved? is the all-absorbing topic of the present time. There are those, not a few I fear, who think the *art of cultivation* needs no culture; that it will thrive best in the *natural way;* will progress most, with least protecting care; that what the fathers have done the sons can do, and all attempts to mend this state of things will be labor lost. To such I have only to say—

> "Where ignorance is bliss,
> 'Tis folly to be wise."

In all other branches of industry, preliminary preparation is deemed indispensable. Who would think of calling on a professional man for advice and assistance, be he minister, lawyer, doctor, or whatever he may be, who had given no attention to qualifying himself in his profession? Does the *mechanic* find favor in his employment, until he has been properly instructed? Who among the *mercantile class* succeed best, those that come in at the door, or those who come in some other way? Why then shall the cultivator of the soil, alone, be supposed to be endowed with *an instinct* adequate to all the exigencies of his employment? The truth is, because some things will grow, in spite of the ignorance of those who plant, many suppose there is no necessity for co-operative efforts.

The culture of the soil is a science, a science most complicated, requiring the combined application of all other sciences. How is it possible to understand the constituents of soils, or the influences of manures, without understanding the elements of mineralogy and chemistry? Without doubt there are many skilful cultivators who know nothing of *these terms*, but does it follow, that they are ignorant of the principles involved in them? Do not these cultivators, like the observing mariner, who has never been instructed in the art of navigation, acquire a science of their own, that will unerringly lead them to the port of destination? This is necessarily a labor of years. It is the same kind of knowledge possessed by the rude sons of the forest, wherein their skill surpasses that of civilized man. If, when starting in life, this knowledge could at once be acquired, would it not ensure progress in advance of competitors less favored? Every one must admit, the more intelligence, the more skill, the more knowledge a man has, the better will he be qualified, other things being equal, for the management of a farm. So also with those who are called on to assist in such management. It is pointedly remarked by Mr. Coleman, when speaking of the mode of culture in England—"the difference between an educated and uneducated laborer is this, —the one is accustomed to depend upon himself, to inquire, to reflect, to observe, to experiment; the other, scarcely exercising his mind at all, more than the cattle which he drives, is accustomed to move in the line, and that only, which has been marked out for him."

The question now is, can any thing be advantageously done by the State to promote their education? With us this is a new inquiry. In many of the States it is now going on. New York, Ohio, and others have done something. Shall Massachusetts, the oldest, and as she claims, the most enlightened of all the sisterhood, be the last to make the effort? Suppose it should be made and fail—who will be harmed thereby? Suppose $20,000 of the funds realized from the tax on banks, togethgether with $20,000 more collected from voluntary contribution, should be applied in this enterprise, as the commissioners recommend; will any harm follow such an appropriation? When I think of the liberality of the action of the House yesterday, on a collateral subject, I am inspired with a hope that something will be done. With a high probability of benefit on one hand, and an entire certainty of no loss on the other, there can be no hazard in thus legislating. The time has come when the experiment is demanded. If farmers are just to themselves, it will be tried.

March 11th, 1851. P.

☞ Mr. J. R. Stafford, an Ohioan, has for several years been engaged in devising and perfecting improved methods of putting up Corn Flour. His recently patented method has received the stamp of scientific and practical approbation, earning him several gold medals and other gratifying testimonials. The new and extensive mills constructed under his auspices at Atlantic Dock, Brooklyn, are now turning out an abundant supply of "Indian Corn Flour," and "Indian Corn Farina," of the best quality, utterly divested of moisture, and so put up as to be proof against deterioration or change by transportation, time or temperature. We advise every one to procure a box of this "flour" and one of this "farina," as samples of the best preparations of grain for human food ever yet made. The attention of shippers of breadstuffs, we presume, has already been drawn to them.—*N. Y. Tribune.*

For the New England Farmer.

THE CULTIVATION OF NATIVE TREES AND SHRUBS.

[*Continued from Page* 86.]

Mr. Cole:—The evergreens form an interesting class of ornamental trees, which have not received that attention from cultivators which their beauty demands. We shall first speak of the natural order Coniferæ, embracing the pines, firs, junipers, cypresses, spruces, larches, hemlock and yews. The larches embraced in this order are deciduous trees, and have been noticed. The first tree we shall notice is the White Pine, known in England as the Weymouth Pine. This tree is one of the loftiest in our forests, having been seen 250 feet in height, by 6 feet in diameter. It grows only in the colder parts of our globe, being found in the 79th parallel of north latitude, and, on mountains, it flourishes within 3,000 of perpetual snow. It is easily cultivated, and of rapid growth, and when taken up for transplanting with care, and a sod of earth around its roots, it is almost sure to live and grow.

By this method, the pine, as well as all other evergreens of this order, can be safely transplanted at any season of the year, when the ground is not frozen, and even then, by what is termed the frozen ball method. We have removed in this way the white pine, as well as many other kinds of evergreen trees, with success in the months of May, June, July and August. The roots of the pine, and some other evergreens, when uncovered by the earth, and exposed to the air, consequently become dry, and are quickly injured. As a general rule, all evergreen trees succeed and flourish best, when planted in groups, thus affording each other protection. When placed singly and alone, they are sometimes injured very much by high winds, and I have for many years observed, that evergreen trees suffer more in the month of March, from dry, cold and piercing winds, than at any other period of the year. This injury is noticed by the leaves and branches becoming red and dry. In their native *habitat*, they fondly protect each other, and it is well to afford them some protection in their new position.

Beside, this grouping of trees in landscape gardening is a subject deserving of more attention than we usually bestow upon it, as it is a feature of great beauty, and some of our tender trees, shrubs or plants will succeed well, and withstand our severest winters by the protection they receive from a clump of evergreen trees.

Belts of evergreen trees planted on the north and east side of our farm houses, are very desirable from the shelter they afford in winter. Trees can be obtained from planting the seeds of the white pine, but then it is a tedious and slow process; the first shoots from the seed are weak and feeble, resembling a small spire of grass, and very liable to be thrown out of the ground by the frosts of winter. The trouble attending the raising of the pine from seed, can, I think, by us be avoided, as a plenty of small young trees, suitable for transplanting, can usually be obtained.

The Pitch Pine is a tree of no great beauty, frequently associated with the Red Cedar, and growing on our most sterile hills, and as it will grow and flourish in the most meagre soils, it is well calculated to beautify in some degree, with its dark green foliage, our dry, rocky hill sides. The Red, or Norway Pine, is found in Massachusetts, and closely resembles Pitch Pine, but grows to a much larger tree. These three species of pine, viz., the White Pine, Red Pine and the Pitch Pine, are the only species that have as yet been discovered in Massachusetts. Micheaux supposed that the yellow pine of the southern States, known to our carpenters by the name of the hard pine, was to be found on the Hudson River, near Albany. But Doctor Torrey has as yet failed, as he informs us, to discover it in New York. Should it be, however, found in that State, it is not improbable that it may occur in Massachusetts. There are said to be several large and beautiful pines, high up on the slopes of the Sierra Nevada, California. These will probably prove hardy in the middle States, and perhaps in the northern States. Mr. Douglass discovered in Northern California a pine tree blown down, which measured two hundred and fifteen feet in length, and fifty-seven feet nine inches in circumference, at three feet from the roots, while at one hundred and thirty-four feet from the root, it was seventeen feet six inches in girth. The cones measured sixteen inches in length.

The Fir trees are distinguished from the pines by thesr short leaves, and these being placed singly upon their branches, instead of being collected in bundles; and for their symmetry and pyramidial form. The Fir Balsam is thought by many persons to be the most beautiful of evergreen trees. But after observing this tree for many years under cultivation, we do not consider it worthy of the high enconiums bestowed upon it. It is a comparatively short-lived tree, and is often past its prime in forty years. We have indeed sometimes seen some very handsome specimens of the Fir Balsam, especially when young, but as they advance in age they frequently become open and thin, by loosing their leaves, the lower branches die, and the tree has a ragged and unsightly appearance.

We could point to many Fir Balsams, that have been planted not more than twenty years, that have ceased to be objects of beauty. The Double Balsam Fir is said strongly to resemble the common fir, and most people would not discover its distinctive marks. It is smaller than the Balsam Fir, its leaves are more numerous, of a rich appearance, and diffusing an agreeable odor. Mr. Emerson says it is to be found nowhere in Massachusetts, except on the top of Saddleback Mountain. It has been called the Fraser Pine by Pursh, from its discoverer, Mr. Fraser, who first noticed it on the mountains of Carolina.

The European Fir is, we think, a superior tree to our own, as an ornamental tree. The fir found in the forests of Germany, called the Silver Fir, rises to the height of one hundred feet, and frequently more, and is said to succeed well in Massachusetts.

The Red Cedar is a common tree, found on our dry, rocky hills. It has frequently a ragged appearance, and its trunk is deeply furrowed. But when the tree is taken young and trimmed of some of its lower branches, its trunk becomes smooth and straight, it forms a fine round head, and is a fine tree. Cultivation in a rich soil improves the appearance of this tree very much.

The Juniper, in this State, is a prostrate shrub found in our dry, rocky pastures, spreading for several feet in every direction, and is not worthy of particular notice. The Yew or Ground Hem-

lock is another prostrate evergreen, distinguished for its deep green foliage, and the rich scarlet color of its fruit, which resembles an acorn. Mr. Emerson says it occurs in the western counties of Massachusetts, and for the sake of the very rich green of the yew, it might be cultivated beneath the other trees, its natural habit, to take off the barrenness of the surface of the ground, especially under evergreens planted near a dwelling house.

We can hardly conceive of a more beautiful object around a house, than a belt of evergreen trees, say the white pine, with the surface of the ground around their roots covered with the rich green of the American Yew. The European Yew, sometimes called the Church Yard Yew, has long been used in England, to embellish places for the burial of the dead, and had many poetical associations connected with it. Its leaves are of a dark green, and its branches are close and compact. We have it under cultivation, and find it of an exceeding slow growth, and tender for our climate. In consequence of the slowness of its growth, and the injury it receives in winter, it has attained only to the size of a shrub. S. P. Fowler.

Danvers, Feb. 25th, 1851.

[to be continued.]

For the New England Farmer.

RENOVATING OLD ORCHARDS.

Mr. Cole:—The fruit-growing business is undoubtedly, under careful attention, to be henceforth a prominent employment of the New England farmer. We infer this from the fact that the healthfulness and luxury of the choice varieties are much better understood now than they were a few years since, when our apple-orchards, for the most part, bore natural and very ordinary specimens: when not one garden in half a dozen furnished a single pear tree, and these in the main produced worthless, insipid affairs;—when a cherry tree, unless it were some of the old varieties, of moderate and scrubby growth, producing when they produced at all, a small inferior fruit.

Then, in many places, the farmer who could sell his seek-no-furthers and greenings for 12 1-2 cents and 17 cents a bushel in autumn, thought he was doing a pretty fair business. Now he can sell the same varieties at the same season for fifty cents a bushel.

It is no wonder, then, that fruit culture is becoming more popular than it once was, and that many old orchards are undergoing a remodelling by grafting, and that many young trees are being set. Nor is it strange at all that in this grafting of old trees and setting out new, that many are in the end disappointed in their realizations. There are doubtless approximate causes for these failures in success which are so often realized.

First, we will take the old orchard, which very likely from mismanagement has fallen into a premature old age. There are many such in all parts of the country, and many of these are now-a-days having their rough trunks cleaned and their moss grown branches taken off to be newly grafted, with the expectation that when this is done, there is no more to do. Perfect success is the boon which the owners of such orchards claim, and chill disappointment is often the realization of their hopes. The young scion set in these old rough-barked, moss-grown trees, that have probably had their foliage harvested by the canker-worm for a quarter of a century,—we say scions set in these *may live* and have a sluggish growth for a year or perhaps for several years, but they will be sure to inherit the disease of the tree and in the end perish by them. If old trees are to be grafted, they should be subjected to the washing and scrubbing operation for a year or two before it is performed. That is, the old rough bark and moss should *all* be scraped off, and two or three washings of strong lye be given each season to impart healthfulness and destroy insects. Then another thing may need attention. The trees may stand in grass land and the old turf may have become so thoroughly sodded that the air and the dews, the sunshine and the storm, those great elixirs of vegetable health, have but little influence upon the roots. Tillage may be necessary to insure healthful vitality to the tree. We once took half a dozen trees, which had nearly given over bearing, and after a thorough ploughing, planted the land to potatoes two successive years. In 1842, this ground was thoroughly stocked, and that year and each successive one those trees have borne liberally, and yet there was no manure applied on this ground. The change was all effected by a judicious pruning and cleansing of the trees and thorough working of the soil Every particle of turf there, and every bunch of moss which had driven the turf away from home, became manure, and told in connexion with the deep tillage its efficiency.

We have resusciated a few old trees by another method, which to some may appear more favorable, and where only one or two are going to decay, may perhaps be more convenient. It is simply this. After relieving the tree of the rough old bark and useless branches, take a load of any productive soil and spread it evenly under the tree. If lime ashes or chip manure are mixed with it, so much the better; but if nothing else can conveniently be had, take the soil alone. It will kill the grass, nearly or quite, for a year or two, but the branches of the tree will start in new growth, the leaves will be broader and healthier, and the fruit be increased both in quantity and quality. An easy experiment; who will try it?

Again, farmers are disappointed after grafting their old trees by not getting the varieties they expected. We have suffered none at all in this way ourselves, but we have heard, from more than one individual, great complaints in this matter, especially where travelling grafters have been employed, even where the desired varieties were obtained for them, and they were paid at the same rate as when they furnished scions. Yet we suppose that if apple trees would speak with men's tongues and teach in men's language, there are many in Massachusetts that would tell that their ancient heads were taken off simply to be restored by scions from their own sprouts. That such occurrences do take place; we must believe on the principle that "in the mouth of two or three witnesses every word shall be established," for we have certainly heard more than three say that they had been duped in just such ways. How vexatious it must be, after paying a liberal compensation for grafting, and waiting in hope and patient expectation until the first blossom appeared, and then watched the swelling fruit until the joyful harvest time, and then find that the graft produces the like in every respect as the parent tree! We presume that all travelling orchard renovators do not practise such degrading frauds;

and that some should, may not perhaps be strange. But in order to be on the safe side we would advise farmers and fruit growers to get their scions from responsible sources, and then set them themselves, or if age or infirmity forbid this, employ those who will be found somewhere in the regions of responsibility, if there is any failure in the matter. Yours, &c.,

March, 1851. EVELYN.

For the New England Farmer.

PLOUGHS---DELANO'S HORSE RAKE.

MR. COLE:—Dear Sir,—Will you allow me to address a few words to the numerous readers of your valuable paper, in regard to ploughs.

Brother Farmers,—We as a class are quite careless in regard to the kinds of implements which we use, whereas on account of the great western competition which is circumscribing our profits, we ought to be "wide awake," and ready to adopt any thing that will reduce the amount of labor required, or do the work better.

In ploughs, we fail most, for we are apt to think that if we move the earth it is sufficient. Whereas, it is of the utmost importance that it should be, in almost all cases, completely inverted.

Few of us have learned that the good sward plough is fit for nothing else, at least wholly unfit for stubble. For the plough that will lay the sod over smoothly, has not sufficient flare to use in stubble ground. As the loose earth is continually falling back into the furrows, and the layer of earth turned up is left edgewise, leaving insufficient room for the next furrows slice; beside this, the objection of clogging is almost always felt.

Last fall, we procured of Ruggles, Nourse, Mason & Co., one of their Eagle, No. 38, Stubble Ploughs, and find for the first time that we can do the work to perfection, can turn in long manure, corn-stalks, &c., without fear of clogging. We find the ground pulverised, and completely inverted, the furrows open and clean, and every one is surprised at the amount of work done with the power which is required, and at the ease with which the ploughman can control it.

We should as soon think of pitching manure with the old-fashioned dung fork, as to think of dispensing with this plough for any other we have ever seen.

It is well made, with more strength and lightness combined than any plough of any kind I ever saw. They may be procured of Ruggles, Nourse, Mason & Co., of Boston or Worcester, or any of their agents, and should be described as Eagle No. 38. Wheel and Draft Rod; plain and fin cutter share; the plain share is for corn-stalks ground, long manure, &c.; the fin cutter share is for stubble or very weak sod.

Next allow me to recommend to you the A. No. 2, Side Hill. This received one of the premiums at our last Agricultural Fair, in Middlesex County, being used only as a right hand plough by an Irishman of but little experience.

I ought to have stated that the No. 38 will plough 11 or 12 inches deep. We used it 11 inches with 2 yoke of oxen; our neighbors use it from 4 to 6 inches with one yoke. The beam is about 18 inches from the bottom of the share. They have also one of the same kind, one size smaller, called Eagle, No. 37. I have never used this, but they (R. N. & M.) inform me that it operates well.

One advantage the ploughs of Messrs. Ruggles, Nourse, Mason & Co. have over the kinds we have generally used, is that they are already scoured bright. Another is if any part of the plough fails or gets broken, (a beam or handle for instance,) they can always supply you with the part wanted much cheaper and better than you can generally get made by an ordinary mechanic, and then you are sure of your plough working the same as before, as all parts are made by machinery, and of course all parts of the same exactly correspond.

The only interest in this matter which induces me to say so much in favor of these ploughs is the desire I have of seeing all who are engaged in farming using good implements.

I should like also to recommend the use of Delano's Independent Horse Rake. We used it last season, and dispensed with all others.

If any of our farmers or mechanics know of a good mowing machine, I hope they will describe it in your columns. This is what we much need, and which may, and I doubt not, will soon be constructed, if it is not already, well suited for the use of many farmers in New England.

Yours truly, DAVID LYMAN.

Durham, Ct., March 16, 1851.

For the New England Farmer.

NEW SEEDLING POTATOES.

MR. COLE:—My attention was called to-day to some very fine looking potatoes, raised by Mr. John Bradstreet, of this town; in connection with which, he stated the following facts, among the most encouraging that have come to my knowledge in this season of potato investigation.

Five years since, Mr. B. commenced raising potatoes from the seed. He planted the seeds, in drills, and in the autumn selected those most promising. He so continued until 1849; he had four kinds distinct and preferable to all others. In 1849, from two and a half bushels of the kind now presented, seventy bushels were raised. In 1850, from eleven bushels, two hundred and seventy bushels were raised. In no instance have they been affected with the rot or other decaying quality. They are large and fair, and uncommonly good for the table. They were planted on plain, shallow lands, moderately manured, yielding a bushel to every twenty hills. They bear cutting well, four eyes being sufficient to a hill. Mr. B. says he should be pleased to supply those curious in the matter, with some of these potatoes, and will warrant them as described, &c. Yours truly,

J. W. PROCTOR.

Danvers, March 11, 1851.

THE QUINCE.—The quince is easily propagated from seed, layers, or cuttings. From seeds, the quince is somewhat liable to vary in its seedlings, sometimes proving the apple-shaped and sometimes the pear-shaped variety. Cuttings, planted in a shaded situation, early in the spring, root very easily, and this is perhaps the simplest and best way of continuing a good variety. The better sorts are also frequently budded on common seedling quince stocks, or on the common thorn.

Quince stocks are extensively used in engrafting or budding the pear, when it is wished to render that tree dwarf in its habit.

ASSOCIATED AGRICULTURAL CONVENTION.

Agreeably to a call, which notice recently appeared in our paper, a convention of delegates from the several agricultural societies assembled at the Green Room, in the State House, March 20th, for the purpose of concerting measures for their mutual advantage, and for the promotion of the cause of agricultural education.

The convention was organized by the appointment of the following officers.

For President—Hon. Marshall P. Wilder, of the Norfolk Society.

For Vice Presidents—Hon. John C. Gray, of the State Society; Hon. Levi Lincoln, of the Worcester County Society; John W. Proctor, Esq., of the Essex County Society; Hon. E. R. Hoar, of the Middlesex County Society; Morgan Lewis, Esq., of the Berkshire County Society; Hon. Seth Sprague, of the Plymouth County Society; J. H. W. Page, Esq., of the Bristol County Society; Hon. William Clark, of the Hampshire, Hampden and Franklin Society; Gen. Jeremiah Mayo, of the Barnstable County Society: Josiah Hooker, Esq., of the Hampden County Society; Gilbert Monson, of the Housatonic Society; Alfred Baker, Esq., of the East Hampshire Society; Hon. George Denny, of the Westboro' Society; Hon. Henry W. Cushman, of the Franklin County Society.

For Secretaries—Hon. Mr. Whitaker, of Needham; Hon. Mr. Keyes, of Dedham; Wm. S. Lincoln, Esq., of Worcester; Samuel A. Dean, of Taunton.

Rev. Mr. Huntington, of Boston, invoked the blessing of Heaven upon the convention.

The president made a few remarks on the objects of the convention.

A business committee were appointed; and it was voted that the members of the executive and legislative branches of government be invited to attend the convention.

AFTERNOON SESSION.

In the afternoon the convention assembled in the Representatives' Hall, which was pretty well filled.

Rev. C. C. Sewall, of Norfolk, of the business committee, reported the following preamble and resolutions.

Whereas, Agriculture, the parents of the Arts, is essential to the subsistence and preservation of the human race, and embraces in itself the elements of national wealth and power—therefore, be it

Resolved, 1. That the encouragement and advancement of agriculture should be with us, as it has been with other civilized nations, a leading object of public regard, to be cherished by a generous public sentiment, and liberally sustained by the resources of the commonwealth.

Resolved, 2. That it is expedient to establish a Central Board of Agriculture, to be composed of delegates from the various incorporated Agricultural Societies of the commonwealth, whose duty it shall be to meet semi-annually, or oftener, if it shall be deemed expedient, and to recommend to the several societies uniform rules of action, and to take into consideration all subjects pertaining to the interests of agriculture.

Resolved, 3. That, whether acting as individuals, or as representatives, the citizens of the commonwealth are bound to encourage the application of science to all those branches of industry which minister to human comfort and happiness, and thereby to the wealth and prosperity of the State.

Resolved, 4. That Agricultural Schools having been found, by the experience of other nations, efficient means in promoting the cause of Agricultural Education, which is so essential to the prosperity of farmers, and to the welfare of communities, it becomes at once the duty and policy of the commonwealth to establish and maintain such institutions for the benefit of all its inhabitants.

Resolved, 5. That the general plans for an Agricultural School, recently reported by the board of commissioners appointed for that purpose, are worthy the profound consideration of the people of Massachusetts, and their representatives in the General Court, as indicating the feasibility and practicability of an establishment worthy that exalted character which the State has secured by the endowment of kindred institutions, designed like these for the diffusion of useful knowledge among the people.

Resolved, 6. That inasmuch as agriculture is the chief occupation of her citizens, the commonwealth, in her organization, should be provided with a department of agriculture, with officers and honors commensurate with the importance of the duties to be discharged, of the abilities to be required, and of the labors to be performed.

Resolved, 7. That the several county and local Agricultural Societies, (already the adopted children of the commonwealth,) by their pioneer efforts in diffusing useful knowledge among the people; by their agency in arousing and directing the energies of the farmer in the course of modern improvement, and by the encouragement they offer to every worthy effort of agricultural skill and industry, recommend themselves still more powerfully to the protection and patronage of the Legislature.

Resolved, 8. That the convention respectfully suggests to the Legislature the propriety and expediency of reserving the entire proceeds of the sales of the public lands of the commonwealth—from and after the period when the Common School Fund shall have reached the maxium fixed by the act of 1834—for purposes of education and charity, with a view to extending that aid and encouragement to a system of agricultural education which the importance of the subject so imperiously demands.

Voted, that the resolutions be taken up in order excepting those relating to agricultural education, which were left to the last.

The first resolution was taken up and adopted without discussion.

The second resolution was taken up, and after considerable discussion it was adopted.

Col. Page, of the Bristol Society, offered the following motion, which was adopted:—That the President and Secretaries of this Convention be a committee with power to take measures for the organization of the Central Board of Agriculture, as recommended by the first resolve, and that such Board be authorized to petition the Legislature for an act of incorporation, if they deem it expedient.

The third resolution was adopted without discussion.

The sixth resolution was taken up and discussed to considerable length, and then passed. Adjourned to seven o'clock.

EVENING SESSION.

The seventh resolution was taken under consideration.

Gov. Boutwell, in compliance with a call from the chair, made a few remarks upon the subject, and the resolution was adopted.

The fourth and fifth resolutions were then taken up, and discussed at length, and then adopted.

The eighth and last resolution was adopted.

Col. Page offered the following resolution, which was adopted.

Resolved, That the President and Secretaries of this Convention be requested to present to the Legislature as a memorial, a certified copy of the resolutions now adopted, with explanatory remarks, and request that the Legislature will take such action on the subject as to their wisdom may seem best.

The Convention was dissolved at rather a late hour.

Mechanics' Department, Arts, &c.

IMPROVEMENT IN PLANING, TONGUEING AND GROOVING MACHINES.

Messrs. Rufus and C. S. Bixby, and John Garst, of Dayton, Ohio, have taken measures to secure a patent for improvements in planing, and stationary tongueing and grooving cutters. The planing knives are stationary; a set of section roughing planes are set transversely to the motion of the boards, to cut off small portions of the rough surface at once, and then the whole face is finished by a single smoothing plane set behind those which operate upon the rough surface. Each plane, therefore, is made to perform but a small part of the operation, and thus far ease of working the planing action is spread over, it may be said, a wide surface. The tongueing and grooving is performed by stationary gouges set in the frame behind the planes, so as to take into the edges of the board and match them after the planing operation. The principal new feature in this does not relate to the cutters but to a fine revolving chain belt on each side under the gouges, which, by its continual revolving, keep the cutters clear of chips. This is a very important improvement.

NEW STYLE.—Our attention was yesterday called to a sleigh upon a plan different from anything we have before seen. The bottom is entirely of wrought iron, the runners being plated with steel, and the fender of zinc and Russia iron. It is so constructed as to be very light, and a common single sleigh, we are assured, will sustain a weight of half a ton. The improvement was suggested and we believe has been patented by Mr. John J. Hiley, of Sebago. It strikes us that the improvement is a valuable one to the public, and we hope it may prove a valuable one to the inventor.—*Portland Advertiser.*

IMPROVEMENT FOR BENDING CARRIAGE SPRINGS.—Mr. James Watson, of this city, has invented and taken measures to secure a patent for an improvement in presses for setting eliptical carriage springs. The way to set the spring is to bend one half of the spring first, then turn back the feed roller by reversing its motion, and set the other half of the spring. The improvement of Mr. Watson is in the gearing for reversing the motion, whereby one-half the time is economized by setting a spring and with fewer attendants to the machine.—*Scientific American.*

RESPIRATOR CRAVAT.—A new cravat has just been brought out in Manchester, England, for the benefit of those who have weak lungs in that foggy country. It consists of a cloth which allows the wearer to breathe freely through it, so that it is warmer for the lungs. The moisture of the atmosphere is also, as it were, screened, and the lungs thereby relieved from burdensome pressure.

Ladies' Department.

COURAGE OF WOMAN.

There is a branch of general education which is not thought at all necessary for women—as regards which, indeed, it is well if they are not brought up to cultivate the opposite. Women are not taught to be courageous. Indeed, to some persons courage may seem as unnecessary for woman as Latin and Greek. Yet there are few things that would tend to make women happier in themselves, and more acceptable to others with whom they live, than courage. So far from courage being unfeminine, there is a peculiar grace and dignity in those beings, who have little active powers of attack or defence, passing through danger with a moral courage which is equal to that of the strongest. We see this in great things. We perfectly appreciate the sweet and noble dignity of an Anne Bullen, a Mary, Queen of Scots, or a Marie Antoinette. We see that it is grand for those delicately-bred, high-nurtured, helpless personages to meet death with silence and confidence. But there would be a singular dignity in woman's bearing small terrors with fortitude. There is no beauty in fear. It is a mean, ugly, dishevelled creature. No statue can be made of it that a woman would wish to see herself like. Woman are pre-eminent in steady endurance of tiresome suffering; they need not be far behind men in becoming courageous to meet that which is sudden and sharp. The dangers and the troubles, too, which we may venture to say they now start at unreasonably, are many of them mere creatures of imagination—such as, in their way, disturb high mettled animals, brought up to see too little, and therefore frightened at any leaf blown across the road. We may be quite sure that, without losing any of the most delicate and refined of feminine graces, woman may be taught not to give way to unreasonable fears, which should belong no more to the fragile than the robust.

WATERY POTATOES.—The following receipt for remedying watery potatoes is well worth trying: If your potatoes are "watery," put into the water, before boiling, a small piece of lime. This will render them perfectly dry and mealy. This is an

easy and cheap method of remedying a very common evil, and one at this season very extensively complained of. The lime should be fresh, and for a common-sized family, say of six, the piece should not exceed the size of an English walnut.

Fried Potatoes.—The French method of cooking potatoes afford a most agreeable dish. The potatoes are peeled, wiped, and cut into thin slices, then thrown into a frying pan containing an abundance of hot lard. As soon as they become brown and crispy, they are thrown into a cullender to drain, then sprinkled with salt, and served up as hot as possible.

Corn Griddle Cake with Eggs.—Turn one quart of boiling milk or water, on to a pint of Indian meal. When lukewarm, add three table spoonfuls of flour, three eggs well beaten, and teaspoonful of salt. Bake on a griddle.

NOTICES OF PUBLICATIONS.

The Flower Garden, or Breck's Book of Flowers.—This is a new work, which will be very acceptable to the public, as it describes all the various hardy herbaceous perennials, annuals, shrubby plants, and evergreens, desirable for ornamental culture. The author is well known as a skilful florist, and we know of none better qualified to attend to the task which he has so faithfully executed. This work is an able, valuable and interesting contribution to floriculture. Published by John P. Jewett & Company, 17 and 19 Cornhill.

Report of the Agricultural Commission.—At the last session of the Legislature an Agricultural Commission, consisting of Mashall P. Wilder, Edward Hitchcock, Samuel A. Eliot, Thomas E. Payson, and Eli Warren, was appointed to report on the establishment of an Agricultural School, and other subjects relative to the advancement of the interests of agriculture in this commonwealth. This report is now before us, embracing over 100 pages; but we have not had time to peruse it. As this is an important subject, we shall give particular attention to the report, and give our readers a review of it, or some of the most interesting parts.

The Horticulturist, by A. J. Downing; published by Luther Tucker, Albany, N. Y. Jos. Breck & Co., agents, Boston. This work continues its high reputation, and that of its well known author. Besides the large amount of instruction in each number, it is emphatically, as it professes, a work of rural taste. Besides various illustrations, each number is embellished with a beautiful engraving.

Hovey's Magazine of Horticulture, by Chs. C. Hovey. The author is among the most indefatigable of pomologists in the country, searching up and descovering new fruits, and instituting comparisons with old ones. The work also treats largely and minutely on florieulture and ornamental plants, shrubs and trees.

Annual Report of the Board of Agriculture of the State of Ohio for 1850.—We are indebted to Mr. F. R. Elliott for this work, which we have not yet perused.

Report of the third session of the Ohio Nursery men and Fruit Growers. This favor also from friend Elliott.

Model of Fruits.—Mr. Townsend Glover, of Fishkill Landing, N. Y., has recently exhibited at the Horticultural Rooms in this city, fine models of a great variety of fruits, which, generally, were executed with great exactness. At a short distance from these fruits, they appeared perfectly natural, and on close inspection, those that were best executed appeared like fac-similes of the originals. Mr. Glover's art is his own peculiar invention. In order to reeognize those fruits that are rare, and seldom seen, it is desirable to have exact models of them, and models of all fruits would be very useful to learners in pomology, and even adepts in the art would sometimes receive an advantage from them.

Large Hog.—We lately saw at the stall of Flint & Richards, 28 Faneuil Hall market, a hog raised by John T. Gates, Claremont, N. H., was 19 months old, and weighed 728 pounds. He was a cross of the Suffolk breed.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

☞ Also published at the same office *every* Saturday, on a large handsome folio sheet, the New England Farmer and Boston Rambler, an independent Journal, devoted to Agriculture, Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and the usual variety of Literary and Miscellaneous matter, adapted to family reading. Letters from Home and Foreign Correspondents will appear from week to week, together with a variety of contributed and selected articles of a Literary, Scientific, Historical, Biographical, Humorous and Juvenile character, short Moral Tales, &c.; containing more reading matter than any other Agricultural Family Newspaper published in New England. Every thing of a hurtful or even doubtful tendency will be carefully excluded from our columns.

Terms, $2,00 per annum in advance. At the close of the year, the publishers will bind the semi-monthly Farmer gratis for any person who subscribes for both publications, paying one year in advance for each.

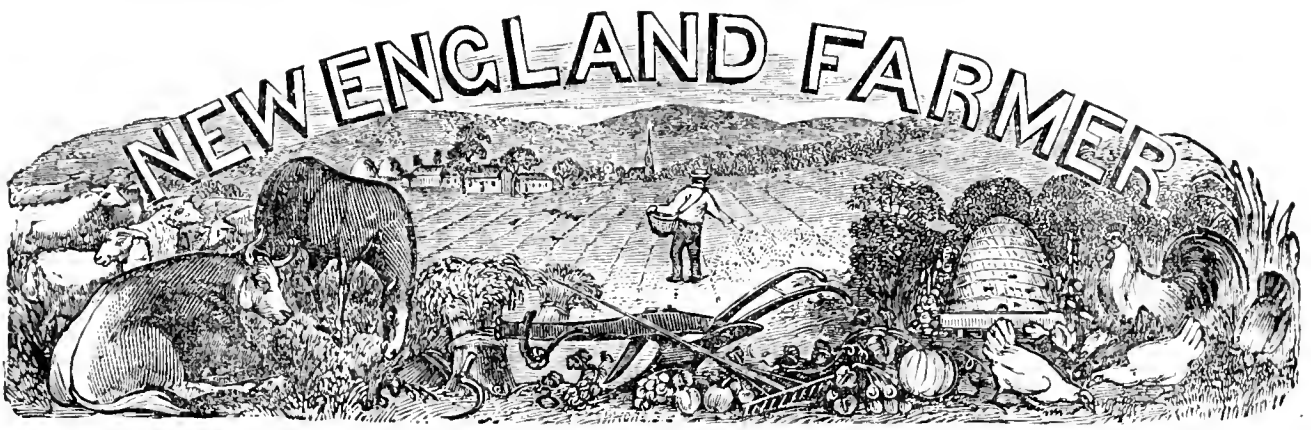
☞ The Semi-Monthly Farmer contains nearly the same matter as the Agricultural department of the weekly.

☞ All papers will be forwarded, until an explicit order for discontinuance is received; and whether taken by the subscriber or not from the place where they are ordered to be sent, he will be held accountable until he orders a discontinuance, and pays up all arrearages.

☞ When subscribers wish to change the direction of their papers, or when they return a copy to this office, they will please be *particular* to name the Post Office, and State, to which it has been sent, as well as the one to which they wish it directed; as it often happens that two or more of our subscribers are of the same name, and annoying mistakes have occurred in consequence.

☞ Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year.

☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, South Market Street, Boston.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, APRIL 12, 1851. NO. 8.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

LEGISLATIVE AID TO AGRICULTURE.

This subject has been under consideration by the joint committee of the two branches of the Legislature on agriculture, and their report will doubtless be before the public before this article is published. As large sums of the public money have been expended on colleges, and other professions have received the principal benefit from them, there should now be something done for the instruction of farmers.

Our colleges are open to farmers as well as to other classes, but the instruction given in them is not suitable to qualify a farmer for his calling, hence but very few who persue farming as a main business ever graduate at our colleges. We should have some mode of imparting information to farmers that is of a suitable character for their wants, and the system should be such that it will be easily accessible, and open to all, even the most humble in pecuniary condition.

But in urging the claims of farmers on the bounty of the State, we would not found it on the ignorance of farmers, of which so much has been said in our public discussions, and by orators at farmers' festivals, but we would found their claims on the fact that the State has given them only one talent, and they have improved upon it, equal to others who have had ten talents from the public chest; and as they have gained ten talents from one, they should be made ruler over many.

We believe that the State in providing to enlighten farmers will not at first establish a school or college with a pattern and experimental farm; for it will be very expensive, and its operation in the way of improvement upon the whole agricultural community will be slow, therefore a failure would be likely to result from an expensive establishment in the beginning. The time may come when a school or college and public farm may be necessary, and the people generally prepared to bear the expense, even if it be high.

In our remarks on this subject at the State House, we suggested that as an economical and efficient mode of diffusing valuable practical information among farmers, there should be a board constituted of farmers well experienced in their calling, with an able agricultural chemist, who should collect, and by proper mode diffuse all over the State the best practical and scientific information on agriculture.

Such a board, or one of a similar character, will, we trust, be established. But as we understand that some persons who take an interest in this cause are very anxious to have the Governor, Lieut. Governor, and Secretary of State, members of this board *ex officio*, we do sincerely hope that no such arrangement will be made; for it frequently happens that the governor and other dignitaries of a State know nothing about farming. Then why should the board be encumbered with such men. Again it would be connecting the board with political affairs, of which it should be perfectly free. Before an election the farming qualities of candidates would be a subject of discussion, reproach and enconium, and some candidates would be found digging in their potato patch, or in their patch of thistles and weeds, who had hardly thought of using the hoe until they were nominated for office, and we should have farmers made up for the occasion at short notice; and those who never knew much about crops, excepting in consuming them, would be writing dissertations (borrowed) and delivering lectures to farmers of 50 years experience.

We have too much of this now. Leave the management of farming, even the institutions of the State's bounty, to farmers themselves. We cannot find better men for the business. We dare say that if the State provides for instructing farmers in accordance with the views of farmers, and then leaves the management of the business to the same class, there will be a good account given of what the State confides to their management, and that there will be, as there has already been done, greater improvement among the cultivators of the soil, than in any other profession. It is highly important to be-

gin right in this business, and lay a good foundation in the minds of farmers, and not begin without a substantial base and rear a splendid fabric, a grand scheme, that will totter and fall before it is completed. Practical farmers must see, feel and acknowledge the want of a college, and be conscious of its utility, and its preference to other plans, before it can succeed. Others may dwell eloquently on its advantages and its beauty, but farmers must support it with their purses, and their influence, else it must fail and pass away, as a scheme. In due time a school and State farm may be desirable, and they may grow out of the doings of a board of agriculture.

RAISING WHEAT IN NEW ENGLAND.

A great deal is said upon this subject, at the present time; and it is urged that we should raise our own bread-stuff in this part of the country, and no farmer should buy flour while he has land that will yield a crop of wheat. We have no doubt that many farmers would find it profitable to raise their own bread-stuff who do not now accomplish this desirable object; but there are others who give their whole attention to the dairy business, or to raising other profitable crops, or who are near a market where milk, fruit, and vegetables are in demand, who may gain by buying instead of raising their materials for bread.

There is in New England waste land sufficient, if improved, to supply the whole population with bread. And there are many farmers that live in the interior where land is cheap, who raise crops and sell them at a low price, and then buy flour that has been brought one thousand miles to a market on the sea-board, and is then carried back into the country at an extra expense of 50 cents on a barrel.

It may not be profitable for farmers in New England to supply our large markets with grain and flour, but we believe that there are a great many farmers who live remote from markets where flour is high, and other produce low, who will find it profitable to raise grain enough for their own supply.

Most of the tillage lands in New England are adapted to the raising of wheat, and with good management, it usually succeeds well. The best soil is one that is rather strong, of fine tilth, and put in rather high condition for previous crops. This preparation is better than to apply manure to the wheat crop, as in such case there may be a rapid growth, producing the rust. Yet if the land is rather poor, a moderate dressing of well decomposed manure may be applied to advantage. It should be intimately mixed with the soil.

It is of great importance to select the best variety of wheat for seed. By using sieves of suitable size, the small shriveled grain may be excluded; and by washing in salt water, the light grain will swim and may be skimmed off. After draining off the salt water, apply lime.

Culture of Celery.—For early use it should be started in hot-beds; but for later use, it may be sown out in April. When the plants are of suitable size, transplant into a rich deep soil. Set in trenches 2 1-2 feet apart, and 15 inches deep. Put a few inches of mellow manure into the bottom of the trench, and as much good loam, and mix intimately together. Set the plants six inches apart. If convenient take up a ball of earth with each, and transplant in the evening, or in damp weather.—Stir the soil frequently, and as the plants grow, earth up gradually, until the trench is nearly filled, leaving only a small depression to catch the water.

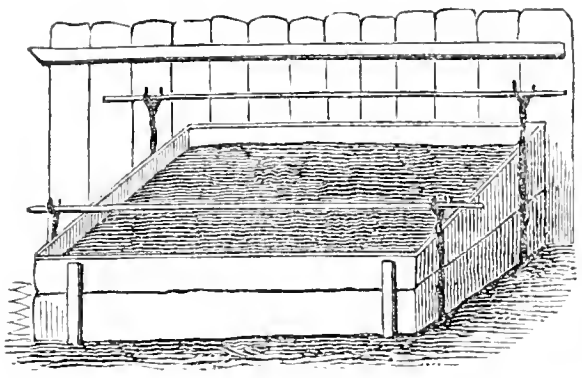
On Setting Fruit Trees.—Mr. William G. Churchill, Deerfield, N. H., inquires whether it would not be well in setting standard apple trees, to let them lean to the south in order to avoid the sun scald. He observes that a large part of the old trees in that vicinity lean in a north-western direction, which he attributes to the prevalence of south-easterly winds.

In any location where winds generally prevail in one direction, there is an advantage in setting the tree leaning a little to the windward; and in case the wind is in a southern direction, there is the additional advantage in avoiding the powerful effects of the sun on the trunk. But this effect of the sun is less on the apple than on the cherry and pear.

Reward for a Remedy for the Potato Rot.—A reward of $10,000 has been offered by the government of this commonwealth, to any person in the State who shall discover a complete remedy against the potato rot, to be tested by experiment for five years to the satisfaction of the governor and council.

☞ We published an article sometime since in regard to some person selling some poor apples to Dr. Kelley, of Newburyport, for the Danvers Winter Sweet; and as Mr. W. G. Lake, of Topsfield, is an extensive dealer in fruits and trees, and he thought that article reflected upon his reputation, we give notice that Dr. Kelley says that it has no reference to that gentleman.

Skill in Farming.—Skill adds more to the profits of farming than hard work. In the article of butter for instance, the same outlay is required, or nearly the same, to make a hundred pounds of poor butter, as would be required to make a hundred pounds of that which is good. But, when the two articles are marketed, there may be five or six dollars of clear extra profit in the pocket of the skilful dairyman. The importance of scientific farming is realized by those who have found such benefit as is noted above in nearly every department of their labor.



For the New England Farmer.

THE FARMER'S HOT-BED.

Friend Cole:—I regret that I have been unable to furnish the article I promised you in relation to what I shall call the *Farmer's Hot-Bed* at an earlier date, for the season of preparing them has now arrived, and if my suggestions shall benefit any of your readers, for the present season, it will be only those who act at once in relation to the matter. Having a great fondness for a good garden and its varied products, I have oftentimes, in years past, felt the want of some cheap arrangement, by which I could bring forward certain vegetables earlier than I could get them, by planting out the seeds in my garden, in the usual way.

A hot-bed with a glass frame, &c., used by our best cultivators, was out of the question, for it cost too much, for a poor man. After a variety of efforts to effect the desired object, cheaply and certainly, I have settled on the method I am about to describe. The engraving at the head of the column will give the reader, at a glance, the manner of constructing the bed, which need not be more than four feet wide and six or eight feet long, according to the fancy of my brother farmer.

Some bits of old plank, or even inch boards, will answer for material, with a few stakes to hold them in place. The stakes at the ends may be crotched, as in the cut, to support the polls or straight stakes may be used and the tops sawed off, after being driven, and the polls fastened on the top with nails. In constructing the bed no boards will be needed in the rear if it is backed, as it should be, against a building, a board fence, or a close wall. The bed should, if possible, have a south-eastern or southern exposure, though I once succeeded very well with one having an eastern exposure. About two feet, or thirty inches high in the rear, and eighteen or twenty inches front, will give sufficient depth. The enclosed space should be filled, to within six inches of the top, with fresh unfermented manure from the horse stable, which must be trodden well together. Four or five inches of good loam from the garden, enriched with a few ashes, a little ground plaster, and some fine well rotted manure, spread over the surface, will complete the bed. The two poles placed lengthwise, across and over the bed, are put there to support on old blanket rug or piece of sail cloth with which the bed must be nightly covered, from the time of planting it until the plants are removed. The cloth should be thrown off in the morning, as soon as the sun is up. A few short boards placed near the bed will answer to protect it in case of a storm.

The bed may be constructed and fitted ready for planting, by an active man who has the materials, in two hours. We will now proceed to plant it. Take your jack-knife in your pocket, Mr. Farmer, and visit your wood lot, if you have one, and if not, your neighbor's, with his consent of course. Look out some white birches three or four inches through. Pieces of old pasteboard, and some other cheap materials, will answer. Split the bark up and down and then peel it off in strips about four or five inches in width. Two or three dozen will do. Get your wife, if you have one (and if you have none, drop the hot-bed for this season and go and look up one,) to sew with a strong thread the ends of each strip together, lapping them half an inch at top and an inch at bottom, so that the pot may be a little less in diameter at bottom than at top. Two or three stiches each at top and bottom will do. Prepare some loam from the ground, as directed above, and fill each pot, setting it down on the floor during the operation, and pressing the earth in pretty firmly. When within one inch of being filled, put in your seeds. Of the squash, about two, of the melon or cucumber, four, about two inches apart, and cover them, pressing the earth moderately upon the seeds. Place your pots close together on the centre of your bed and fill the space between them with loam, banking up around the outside row of the pots with the same material. Your pots will occupy but a small part of the surface of your bed, and on the remaining portion you can sow your tomato, lettuce, pepper and cabbage seeds, and grow fine large plants by the time your garden is sufficiently warm to have them transplanted.

The ammonia given off from the fermenting manure, will pass up through the soil of your pots and other parts of the surface of the bed, and increase greatly its fertility and the growth of your plants. When the roots of your squash and cucumber plants, begin to show themselves at the bottom of the pots, which you can learn by raising one of them occasionally, they must be removed to your garden. Prepare your hills for receiving them just as you would if you were about to plant the seed. That done, open the centre of each hill to sufficient depth to receive the pot, and have the surface on the same level with the soil around. Press your pot firmly in its place and then with the point of your knife, clip the string at top and bottom and peel off the bark from the ball of earth containing the plant. The roots of the plant have by this time formed a complete net work through the ball of earth and prevent its falling apart, as you remove the bark. Bring the earth around the plant and press it pretty firmly; give it a little pure water (if there be rum in it the plant will die) and your plant, if the earth has become tolerable, warm will hardly know that it has been removed from the hot-bed. By this method, which can be adopted with little labor and no expense, two or three weeks are gained for plants which require a long season or of which an early product is desired. If the bed becomes too hot, raise the pots and put more soil under them Give the bed water from time to time with the water-pot, as you can graduate the quantity thus better than by leaving it uncovered during a shower.

If you have small boxes, as every farmer should have, to protect plants when first transplanted, or from the effects of cold night air, place them over your squash and melon plants for the first twenty-four hours and during the nights of the first week after removing them to your garden. By this method I raised in the year 1818, on a piece of ground twenty-two feet square, a crop of winter squashes,

for which I was offered as they lay on the earth where they grew seven dollars. I did not accept the offer, for they were worth more money. Some straw or old hay placed around your bed will prevent the radiation or loss of heat. C. JEWETT.

ELEVENTH AGRICULTURAL MEETING

AT THE STATE HOUSE, MARCH 25TH, 1851.

Hon. Marshall P. Wilder in the Chair,—Subject, "Agricultural Education, continued."

Col. Wilder made some remarks on the importance of science in agriculture, as it had greatly aided other arts. He inquired how this should be done. The plan of agricultural schools of Europe, though not perfect models, will be of advantage in establishing similar institutions in our own country. No country is better adapted than ours to schools of this character. There is only one way to prepare teachers of agriculture, and that is by a school; and there ought to be a mother institution to regulate the whole and furnish teachers. France had made very liberal appropriations for this purpose. As our lands are becoming exhausted, something should be done to check the evil, or posterity will suffer by our neglect.

Mr. Cole, of the N. E. Farmer, said that this subject had been discussed for a number of years, and gentlemen of other professions had come forward and spoken of the great ignorance of farmers, and the little improvements that there had been made. He contended that farmers were no more ignorant than other professions, and for 20 years past they had made as much advancement in their calling. Our system of jurisprudence was becoming more complicated and expensive. Although we have a large number of physicians, people are suffering from disease, and going down to premature graves. If theologians have made advancement for 20 or 50 years past; why is there not less wickedness than formerly? Why do not gentlemen in these professions make improvements in their own line, instead of reproaching farmers with ignorance? Merchants are no better skilled than farmers, as they make far more failures. In some branches of mechanics great improvements have been made; in others not. The sole leather tanned in the country as was the practice 50 years ago, is worth twice as much as that tanned by what is called the improved process, which, instead of an improvement, is only a deception. No class has made more improvement for 20 years than farmers, and as others have had colleges mostly for their advantage, at a great expense to the public, there should be some method to educate farmers for their peculiar professions. But the establishment of a school for the purpose of originating and establishing facts will be a slow process, and it will be many years before the school reaches that stage of improvement already known to our best farmers; and many more years before the improvements will be taught and disseminated; there are among our most intelligent farmers a great deal of valuable information—many important facts which make up the science of practical farming. The speaker suggested as a plan that four or five of our best practical farmers, of long experience, whose hands were familiar with farming implements, should be appointed as a Board or Institute, who should spend a year, or more if necessary, in collecting valuable facts, and the best practice in agriculture, testing doubtful subjects themselves, and by others who would aid them, and settling as far as possible uncertain questions; and then have the results of their labors published, and the work used as an occasional reading book in the common schools, that the best system of practical farming in our own country might be scattered broad-cast and go into every family in the State. This would be a short way of making a great improvement at little expense. In addition there should be a text book containing the elements of chemistry, geology, botany, and other natural sciences appertaining to agriculture, to be read in our schools, from which boys would learn so that they could understand works on these scienes.

Rev. Mr. Sanger acknowledged that all professions were in the dark. He would have in addition to the board of practical farmers which the gentlemen had recommended, an able chemist.—[Mr. Cole begged leave to say that he had stated his plan imperfectly. It was his design to recommend that a man well-skilled in chemistry, geology, &c., should be a member of the board.] Mr. Sanger proceeded to show the importance of a chemist to analyze soils, and aid the practical farmers in their investigations.

Dr. C. T. Jackson spoke of the important aid an agricultural chemist would give. If a barren soil was made fertile, he could show what change it had undergone. He could show what ingredients a crop took from the soil, and what kind of manure was necessary to supply the deficiency; there is a large circle of sciences connected with agriculture. A school must be established on a liberal plan, and well supported, else it will be a failure. Professors need not be employed all the time. They could give a course of lectures, and then attend to their usual business. Most of the instruction in our colleges is given by tutors, not by professors.

Mr. Jenks of Boston, said that he had occasion to attend to farming, so had a friend; but they could find no place where they could learn the art of farming. Our farmers are deficient in agricultural education, and this evil may be remedied by a school, on a plan similar to those in Europe, and on which Prof. Hitchcock has reported.

Col. Newell, of West Newbury, said that much might be learned from a board of practical farmers,

as had been suggested, but they should have a scientific man to aid them. We do not know how to apply our manure. We need some mode to teach farmers.

Hon. Dr. Gardner, from Bristol County, said that though he thought well of the report of the Agricultural Commission generally, he differed from it in some respects. He thought it best to have agricultural instruction in connection with our colleges. This would be more economical. He then read the remarks of Dr. Wayland, of Brown University, showing that he had suggested this plan in relation to that college. He also read from Mr. Colman to the same effect. He thought an independent agricultural college would cost $100,000, perhaps $200,000.

Col. Wilder said that he had heard nothing this winter reproachful to farmers on account of their ignorance. Mr. Cole replied that he had, and that his remarks on this point extended over the space of 8 or 10 years. He was tired of hearing of it, and thought it was time to reply to it.

Col. Brooks, of Princeton, said that he had attended to various kinds of business, which had brought him in contact with different professions, and he agreed with Mr. Cole, that farmers were not behind other classes in making improvements. He found that farmers were as intelligent as any other class, and more honest. They are still and retiring, and not like some who put themselves forward with a large amount of brass in their face. He thought it best to leave farming to farmers, and let them manage their own affairs; and law to lawyers, and physic to doctors. Establishments for agricultural education should be managed by farmers, not by men appointed by the governor and council, so that it would be all mixed up with politics and offices made a sinecure for men of other professions who could not earn their bread in their own calling. Farmers are as learned in their business as these learned gentlemen; (referring to gentlemen of various professions around him;) but they are retiring. There are many intelligent farmers in the Legislature, but they are still, while a lawyer of two years growth is always talking.

Col. Page, of New Bedford, made some general remarks on the subject of agricultural education, and observed that he had come into the hall with a view of seeing farmers of the Legislature, and other farmers who meet here, and learn their views on the subject. He said that a great many were engaged in agriculture, and they had made great improvements, and now the question is, how shall they learn more? If you would have your son learn a trade, you would send him to one thoroughly acquainted with that trade; and we want an establishment where farming may be learned thoroughly.

Plums in the Wild Cherry.—Mr. William G. Churchill, Deerfield, N. H., informs us that he has had the Green Gage plum and common cherry grafted into the Pigeon cherry, on his farm, the former two and the latter three years' growth, and they are both in a flourishing condition. We have seen several varieties of the cultivated cherries growing in the Pigeon cherry (a very small red cherry) but we never saw it used as a stock for the plum.

REPORT OF THE AGRICULTURAL COMMISSION.

We lately referred to the publication of this report. It commences with general remarks on the subject of agriculture, and proceeds to show that science had done a great deal for other arts, and that it should be applied to the improvement of agriculture as well as to other branches of industry; that, for want of scientific farming our lands are becoming exhausted, all over the country, even in the fertile West; and that government should do something for the education of farmers, qualifying them for their calling, as well as educate men for other professions.

Since the appointment of this commission, Prof. Hitchcock, one of the members, has travelled in Europe, where he examined into the character of a large number of agricultural schools, on which he has made a report in detail, which constitutes the principal part of the commissioners' report. This part furnished by Prof. H. shows a great amount of labor, and close investigation, and that he had diligently and ably attended to his commission. It contains a large amount of interesting matter, which may aid as imperfect models in the establishment of similar institutions in this country. But as the governments and character of the people in Europe differ widely from our own, it cannot be expected that any foreign institutions will serve as a perfect model for an American school. Yet Prof. H. deserves much credit for his industry and zeal in the cause, in presenting so large amount of well arranged matter on this subject; also for the plans and suggestions which he has presented for consideration.

We copy the conclusion of the report, showing the general plans which the commission recommended.

CONCLUSION BY THE COMMISSIONERS.

With these views and statements, the commissioners having had the various subjects committed to them under consideration, and feeling that the great object of agricultural education is one of vital importance, not only to the farmers of Massachusetts but to the prosperity of the commonwealth, beg leave to submit the subjoined recommendations, and earnestly to commend the whole subject to the favorable attention of the Legislature.

But, inasmuch as it has been the custom of the State to disburse her funds for educational and charitable purposes, so as to encourage and enlist private munificence in conjunction with legislative aid, your commissioners offer their recommendations on the following conditions:

1. To carry out the foregoing views, the commissioners recommend the appropriation by the Legislature of twenty thousand dollars, for the purpose of establishing a Central Agricultural College, with a Model and Experimental Farm; said institution to be open to all classes of the commonwealth, and in the government of which the State shall be interested so far as may be deemed expedient; provided, however, that this sum shall not be drawn for until an equal amount shall have been raised by private donation or legacy, and deposited in the treasury of the commonwealth, to constitute a common fund for this object.

2. Whenever any incorporated Academy, not exceeding one such institution in each county, shall raise a fund of two thousand dollars or more, towards establishing and supporting a department of agricultural instruction, with lands suitable for experiments, it shall be entitled to draw from the treasury of commonwealth the sum of two hundred dollars annually, provided, however, that when the number of scholars receiving instruction in agriculture shall be less than ten, the aid of the State shall be withheld.

3. The undersigned recommend the establishment of a State Department of Agriculture, to consist of a board of commissioners and a secretary, whom they shall annually appoint, which board shall sustain a similar relation to agriculture and the schools connected with it, as the board and secretary of education do to primary schools. This board shall consist of one member from, and to be elected by, each of the incorporated agricultural societies now receiving the bounty of the State, which board shall have power to locate, organize and put in operation the college contemplated by the foregoing recommendations. The duties of the secretary shall be, under the direction of the board, to give lectures in the various parts of the commonwealth, whenever it may be deemed expedient, on the science and practice of agriculture; to receive the returns of the incorporated agricultural societies, and make a digest of the same in the form of an annual report to the Legislature; to collect agricultural statistics and information in the various departments of this science; to correspond with local societies in this and other lands; to visit individually, in connection with the board, the exhibitions of the various county societies; and to promote, by such other measures as the board may devise, this most important branch of human industry.

4. The commissioners further recommend, that inasmuch as the aid now rendered by the commonwealth to agricultural societies was granted with reference to a very different state of things, when the population was smaller, agricultural products fewer, and all industrial pursuits were sources of much less revenue to the State; and in view of the increase of population, productions and revenue, an *additional* grant of one hundred dollars annually be made on every thousand dollars of the permanent fund of the several agricultural societies, which are or may be entitled by the present laws to the bounty of the State. Provided, however, that this sum shall not exceed nine hundred dollars to any society per annum.

5. That a premium, of such an amount as the Legislature may deem judicious, be offered for the best Elementary Treatise on Agriculture, suitable for common schools; said premium to be awarded by the Board of Agriculture, if such be created, or, if not, by a committee to be appointed by the Governor and council.

6. That after the common school fund shall have reached the sum of one million of dollars, and the Western Railroad sinking fund shall have been adequately secured, all proceeds of lands belonging to the commonwealth in the State of Maine, and of the claims of Massachusetts on the federal government, shall be reserved to form a fund, the income of which shall be appropriated, at the discretion of the Legislature, for the encouragement or support of institutions for instruction in agriculture, for charitable purposes, and for education.

In conclusion, the commissioners have not deemed it expedient to report in favor of aid, at this time, to the other subjects committed to them for consideration, or to submit any more specific plans than those embraced in these general recommendations, or such as may be drawn from the substance of this report, leaving for the wisdom of the Legislature, or any Board of Commissioners which may hereafter be appointed, more perfectly to develop plans and modes of action.

Signed, MARSHALL P. WILDER,
EDWARD HITCHCOCK,
SAMUEL A. ELIOT,
THOMAS E. PAYSON,
ELI WARREN,
Commissioners.

For the New England Farmer.

COLOR OF HOUSES.

MR. COLE:—In the Farmer of March 15th, an article appeared over the signature of J. W., upon the color of houses, in which the writer says, it is *his* opinion, and no doubt that of a large portion of your readers, that the use of neutral tints for such purposes displays "a lamentable want of good taste in the owners of many of our cottages, country seats, &c., which would otherwise beautify our hill-sides, plains and valleys." Now this may be true; still, I am slow to believe that any considerable portion of the readers of the New England Farmer are so utterly devoid of taste as to hold to such absurd notions as this. And if I may be allowed to express an opinion, your readers who have any pretensions to taste would say, that the softened shades of color now used are generally in good taste, and, contrary to the opinion of J. W., white lead is decidedly bad taste.

Lest this should seem to rest upon my simple assertion, I will give the reasons that lead me to such conclusions. Firstly—*Pure white* will not harmonize with nature at all, except in infinitesimal portions. Secondly—When approaching a situation, of which a great white house forms the foreground, the beauties of surrounding field and meadow can never be properly appreciated in consequence of the "horrid glare," particularly on a bright summer's day. Thirdly—When viewing the same from a *distance*, the eye is irresistibly drawn to the house, and the mind cannot be divested of the idea, that it is a great blot on the fair face of nature; consequently it does not give us that satisfaction that it otherwise would, were this huge glaring object softened down to some quiet shade of color.

Again, if white is so beautiful, would not nature, (where we are to look for perfection) have used it with a more lavish hand? Certainly. But in

lieu of white, what do we find? Soft shades of color —the earth in *brown and grey*—the trees and grass in *green*—the waters in *blue and green*—the sky in *blue;* no *white* any where, except the few delicate flowers, and the wide, dreary waste of snow in winter.

It is true one shade of color will not answer indiscriminately for all objects, whether large or small, or in all situations; but as a *general* rule, artists in colors give us the following: the smaller the edifice or the more it is hidden by nature's drapery of foliage and flowers,—the lighter shades of coloring should be used; but in proportion as it rises in dignity or importance, or the more exposed by the barreness of the site, the *warmer* and *darker* may be the coloring.

As a *finale* to this communication we take from Downing's Cottage Residences (to which, with Country Houses, by the same author, we refer J. W. for correct taste in such matters) these remarks by Uvedale Price:—"One of the most charming effects of sunshine, is its giving to objects not merely light, but that mellow golden hue so beautiful in itself, and which, when diffused as in a fine evening over the whole landscape, creates that rich union and harmony so enchanting in nature and Claude. In any scene, whether real or painted, when such harmony prevails, the least discordancy in color would disturb the eye; but if we suppose a single object of a glaring white to be introduced, the whole attention, in spite of all our efforts to the contrary, will be drawn to that one point; if many such objects be scattered about, the eye will be distracted among them. Again, (to consider it in another view,) when the sun breaks out in gleams, there is something that delights and surprises, in seeing an object before only visible, lighted up in splendor, and then gradually sinking into shade; but a whitened object is already lighted up; it remains so when everything else has retired into obscurity; it still forces itself into notice, still impudently stares you in the face. An object of a sober tint, unexpectedly gilded by the sun, is like a serious countenance suddenly lighted up by a smile; a whitened object like the eternal grin of a fool."

Furthermore, *Downing* says—"There is one color, however, frequently employed by some painters, which we feel bound to protest against most heartily, as entirely unsuitable, and in bad taste. This is *white*, which is so universally applied to our wooden-houses of every size and description. The glaring nature of this color, when seen in contrast with the soft green of foliage, renders it extremely unpleasant to an eye attuned to harmony of coloring, and nothing but its very great prevalence in the United States could render even men of some taste so heedless of its bad effect. No painter of landscapes, that has possessed a name, was ever guilty of displaying in his pictures a glaring white house, but, on the contrary, the buildings introduced by the great masters have uniformly a mellow, softened shade of color, in exquisite keeping with the surrounding objects."

If Uvedale Price and A. J. Downing are not authority in matters of taste, pray who is!

Boston, March 17, 1851. J. B. D.

☞ A man too busy to take care of his health is like a mechanic too busy to take care of his tools.

☞ Sheep abhor rains and wet in winter. These injure them more than cold or dry snow.

For the New England Farmer.

MANURING GRASS LAND---PLOUGHING IN OATS.

When is the best time to put manure on mowing land, is a question that may be answered pretty much as the following;

"Would you know the best season to laugh and to sing,
'Tis summer, 'tis autumn, 'tis winter, 'tis spring."

After near 50 years experience, I would say, put manure on to mowing land at any time from taking off a crop of hay, until the grass has fairly started for another crop the following spring. If the manure be coarse, it will not do so well to put it on late, but if it is fine, it may be spread after the grass is up in the spring two inches, with good effect, more particularly if it should rain soon after; and the better way is to spread the manure directly from the cart or wagon, and not put it out in heaps at all. And as to ploughing in oats, I would say also, after about the same experience, where the soil is dry and mellow, it is better to plough them in, always supposing the ground to have been well and deeply ploughed before, and harrowed previous to sowing; then a shallow ploughing, with sufficient harrowing, &c. after, to smooth off, does the work up so as to give good prospect for a crop.

An old Subscriber and Constant Reader.

For the New England Farmer.

PREPARATION OF SEEDS.

Mr. Cole:—Having often witnessed the destruction of seed, caused by the depredation of birds upon grain fields, and the various expedients that have been resorted to by farmers to guard their fields against these depredators having generally proved ineffectual, as a means of protection, it is my purpose to excite some inquiry upon this subject by giving a statement made to me by a practical farmer, as the result of his experiments upon the preparation of the seed, which he avers has resulted in the discovery of a solution, by which grain may be prepared, rendering it so distasteful to any kind of fowls, that they cannot be induced to pick it up. That he has tested this solution with the seed for nine years, in five different localities, and in no instance has it failed of protecting it from the depredation of birds. That the cost of preparation does not exceed twenty-five cents for a bushel of seed, and is in no wise detrimental to its growth. And that the test was particularly satisfactory when his field was adjoining that of his neighbor; the birds gathering in large numbers upon his field, passing directly over that which he had planted with the prepared seed. The solution being very simple in its composition, renders it very difficult, if not impossible to demonstrate its utility without exposing the secret; in that case no letters patent could issue to secure an interest to the inventor.

The importance of such a discovery is fully stated by Hon. Daniel Webster in a correspondence with the inventor, from which I am permitted to take an extract.—"If you have succeeded in such a discovery, relating to the preparation of seed, you have accomplished something highly important. * * * * Of course you are at liberty to prove the utility of your discovery on any part of my farm, and you will be at no expense for men, teams, or ploughs, &c." In consideration of the general importance of such a discovery to the agricultural in-

terest, I suggest that it would be a proper subject for legislative bounty, on the principle recently adopted for the discovery of the causes of the potato rot. This subject is respectfully submitted to the consideration of the members of the Legislature now in session, to agricultral societies, and the public generally, for a proper investigation of its utility.

Bedford, March 22. J. W. S.

Remarks.—The writer of this article will see, on reflection, the impropriety of making such a communication without his own or his friend's name. Suppose the Legislature was disposed to act on the subject, to whom could they apply for an investigation?

For the New England Farmer.

PROGRESS OF AGRICULTURE.

There has been a vast improvement in the various farming operations since the commencement of the present century; many old systems have been abandoned, and new and better ones adopted. Science has lent its aid to the cause: in short the subject has received a general impulse.

Many tracts of mowing land which were formerly uneven and abounded with rocks and brushwood, now present a smooth and beautiful surface. The neat rail fence, stone wall or the live hedge are taking the place of unsightly log or brush fence over-run with briers and shrubbery. The fruit department has received its proper share of attention; where there are now orchards of the finest fruit of many varieties, there were formerly few trees that produced any worthy of cultivation. Farming implements of improved construction and superior workmanship, combining the qualities of lightness, strength, and saving of labor, are usurping the place of the clumsy and unwieldly ones of former days.

Agricultural papers, which were once few and far between, are now found in nearly every family throughout the length and breadth of the land, diffusing information broadcast, which is springing up a hundred fold, and which is every day visible, in the landscape around us. There are other improvements which might be enumerated, but the above will suffice as examples. Should the same spirit continue for years, we shall vie with, and perhaps outrival the best agricultural portions of Europe in the productions of our soil. We need not fear that the subject will be exhausted; for Europe, after many centuries' experience in cultivating the earth, is far behind China in their knowledge of many branches of husbandry. O. V. Hills.

Leominster.

For the New England Farmer.

BIRDS.

Mr. Cole:—I find by making out a list of birds, that we have at least 80 kinds that are common in this town; and I also find that there are very few people that know what they live on, or whether they are useful or not. It is well known to naturalists, that a large majority of birds live wholly, or partly, on insects; some on one kind and some on another. For instance, the robin lives on worms, grubs, &c., until cherries, currants and berries are ripe; when these are gone, you will see them in the fields again, in search of grasshoppers, worms, &c., and then in winter they live on cedar and sumac berries, &c., thus changing several times in the course of the year.

Now my object in writing at this time is to get information, and I hope that some of your correspondents who are qualified will give us, from time to time, the history of our birds, or answer the following questions about them, viz: what does a blue bird, or any other kind of bird, live on? of what use are they? should they be killed, or should they not? and what are their habits? I think that if we could get the history of one bird in each of your numbers, that it would be space well taken up.

Pelham, N. H. B. F. Cutter.

For the New England Farmer.

GRAFTING IN ODD AND EVEN YEARS.

Mr. Cole:—In looking over the 2d Vol. of the N. E. Farmer, I noticed at page 30th, a call for facts in relation to the year of grafting having an influence on the year of bearing of apple-trees, and as I have a little *practice* in point, it is at your service.

In the spring of 1845, I took scions from a Baldwin apple tree that bore invariably in odd years and inserted them into a standard. The next year I took scions from the same tree as before, and inserted them into another standard. The result is as follows: The tree first grafted bore fruit in 1848, '50.

On the second tree about one-half the scions bore fruit in 1849, the other half in 1850. The trees grafted were natural fruit of the same variety, and great bearers every year.

Yours, P. L. Converse.

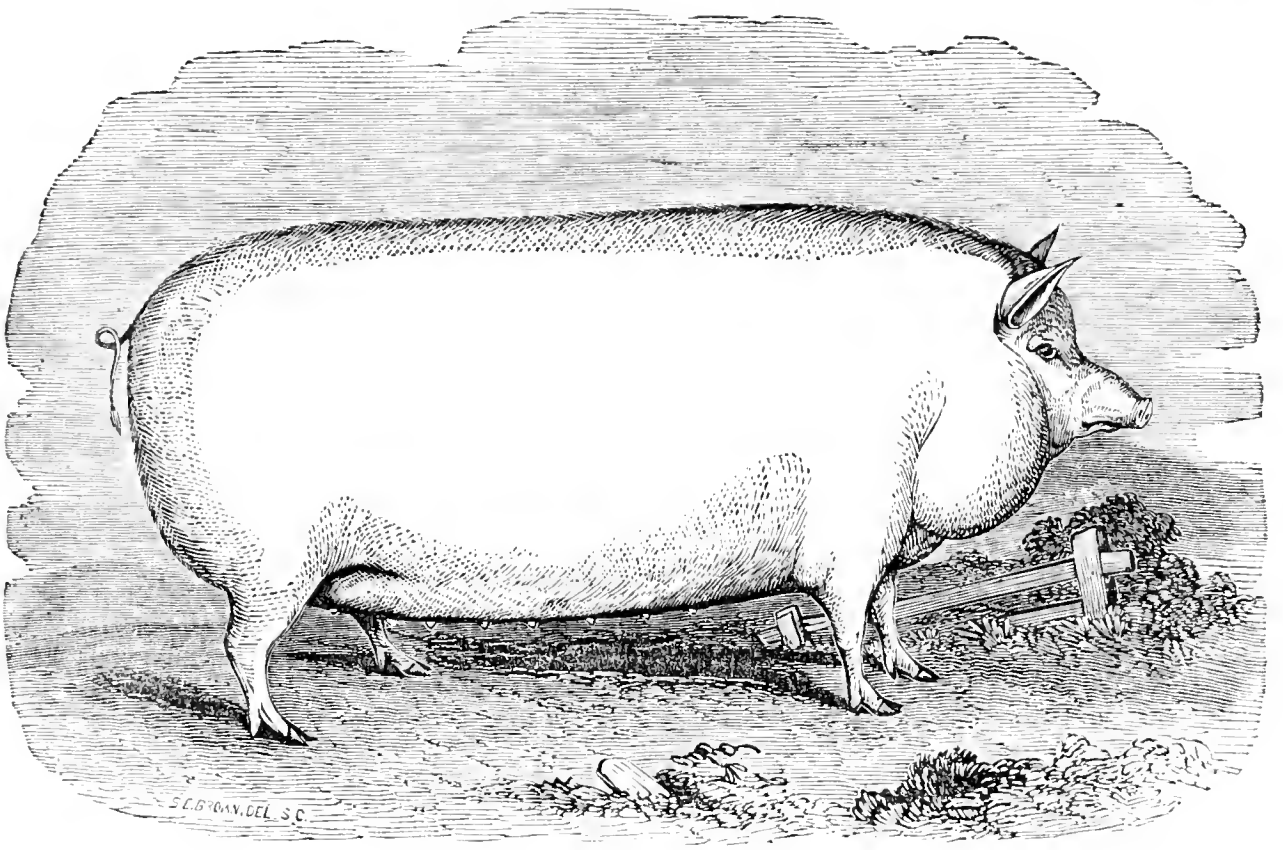
Woburn, March 24, 1851.

NIGHT SOIL---ITS VALUE.

The best of all manures is the one which in our country is almost universally wasted. In Belgium, where agriculture is carried to great productiveness, they "order things differently." There, the estimate is, by *nice* calculation, that it is worth $10 for every individual, man, woman and child. We traverse sea and land, send to Africa and South America to bring elements of fertility which at home we throw away on every farm in the country. What an immense amount is wasted in our cities! It must be the most valuable, containing the elements of all kinds of food consumed by man, and in returning these to the soil, we return the identical constituents which former crops and animals had taken from the land. Night soil contains the phosphate of lime, which is indispensable to the growth of animals' bones and to the nutriment of plants, and which is not supplied from the atmosphere, like carbonic acid and ammonia. All fluid and solid excretions should be preserved by mixing them with burnt clay, saw-dust, ashes, peat or wood charcoal, &c.

We have a great deal to learn, and alas, much more to practice, that we have learned.—*The Plow, the Loom, and the Anvil.*

Fine Mutton.—Mr. John A. Pierce, Stanstead, Canada East, dressed a sheep last fall, of the Leicester breed, 1 1-2 years old, that weighed dressed 125 lbs. Also a lamb six months old that weighed 65 lbs.



THE SUFFOLK PIG.

The Suffolk breed of hogs is comparatively of recent introduction into this country, so they are not generally known except by reputation. Their fair fame seems to be pretty well spread over the country. It seems to be the general opinion of those who have kept this breed that they produce more pork, in proportion to the food they consume, than any other race, and they are said to be less dainty or squeamish about their food than other hogs generally.

The pork of the Suffolk breed is of a superior quality, being firm, remarkably sweet and tender; and the high estimation of its quality is evinced by its usually selling in the market two cents higher on the pound than common pork. The lard is also excellent, being very white and firm.

These hogs are short, and round; the head, legs and tail very small, so are the bones. Dealers in the market who are acquainted with this breed, say that a hog that weighs 400 lbs. will make 50 lbs. more pork for the barrel than common pork. They have less rough fat than usual. The skin of this race is so thin that the blood veins appear distinctly through it. Notwithstanding the legs of the Suffolk pig are so very small, yet they do not lose the use of them on becoming very fat, as is the case with some other breeds.

One important recommendation of this race is that they are remarkably quiet and peaceable, perfectly free from that savage and malicious disposition that often characterizes the hog, and makes the very term a reproach.

Last winter Mr. J. L. Lovering, of Hartford, Vt., brought to this market one of the finest lots of Suffolk pork ever offered here. Some of the hogs weighed 400 lbs., and some pigs only 8 or 10 months old weighed 300 lbs. It was sold at an extra price, and we purchased some of it, and have not grudged the extra cost, as it is more than compensated by the superior quality.

Some complain that this breed has not sufficient size, but we think it is sufficiently large for profit. The pork is very thick even on the sides, so that there is no deficiency in this respect, even in pigs of moderate size.

Such is the general character of the Suffolk pigs by those who know them well; and those who have bought them, converted them into pork, and consumed it, and now have no interest in the sale of pigs or pork, give the same favorable account of them. We are aware that our statement is a high commendation of this race, and we hope that they will sustain their high reputation, as they will be a great improvement, and an important advantage not only to the agricultural community, but to the consumers of pork generally. But in order to maintain their character, breeders must not sell every runt or refuse pig, for such there will be in all races, occasionally, for breeders, but they should sell for this purpose none but the best. Bad management in breeding, and the sale of poorer animals to propagate from, will bring the finest animals into disrepute.

Our engraving was drawn from a fine pig, which Mr. J. L. Lovering, of Hartford, Vt., recently sold to Mr. Alonzo Andrews, 38 School St. Mr. An-

drews bought several fine animals of the Suffolk breed, and has sent them to his friends in Hillsborough, N. H., with a view of improving the race of hogs in that region. Mr. Lovering pays particular attention to raising the Suffolk pigs, and can supply orders for them.

For the New England Farmer.

THE POTATO ROT.

Mr. Cole:—Dear Sir—If you are not burdened with more important articles, waiting a place in your valuable journal, a few thoughts on the potato rot may be suggested to the readers of the N. E. Farmer. Much, very much, has been written and published on this subject. Wise men have spoken, and shown their opinions. An unpretending individual would also throw in his mite. Although it may weigh little, or naught, in the scale of good, yet the reflection will remain, that he has, with the best aim, done what he could.

This insidious disease pervades not only the American, but also the European continent. And we cannot say what, if any parts, of the globe are exempted from it. A remedy for the disease has hitherto baffled all scientific researches, and eluded the observations and experiments of practical farmers. It still continues to stalk with fearful strides over the earth. And a deep interest and concern to effect a cure has become almost universal. And well it may; for it would be very unwise and illaudable to cease from efforts to effect a remedy, unless it can be demonstrated that this specific vegetable, unlike any precedent in the vegetable kingdom, has had its day, run its course, and is to become extinct.

We perceive by the public journals, that the Legislature of Massachusetts has offered a premium of $10,000 for a cure of the potato rot, to endure five consecutive years. We apprehend no legitimate claim to that premium will ever issue, for no remedy can ever be effected until the subject is taken up and carried out in the right way.

The physical cause of the malady may be considered by the scientific classes as the great desideratum. But suppose the cause were obvious, and incontestible, what then? Would the remedy follow, as a thing of course? Whether the cause be in the tuber, the stalk, the atmosphere, or any where else, still the *remedy*, not the cause, would be the grand desideratum. How many diseases, incident to the human system, baffle the efforts of the most observing and skilful physicians to effect a cure, while the causes are perfectly obvious. The cause of cholera is supposed to be no longer hidden; but can its fatal attack be warded off, where a predisposition to receive it exists? This insidious disease—the potato rot, like the pestilence that walks in darkness, and wastes at noon-day, lies beyond the control of human agency alone. Enough has been done already, it would seem, to convince us of the inefficiency of physical means. To expect a cure, therefore, without the concurrence of divine agency, is both vain and absurd.

In concurrence with many serious, reflecting minds, we apprehend the disease is involved in, and predicated upon a moral cause—not coming upon us as a vindictive scourge, but as a salutary means to renew in us a vigorous and abiding sense of our dependence—sent as a paternal corrective of the sin of ingratitude—of wanton luxuriating in the bounties of Providence, and vain boasting of our own prowess to control the elements of earth, and force her to yield her increase at our bidding. A state of invariable, boundless prosperity cannot be sustained with equanimity of mind. It intoxicates with pride; engenders a spirit of self-dependence; leads to self-indulgence, and the vain imagination that our own hands have gotten us all our wealth. Jeshurum of old waxed fat, and lifted the heel against his divine benefactor.

It requires no keen observation or reflection to perceive that the potato, like many other blessings, which earth and heaven are lavishing upon us in superabundance almost, was not duly appreciated until the time of privation came. Then estimating its value by the loss, we begin to feel a returning of dependence. And, foresooth, all the skill of the natural philosopher, the chemist and geologist, the theoretical, practical and experimental farmer, are put in requisition to remedy or ameliorate the disease. We do not say, nor mean to imply, that this is not a laudable course of procedure. Far from it. But do say, that it lacks the most important and preliminary step in the process, viz., a looking in penitence, prayer and supplication to Him who sent the disease, and who alone can control and remove—without whose benignant smiles not a blade of grass, nor kernel of grain, nor field nor garden vegetable can be made to grow, and arrive at maturity. Intelligent, reflecting minds may dilate this point of the subject at great length. But we forbear; "a word to the wsse is sufficient."

It may be asked by some why other productions of the earth, of less easy culture, and less prolific yield, are exempted? But the question is totally irrelevant to the case; and resolved into the wisdom of the Almighty, whose paths are in the deep and mighty waters, and whom none by searching can find out. It is enough to know that a specific calamity is upon us, which fills many with deep, solemn concern, and may justly fill all with fearful, trembling apprehension. But the time to despair, we trust, is not yet. The bow of promise is still in the cloud. To plant and cultivate with industry, patience, and cheerfulness, all the varieties of seeds, not excluding the potato, even, is an obvious and imperative duty. But let us not vainly imagine that planting and cultivating is our whole duty. The higher duty of firm reliance on our divine benefactor to give the increase, has been, we fear, too much and too generally overlooked already. To continue such a course will have no direct tendency to avert a general blast on the productions of the earth; much less to obviate the one now prevalent. We have indulged the hope that, like many annoying insects, which stayed their appointed time, and then became extinct, the potato disease, after effecting the moral purpose for which it is sent, would disappear and be seen no more.

Thus we have stated, as we apprehend, the best and most feasible remedy for the potato disease. But we would by no means enter the list of those who may compete for the offered premium. Being on the threshold of four score years, we hardly dare indulge a personal interest in the prospective issue of that proposition. But should it be our lot to stay to see the millions of farmers restored to a competent supply of that most valuable vegetable esculent—the potato, we should rejoice with unspeakably greater joy than at the reception of thousands and tens of thousands of silver and gold.

March 26, 1851. An Eastern Farmer.

TWELFTH AGRICULTURAL MEETING

At the State House, April 1, 1851.

Hon. B. V. French in the Chair. Subject,—Manures.

The President opened the discussion. He said that there was no subject so important as this.—He as well as others had made mistakes in the use of manures. Some farmers follow the old mode, and only apply the manure from their cattle and swine. We may as well make bread without yeast as raise crops without manure. We ought to magnify our compost heaps. Manure dropped in our barn-yards in the summer wastes by exposure. If we apply leaves from the forest, to save it, we rob them. If we have peat bog, there is nothing better. It is best to dig peat in the fall and expose it to frosts and air. He considered it the best absorbent he had found. It absorbs and saves the urine. After being mixed with manure, it should undergo fermentation, else it will produce sorrel. We need some absorbent to take up the ammonia and hold it until the manure is applied. He had found his account in using 30 bushels ground bone to the acre. Guano had produced excellent effects in some cases; but with him the results were not satisfactory. Much depends on applying manure to the soil. He once applied 5 cords to half an acre, and ploughed it in He ploughed other lands by the side, and then applied manure to all alike. But the crop was no better when the extra quantity of manure was plonghed under. He thought he should see its effects in the grass, but he never saw any benefit from it. Compost manure should be shoveled over and fermented, but not heated so as to fire-fangle. On all red sandy soils impregnated with iron, lime is good, but generally there is no benefit from it. There are in this State over 300 towns, and on an average 100 farmers to a town. Each loses on an average five dollars in saving and preparing manure for want of information, and five dollars more in the application, making a loss to each farmer of $10, or over $300,000 to the State annually.

Mr. Sheldon, of Wilmington, said that he wished to make a few remarks on the subject discussed at the previous meeting. Leave was granted. He said that he agreed with Mr. Cole, that farmers had made greater improvement than any other profession. In ploughing they now dispensed with half the time and hands formerly used, and did their work better. In raking hay, one man would do as much as four in the old way. With a simple machine one man would do as much in weeding onions, as four men with hoes. Have other professions made equal progress? Numerous other improvements might be named. Farmers are called ignorant, because they cannot make exact estimates on the expense for manure, and cost of crops. It is wisely ordained by the God of nature that exact experiments cannot be made. No person can tell what it costs to make a pound of butter. In raising crops an exact estimate cannot be made, as the benefit to the land cannot be reckoned. When riding lately, a gentleman said to him that if a certain oak, among other trees, had been removed, there would have been more timber by the greater growth of the others; but this experiment could not be made. So farmers must make heavy draughts upon their judgment, and should not be reproached with ignorance, when exact experiments cannot be made. As to the subject for this evening, manures, he thought it was a good plan to haul out green manure in the fall, spread it and then back furrow the land, covering up the manure in the ridges, and let it become compost with the soil.

Mr. Flagg, of Worcester, inquired how he should apply his manure, which was from horses, cows, and some in compost, to a light gravelly soil for Indian corn. He had no peat.

Mr. Walker, Secretary of State did not agree with the gentleman that exact experiments could not be made. In making compost, different materials might be used in different proportions, for several lots, and the result on the crops noted.

Mr. Chapin, of Chickopee, said that in his region, they use manure in the green state, ploughing in, but not under the sod. They think there is na advantage in decomposing manure before it is applied. They soak their corn and then roll it in plaster.

Mr. Sprague, of Plymouth county, said that the ubject of preparing and applying manures was but very little understood. On his light soil it was best to plough in the manure without composting, and it saved labor. To put manure on or near the surface is a waste. He would like to have his friend from Princeton state how farmers can make too much manure.

Mr. Brooks said that moderate crops were most profitable, and we can get this without high manuring. By collecting sods or other absorbents, and pouring on them the urine from the horse, a large amount of good manure might be made. By using materials to absorb all the liquid manure of cattle, a great of manure may be made. A little plaster should be scattered over the cattle house, to absorb the ammonia. On his heavy land peat was not good, but it is beneficial on light soils. Dr. Dana, in his Muck Manual, led him astray by saying that two loads of peat and one of cow manure were worth as much as three loads of cow manure. Manure enough may be made on every farm by feeding the crops mostly on the farm. Grass is not exhausting. Land long cropped with it, yields well on being ploughed up for tillage.

Col. Newell, of West Newbury, thought there was no advantage in composting manures, as they may be applied in their green state without loss.

Peat in compost is good for light land, but not for wet meadows. He would spread green manure broadcast, and plough in eight inches deep on gravelly land, and then spread compost manure and work it in with a cultivator.

Mr. Brooks in answer to an inquiry as to the quantity of manure he applied to the acre, said that before he had a barn cellar he used 24 loads of 30 bushels each; but now 16 loads were of equal value. He spread and harrowed in well decomposed manure from his barn cellar, and when his crops came up he applied a little compost to them. Compost must be made of materials to adapt it to the soil.

Rev. Mr. Sanger, of Dover, remarked that the gentleman had been led astray by books, and some complained that they had been lead into an error by remarks in this hall. There must be judgment in the application of knowledge.

Mr. Flagg said that he had thought of applying clay to his soil. Manure should be adopted to the soil. It is important to know the deficiencies of a soil.

Mr. William Parker, of Sudbury, said that he was a great friend to peat. He decomposed peat in a short time by turning on it hot lye, used in bleaching in a paper mill. He had 600 gallons per week, and he had no doubt that the waste of this material in this State was equal to $30,000 annually.

We closed our report at a late hour, while some gentleman was speaking.

Subject for the next meeting, Fruits and Fruit Trees. It is expected that the Hon. Isaac Davis will preside and open the discussion.

For the New England Farmer.

ON THE CULTIVATION OF NATIVE TREES AND SHRUBS.

Continued from Page 116.

The White or Single Spruce is an inhabitant of the northern regions, and is capable of resisting the severest colds. It probably attains its greatest beauty and height in the forty-sixth parallel of latitude. As we approach farther north toward the Pole, it begins to be dwarfish in its habits.

Sir John Franklin, in his second expedition to the Polar Sea, says the spruces abound in the vicinity of the Great Bear Lake, where the clay, which lies under the soil, is firmly frozen during the greatest part of the year, and adds, although we remained there two seasons, the thaw never penetrated more than twenty inches from the surface. This tree is remarkable for being found farther north than any other tree in America.

The White Spruce sometimes attains to a very large size, if we may credit the account given of a large one, seen by Johnson, and described in his Voyages to New England, published in 1675. He says, at Pascataway, there is now a Spruce tree, brought down to the water side by our mast men, of an incredible bigness, and so long that no skipper durst ever yet adventure to ship it, but there it lies and rots.

The Single Spruce is not so ornamental a tree as the Double or Black Spruce. The leaves are of a light bluish green tint, and thinly arranged on its branches. We occasionally see some handsome white spruces, but they usually, as they advance in size, present a ragged appearance, by their branches being deprived of their leaves.

The Black or Double Spruce is distinguished from the White or Single variety, by its leaves being of a darker green, more thickly set on its branches, less slender, and tapering, and of a more robust habit of growth. Its branches are disposed in whorls, forming a conical head, of great regularity and beauty. In a moist, rich soil, it is of a rapid growth. One we planted when quite small, has attained a height of thirty-five feet, with a diameter of one foot, in twenty-five years. It was taken from the forests of Maine, in the month of August, with many others, with a sod of earth around its roots. It commenced its growth, by sending out a whorl of branches near the ground, and it has continued to do so every year since.

The Norway Spruce is a very fine tree, a native of the north of Europe, and perfectly hardy in Massachusetts. It is of the most rapid growth, and will grow in almost any soil or situation. It rises to the height of from eighty to one hundred and fifty feet, and when advanced in age, its branches are said to have a weeping habit, which gives it a very elegant appearance. It is every way a very desirable tree, and is becoming a great favorite.

The next tree of which we shall speak is the Hemlock Spruce, or as it is usually called by most persons, the Hemlock. It is a beautiful tree, and deserves something more than a passing notice, not only in consequence of its great beauty, but also of the useful properties it possesses. But these were not discovered or admitted by our ancestors. The early writers of New England, when speaking of the hemlock, express their regret that so useless a tree was found so abundantly in the country.—Capt. Jonathan Carver, who travelled throughout the interior parts of North America in 1766, and described some of its vegetable productions, when speaking of the hemlock, says this tree grows in every part of America, in a greater or less degree; it is however quite useless, and is only an incumbrance to the ground, the wood being of a very coarse grain, and full of wind-shakes or cracks.—The valuable property called the *tannic acid*, which is so abundantly found to exist in the bark of the hemlock, was wholly unknown to the early settlers of New England, and when they first cautiously used it, they mixed it with the bark of the oak. The present importance of the hemlock to the manufacturers of leather can hardly be estimated. I should suppose that all the trees in our forest could not furnish a supply of bark for many years, without the aid of the hemlock. All the species of oaks, together with the chestnut and birches combined, although all of these trees possess the tanning principle in a greater or less degree, and are used in the north of Europe and England to tan leather, could, but for a comparatively short period, furnish us with bark for tanning. But the hemlock, fortunately for us tanners, is one of the most widely diffused tree in all North America.—And what is very remarkable, and can hardly be said of any other tree, it is found in every variety of soil and situation. It is a tree also that does not suddenly disappear, as it approaches the north, as many trees do, but as it proceeds and encounters

greater degrees of cold, it becomes dwarfish in its habits, until it reaches the sixty-fifth parallel of latitude, when it no longer is seen The hemlock is found growing in dense masses in swamps, and on rocky hill-sides, scarcely covered with earth. It also is found growing alone in extensive tracts of forests, crowding out all other trees, or mingling singly with other evergreens in low moist woods, or leaving the low lands, it mixes with the birches, beeches, and maples. Micheaux says, it begins to appear about Hudson's Bay, near Lake St. John, and in the neighborhood of Quebec it fills the forest, and in Nova Scotia, New Brunswick, the State of Maine, Vermont, and a considerable part of New Hampshire, it constitutes three-fourths of the evergreen woods. Since Micheaux's time, the hemlock is found to abound in New York, Oregon, and the new territories of Minnesota and Missouri. It is likewise found frequently in abundance in all that large tract of country, comprising what is called British America.

The hemlock is likewise distinguished for the close order in which they sometimes stand.—There is hardly a tree in our forests that will grow and flourish in so crowded a manner as this tree. And in consequence of this close habit of growth, it has received its name of hemlock, from their branches hemming, and interlocking each other. If such is the abundance of the hemlock, surely our tanners need not apprehend a failure of bark for many years to come. Several years since, we spent a day in the forests of Maine, in company with several bark peelers, and here in these dark and silent forests, with nothing to break their stillness except the heavy blows of the woodman's axe, the tap of the woodpeckers, or the plaintive note of the wood-thrush, we saw the hemlock in all the decrepitude of old age. It is only when found growing without interference from other trees, or standing singly on the lawn, that we see this tree in all its beauty, and it is then we are led to adopt the language of Gilpin in his remarks on Forest Scenery, when he says, "It is no exaggerated praise to call a tree the grandest and most beautiful of all the productions of the earth."—The value of the hemlock as a timber tree is becoming every day more valuable, as the pine becomes more scarce. This tree requires the same mode of culture and manner of transplanting as the pine, and is most successfully grown in groups. It has been used for hedges, and is said to bear clipping well.

The Arbor Vitæ is not common in Massachusetts. It is a handsome tree, and of easy cultivation. When raised from seed, care should be taken the first and second year of its growth to protect the plants from the frosts of winter, by covering them over with straw, or something of the kind, or by laying them down, and covering them with earth. The young plants are frequently taken from the forests of Maine, and offered for sale in the spring, and when care is used in keeping the roots moist, they readily grow and thrive, when transplanted. The Arbor Vitæ makes a most beautiful garden hedge, and bears clipping well. The Oriental or Chinese Arbor Vitæ is found in China and Siberia, in rocky situations, and has been cultivated in Massachusetts, but is found to be rather tender when young.

There is another tree belonging to the cypress tribe, not an evergreen, and found in the swamps of the Southern States, and is called in the Carolinas and Georgia the Bald Cypress. It is said to grow well in Massachusetts, having been introduced into the Botanic Garden in Cambridge. A friend of ours, a few years since, transplanted several cypress trees taken from New Jersey, which is supposed to be its northern limit, but they have been all destroyed by our severe winters. The American Holly, is a fine evergreen tree and in Micheaux's time, was thought not to be seen north of Connecticut. It is however to be found in Massachusetts, where it attains to the height of ten or twelve feet, but more frequently but six or eight, so that it can therefore be only ranked with us as a shrub. We have never seen it in the eastern part of Massachusetts, and it is not probably to be found on the north side of Massachusetts Bay. It is said it can be propagated by seeds, or plants taken from the woods. We should be pleased to know in what manner we can cause the seed of the holly to germinate; all attempts hitherto made by us, at producing plants from seeds, have failed, although we have endeavored to follow the mode laid down by Loudon and others. S. P. Fowler.

Danvers, March 28, 1851.

[TO BE CONTINUED.]

PROFITS OF FARMING.

Within a few years a great deal has been said on this subject, and some great stories have been told, some of which are true. A single instance of great crops does not show the profits of farming generally, nor does a failure of crops show that the business is poor. The farmer's business is not all sunshine, nor is it all shade, as some have intimated. He is always blessed with seed time and harvest, and generally with fruitful fields; yet occasionally he has reverses.

To ascertain the profits of farming, we must take the history of a farmer during his career on the stage of action, and we now propose to give an example. Mr. Nathaniel P. Morrison, of Somerville, was married at the age of twenty-two years, and the following was the property which he and his wife possessed when they became one: Two cows, four sheep, one year old colt. In 1812, when he bought his farm in Somerville, he had accumulated $5000 in cash, and he owned a farm in the country. His statement below shows how he has succeeded in farming in Somerville. Besides his permanent improvements in buildings and other property gained from the sales of produce, amounting to $5,153, he has made great improvements on his land, and since his statement he has expended $200 or $300 for a front fence, $100 for a shed, $75 for a hen house, and he has money at interest. Another great profit, much larger than usually falls to the lot of farmers, is the rise of his real estate. We will not name the amount of this, lest it affect his valuation for taxes: and besides his property in Somerville, he sold a farm in the country for $1,800.

We have occasionally visited Mr. Morrison's place, and we must say he is among the most skil-

ful of farmers, gardeners and orchardists, and every thing about his place is in good order, and wise management is seen in his operations, and this is clearly shown by his success. The item of $125 which was the difference in exchanging piano fortes, reminds us of the important fact that the same "huge paws" that lay hold of the farm implements nimbly operate on the piano forte, in a style superior to most performers. When Mr. Morrison rendered the following statement, he had $600 worth of fruit not harvested. For 25 years he has used no ardent spirit on his farm.

M. P. MORRISON'S STATEMENT.

To the Committee on Farms, of the Middlesex Agricultural Society.

In the management of my farm my object has been to improve the land and trees so as to realize the greatest profit from the least expense. I purchased my farm in 1842 for $5000. It consists of between nineteen and twenty acres; eight or nine of which includes the buildings and fruit trees; the remainder, when I purchased it, was a stony, worn-out pasture, which would not produce two hundred pounds of oats to an acre. I commenced ploughing, digging out of stones, and manuring it, till it became productive and suitable for all kinds of vegetables. I have set on the same between eighty and ninety apple trees.

I have in all about 600 fruit trees; about 40 kinds of apples, 20 kind of pears, 40 quince trees, 40 cherry trees, a few peach and plum trees. When I purchased, my orchard was principally grass ground, which I consider to be very injurious to the growth of the trees and fruit. It was impossible to plough near many of the trees in consequence of low limbs; I commenced pruning about the last of February I think, 1842, and made a dreadful havoc both to limbs and trees, as many good and experienced farmers thought, and assured me that I was "spoiling my orchard." I commenced grafting also during the same spring, and have continued to graft each succeeding year. I have taken the tops from about 60 trees, many of which were more than a foot in diameter. I gathered from one tree, the third year after grafting, 3 bbls. of Baldwin apples; fifth year, 5 bbls.

The trees are now in a healthy condition. My horses can walk under and near every tree so as to plough with all ease. I prune and scrape my trees every year, generally in February and March. Scraping I consider to be of great importance, and would recommend to all to practise the same. I think my orchard, previous to my purchasing it, never produced more than 60 barrels in a year.

In 1842 I had	45 bbls.	(early apples not included.)
1843	" 55	"
1844	" 196	"
1845	" 183	"
1846	" 116	(Russetts failed.)
1847	" 200	"
1848	" 130	(Russetts failed.)
1849	" prospect very good.	

The nett income of my farm since 1842 up to Sept. 1st, 1849, is cash paid for

2 Wagons,	$150
Buggy and harness,	151
Horse,	120
3 Ploughs, Cart and Wheelbarrow,	83
Haycutter and Grindstone,	23
Water brought in lead pipes,	50
Barn and Sheds,	1000
Cash paid for building meeting-house,	100
House,	2500
Cash for Pear trees,	25
" " Plum " &c.,	5
" due and on hand,	791
1 Cow,	20
1 Piano Forte,	125
	$5,143

I had a partner during the first five years, whose nett income was about $1,000.

The above I consider to be a correct statement of the amount realized from 19 1-2 acres of land, and within the time specified above.

The amount paid out for labor and manure on the whole farm will not exceed $200 per year for the last three years. In 1847 the amount sold was $1,750. In 1848 about $1,200. In 1849 it will probably be from $1000 to $1,200. I consider that year to be the most unprofitable one for marketing that we have had for twenty years; many of my crops have entirely failed, such as early pears, quinces, cabbages, &c.

Somerville, Aug. 27, 1849.

Mechanics' Department, Arts, &c.

AIR, STEAM AND WATER ENGINE.

This invention of Mr. Black, described and illustrated in former numbers of the *Farmer & Mechanic*, seems in all experiments which have been made with it to be perfectly successful. Messrs. Coons & Aiken, the assignees of the patent, have constructed one on a larger scale, which was exhibited and put in operation at Albany recently, in the presence of some two or three hundred spectators. The editor of the Knickerbocker, who was present, after describing the arrangements of the machine, remarks:

"In the experiments which we witnessed, (which was only a temporary arrangement,) three of the four jets emitted very little steam if any at all, and to the surprise of all present, a single jet of steam but an eighth of an inch in diameter caused that massive wheel (weighing 1,600 lbs.) to revolve at the rate of thirty to thirty-five revolutions per minute, and no two men present were able to check the motion in the least. We were informed by the proprietors of this patent that they have several smaller engines in operation, and they all work admirably.

"This invention, we think, must produce a complete revolution in all stationary motive power. The remarkable simplicity of its entire construction, its neat and beautiful appearance, its safety, and its adaptation to all the various uses which power may be applied, together with its low price and durability, must soon give it a preference over every other engine in the market. Of its simplicity our readers may judge, when we state, that any person of ordinary capacity, whether a mechanic or not, needs but an hour's instruction to make him fully competent to manage the whole of the machinery.

"This machine will, when completed, be placed in our press-room, and taught to turn one of Hoe's

mammoth presses. When ready for company, we shall announce the same, when the public will have a better chance of understanding the wonder than any written description can possibly enable them to do at present."—*N. Y. Farmer and Mechanic.*

PAINTING.

The Dutch, who are celebrated as a people for their industrious and economical habits, have a maxim, it is said, that "painting is no expense." This, doubtless, is true. A coat of paint on woodwork, exposed to the atmosphere, tends greatly to preserve it, and as paint, when of good quality and well put on, lasts unimpared for years, the extra durability it confers upon the substance it is designed to protect, goes, no doubt, a great way toward defraying the expense. All houses should be painted. White is the best color, especially in hot climates; all dark colors having a strong tendency to absorb caloric, or the matter of heat, and by so doing to render houses much hotter than when painted with pure white, which reflects it. One story houses which have had their roofs painted with coal tar, or some other paint of a dark color, are generally insufferably hot.

The out-buildings on a farm ought, for economy's sake if nothing more, to be painted. Any structure that has cost money, ought to be preserved by every means and application possible to be bestowed. Whitewashing the walls of sheds, and fences gives a very neat and tasty appearance to an establishment, while the wash retains its brilliancy, but as soon as that is gone, the aspect is unpleasant. If a farmer possesses the means, by far the most judicious method is to bestow a good finish, and protect by a coat of paint. Durability is a prime quality in farm buildings, and they who expend their money in furnishing good structures at first, escape the heavy expenditures which cheap edifices entail on their owners, for annual repairs.

Paint applied to the farming utensils, such as ploughs, wheels, carts, &c., well repays the cost; it preserves the wood, and a well painted, neat looking instrument, is always used with much greater care and circumspection than one that is not. The cost is a mere trifle, and scarcely worthy of being taken into account, if we contemplate the utility of the process.—*Germantown Telegraph.*

Remarks.—We dissent from that part of the above article recommending white as the best color for houses, and our readers have generally seen our views on this subject which were published recently.—*Ed. N. E. Farmer.*

NEW SELF-CENTERING AND SELF-RELEASING LATHE.

Mr. Thomas R. Bailey, of Lockport, N. Y., has made a very valuable improvement in lathes for concentric turning, such as for broom handles, &c., for which measures have been taken to secure a patent. The live spindle has a sliding cone mouth into which the rough material is placed, and the slide spindle has also a cone mouth in a line with the other. The rough material is placed within these cone mouths, and must be centered, as the spindles always bear a fixed relation to one another, and the cone mouths guide the rough material to lie in a true central line with both spindles. When the slide has run its length, it strikes a cam upon the frame, and the broom handle, or whatever it may be that is turned, is thrown out from the spindles, and drops down. The turning tool can be guided by a fixed side pattern to turn out many different irregular forms. This lathe is easily attended and is very simple. It is a good, new, and useful improvement.—*Scientific American.*

Ladies' Department.

SOUPS.

The delicate and proper *blending of savors* is the chief art of good soup making. Be sure and skim the grease off the soup when it *first boils*, or it will not become clear. Throw a little salt to bring up the skum. Remove all the grease. Be sure and *simmer softly*, and never let a soup boil hard. Put the meat into cold water, and let it grow warm slowly. This dissolves the gelatine, allows the albamen to disengage, and the scum to rise, and diffuses the savory part of the meat. But if the soup is over a hot fire the albumen coagulates and hardens the meat, prevents the water from penetrating, and the savory part from disengaging itself. Thus the broth will be without flavor, and the meat tough. Allow two table spoonfulls of salt to four quarts of soup, where there are many vegetables, and one and a half where there are few. Be sure not to leave any fat floating on the surface. A quart of water, or a little less, to a pound of meat, is a good rule. Soup made of uncooked meat is as good the second day, if heated to the boiling point. If more water is needed, use boiling hot water, as cold or lukewarm spoils the soup. It is thought that potato water is unhealthy, and therefore do not boil potatoes in soup, but boil elsewhere, and add them when nearly cooked. The water in which poultry or fresh meat is boiled should be saved for gravies or soup the next day. If you do not need it, give it to the poor. Keep the vessel tight in which you boil soup, that the flavor be not lost. Never leave soup in metal pots, as sometimes a family is thus poisoned. Thickened soups require more seasoning, nearly double the quantity used for thin soups.

Poisonous Vessels.—Vessels of copper often give rise to poisoning. Though the metal undergoes but little change in a dry atmosphere, it is rusted if moisture be present, and its surface becomes covered with a green substance—carbonate or the protoxide of copper, a poisonous compound. It has sometimes happened, that a mother has, for want of knowledge, poisoned her family. Sourkrout, when permitted to stand some time in a copper vessel, has produced death in a few hours. Cooks sometimes permit pickles to remain in copper vessels, that they may acquire a rich green color, which they do by absorbing poison. Families have often been thrown into disease by eating such dainties, and may have died in some instances, without suspecting the cause. Dr. Thompson.

☞ He shall be immortal who liveth till he be stoned by one without fault.

NOTICES OF PUBLICATIONS.

THE AMERICAN REFORMED CATTLE DOCTOR; containing the necessary information for preserving the Health and Curing the Diseases of Oxen, Cows, Sheep, and Swine, with a great variety of original receipts, and valuable information in reference to Farm and Dairy Management; whereby every man can be his own Cattle Doctor. The principles taught in this work are, that all Medication shall be Subservient to Nature; that all Medicinal Agents must be Sanative in their Operation, and Administered with a view of aiding the Vital Powers, instead of Depressing, as heretofore, with the Lancet and Poison. By G. H. Dadd, M. D., Veterinary Practitioner, author of "Anotomy and Physiology of the Horse." Boston: J. G. Tilton & Co., 326 Washington Street, 1851.

The nature of this work is sufficiently indicated by the title. Dr. Dadd is a practising Veterinarian in this city, and is doing much, we trust, to bring about a reform in cattle practice, by avoiding the harsh treatment that has long been in vogue among the practitioners in this art, and substituting mild means, good management, and merciful treatment, which will commend themselves to the approval of every considerate man. This is a very valuable work, as we might reasonably expect from one who is well skilled in the science of his profession. We would commend it to farmers, and all others who keep cattle, sheep or swine.

THE GARDENER'S TEXT-BOOK; containing practical directions upon the Formation and Management of the Kitchen Garden, and for the Culture and Domestic Use of its Vegetables, Fruits and Medicinal Herbs. By Peter Adam Schenck, formerly gardener to Edward C. Williams, Esq. Boston: John P. Jewett & Co., Nos. 17 and 19 Cornhill, 1851.

This work treats of the situation, soil, laying out, manuring and management of a kitchen garden, in a very particular manner, so that any one can easily practise upon the directions. It is a valuable work, well adapted to enlighten those who are not familiar with this important department of horticulture. But very few farmers give proper attention to a kitchen garden. The study of this interesting work would render the business so familiar, that they would not fail to give more time to the subject. From a small spot, as a garden, the family may be supplied with luxuries the whole year, and in this way a great saving would be made in other provisions.

CATTLE, BY W. YOUATT AND W. C. L. MARTIN, being a treatise on their Breeds, Management, and Diseases, comprising a full History of the Various Races; their Origin, Breeding and Merits; their Capacity for Beef and Milk; the Nature and Treatment of their Diseases; the whole forming a Complete Guide for the Farmer, the Amateur, and Veterinary Surgeon, with 100 Illustrations. Edited by A. Stevens. New York: C. M. Saxton, Agricultural Book Publisher, 1851.

Youatt is distinguished for his historical knowledge of cattle, as well as for his skill in veterinary science. In this work the large number of illustrations and the history of different breeds forms a very attractive and useful feature. It contains a large amount of interesting and instructive matter.

ACKNOWLEDGMENTS.

From E. W. Bull, Concord, potatoes, which he recommends highly, as of an excellent quality, and not very liable to rot. They appear to be the Early Worcester or Riley, but as we are not certain of this, we shall plant them for experiment, in order to settle the question.

HOLLAND POTATO.—S. H. Colton, Worcester, has furnished us with a specimen of these potatoes, which were raised in Holland, Ct., from the seed about four years ago. Mr. C. remarks that they rot but slightly, yield very largely, and are of good quality. He has some for sale.

Of Jordan & Perkins, nurserymen, Corners, Vt., several varieties of apples. Among them was Slocum Sweet, Sweet Russet, Jenny Lind, Newtown Pippin, Lebanon Sweet, and Russet Pearmain. The Sweet Russet is a large apple, and excellent for baking; it seems to be identical with apples of the same name cultivated by E. Davis of Acton, and others, but it seems to be later. Lebanon Sweet is a good winter apple. Newtown Pippin is rather imperfect, as is usually the case with this fruit raised in New England. Jenny Lind is a very fair handsome apple of good size and excellent quality. By the way, this name is given to so many apples that it is no more definite than greening, Pippin, Seeknofurther, &c.

From Albert Chapman, Middlebury, Vt., Baldwin apples, which are like the Baldwins which we raise in Maine. They are harder, more flat, and of a higher color than the common Baldwin. Fine specimen of Roxbury Russet. Also Sweet Russet, of a brighter yellow than the Roxbury, and which Mr. C. says keeps the longest of any apple he raises. The quality is rather better than that of the Roxbury. It is a very fair looking fruit, and may be valuable for its late keeping. It is entirely different from the Russet Sweet mentioned above.

☞ The NEW ENGLAND FARMER is published *every other* Saturday by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market Street, Boston.

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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

WORK FOR THE SEASON.

May comes with its genial warmth and refreshing showers, waking all nature to life and beauty. The earth is clothed with herbage; every plant and tree assumes its beautiful adornments, and the flowers start forth with their fine colors and delightful fragrance. All nature becomes renovated. The animal creation rejoices in the gladsome change; and man, partaking the hue that is around him, revives with nature and acts with new life and energy.

The judicious remarks of our friend Holbrook on spring work, supersede the necessity of our dwelling so extensively on the work for this month, though all we could both say, in filling the whole paper, would not include every particular which claims the busy cultivator in this peculiar month for planting.

Transplanting Trees.—Owing to the cold wet weather, there is much of this business to do yet, and it is better to delay than set when the ground is very wet; but by all means take up the trees and heel them in, to retard their growing. In setting out trees, be very careful to place the roots near the surface, covering them with a few inches of soil. If set deep, they grow slowly; but avoid the other extreme, and cover the roots well, or the wind, when the earth is soft, will displace them. As a remedy against the effects of a hot sun and severe drought, from rather shallow planting, mulch the trees the first year, and the roots will seek their natural depth and support the trees. Dig large deep holes, scattering the sub-soil around upon the ground, and filling the hole nearly full with rich loam. Use no manure in the hole, unless the soil lacks good culture, and then the manure should be thoroughly decomposed, and mixed with the loam. Coarse dressing may be laid around the tree, and it makes good mulching. A good time to transplant evergreens is the very last of May or early in June, just as the new growth has started.

Planting Indian Corn.—In the southern part of New England, corn will generally ripen well, excepting on low land, if planted the last of May, and in some seasons as late as the tenth of June it ripens well. But in the northern section, especially on frosty land, it should be planted by the tenth or fifteenth of this month, if the land be dry and warm. But as it cannot always be planted in season, from the condition of the soil, or the business of the season, it is important to have varieties suited to the climate, as to time of ripening.

Root Crops.—If we have much rain, moist land will not get sufficiently dry to admit of fine pulverization, till we have warm dry weather, and this condition of soil is essential to good crops and easy culture. On such land it will answer to sow beets, carrots and parsnips the last of this month or very early in June, as drought will not affect the crop, and the growth will continue late in the season; but if the land is very dry, and sowing is delayed till late, the hot sun often destroys the seed, and drought may cut short the crop. On light soils sow as early as from the 10th to the 20th of this month. Subsoiling is a great advantage to root crops, especially to the tap-rooted kinds. We have found in some cases a gain of 50 per cent. by this process, and we have many statements of an increase of 20 or 30 per cent. by this cheap operation; that is cheap compared with the advantages. But any person of common sense, who draws up a long root from a soil ploughed only 6 or 8 inches deep, and sees how crooked and contracted that part is that wormed its way down the substratum, among the pebbles and gravel, and found not room to expand itself, needs no experiment to show that there would be a great advantage in stirring the subsoil, and allowing the roots to descend freely, and draw moisture and nutriment from as great a depth as they will naturally descend in a well prepared soil.

Stock, when turned to pasture, should be furnished with a constant supply of salt, or it should be given as often as twice; for when animals are supplied with salt only once in a week or two they will eat too much, if they can get it.

ROOT CROPS.

Some years ago, a great deal was said in favor of raising roots for stock, and many farmers went into the business to a large extent. They did not all realize their ardent expectations, and some have abandoned raising roots altogether. Others raise them, and with a profit, as they consider.

There is no doubt that the value of root crops has been over-estimated by some, while others consider them unprofitable without having made a fair experiment. Some farmers who are situated near a large market, prefer feeding their cows on Indian meal, shorts, and oil cake, to raising roots for them; and in such places it might be more profitable to raise vegetables for market than to raise roots for cows, while other good food for them may be conveniently obtained at a moderate price.

But in the interior, where meal, gain, oil cake, &c., are higher, we believe that many farmers will find it profitable to raise roots for stock. They are good for working cattle, growing cattle and milch cows; also for horses, sheep, and swine. With roots, young cattle may be fed on coarse fodder, and kept in a thriving condition in winter, and they will be less liable to disease than if fed on dry fodder. Working cattle will be more healthy if allowed a moderate portion of roots. Milch cows fed partially on roots will give more milk, and if the roots are of the right kind the milk will be rich and they will be less liable to disease than when they are fed on other food. Horses are kept in better condition, in winter, when fed partially on roots, instead of wholly on grain and meal, with the exception of hay. Sheep suffer much in winter from being kept so long from the ground, and meal and grain are not good substitutes for green food. Roots are better to keep them in good condition.

Animals are in the most thriving state when feeding on green herbage; and roots afford them a succulent food in winter resembling the green food of summer, or at least it is the best substitute for it.

A great objection to raising root crops is the expense in weeding, and this applies particularly to carrots, from the large number of plants that are necessary. But this objection may be obviated, in a great measure, by beginning in season, and preparing and manuring the ground late in the fall or early in spring, and stirring it occasionally in spring, as the weeds start up, until the time of sowing, and soaking the seeds, and allowing them to remain in a moist state till almost ready to sprout, and then sow on a fine freshly stirred soil, and the plants will start before the weeds, and the weeding will cost but a trifle, compared with the old method. In this way a piece of carrots may be hoed with one-fourth the usual expense.

☞ To discover how many idle men there are in a place, all that's necessary is to set two dogs a fighting.

STEEPS FOR INDIAN CORN.

Seed corn is sometimes soaked in warm water, or some preparation for the purpose of promoting vegetation. Some preparations of a nauseous nature are used as steeps for corn to prevent its being eaten by vermin. And some steeps are used with a view to increase the crop. We have some wonderful stories about the crop being increased 25 per cent. just by the small amount of a preparation absorbed by the seed.

There is but little advantage in soaking corn or any other seed that vegetates readily, for the purpose of forwarding the vegetative process. With hard seeds, like beets, carrots, parsnips, &c , there is a great advantage in steeping the seed.

The statements about raising much larger crops merely by steeping the seed in some fertilizing substance, reminds us of the shrewd remark of the intelligent servant of Lord Kaimes. His lordship remarked to his servant John, he had no doubt that so great improvements would be made in agriculture that a man could carry in his vest pocket manure enough to dress an acre of land. To which John replied, "very likely, and I have no doubt that he could carry the crop in the other poeket."

We have no doubt that there may sometimes be an advantage in using a nauseous steep to save the seed from depredations. But will not the earth and sun extract the offensive substance?

In many cases, seed corn has been destroyed by the use of powerful steeps; therefore they should be used with great caution.

A NEWLY DISCOVERED MANURE.

The St. Vincent Royal Indies Gazette mentions that a gentleman of that island has sent to England a quantity of pozzolona, to have it tested as cement, and was agreeably surprised to learn that the chemist who tested it had declared it to be the best manure that had yet ever been discovered, and that it was far preferable to Guano. The gentleman in question was complimented on having a mine of wealth superior to gold. When it is considered (says the Gazette) that the island abounds in this valuable substance—the best cement, and, as it now appears, the best manure known, we cannot refrain from offering our public congratulations on the recent discovery, which must ere long bring great wealth into the island by supplying them with an article which must be much needed by the sugar growers. Pozzolona from St. Vincent could of course be supplied here much cheaper than Guano, and might in consequence of its cheapness be extensively used.

☞ Women require more sleep than men, and farmers less than those engaged in almost any other occupation. Editors, authors, and artists need more sleep than those of most other professions. The same is true of precocious children.

☞ Wisdom and virtue are the greatest beauty: but it is an advantage to a diamond to be *well set.*

EGYPTIAN WHEAT.

The above cut represents a plant of wheat, such as we cultivated some fifteen years ago, under the name of "WildGooseWheat," as it came from grain that was taken from the crop of a wild goose, in the northern part of the State of New York, as it was stated. This grain has also been called "Mummy Wheat," as the seed was said to be taken from a mummy. It has had other names, and other countries have been assigned as the place of its origin. Some years ago this grain was figured in the southern papers as a wonderful variety, and it enabled those who raised it to get up a great humbug and sell it at *five dollars* per head, after it had been tried and condemned in the eastern section of the country.

After we obtained this wheat, we had a thorough experiment made on it, as soon as we could obtain a sufficient quantity, from the few grains we had purchased at an exorbitant price. At first it was promising, and seemed to excel other wheat, but afterwards it generally failed, as not adapted to our climate.

We put this article in as a caution, for it is most time to have another humbug raised on this singular grain. The true name is Egyptian Wheat.

FOWLS.

Fowls that are confined to a small space should have a supply of grass. They may be let out on a grass plat to feed, or sods of grass may be given them. If let out to feed in the latter part of the afternoon, they will generally return to their house without trouble.

When fowls are confined to a narrow space it requires much pains to supply them with all the various kinds of food which they collect when running at large; and without care to supply their wants, they will not be profitable. When roaming as they please, they devour many insects, eat gravel and various kinds of herbage, seeds of various kinds, and many other things which we cannot discriminate, though we look on while they select their food.

For the New England Farmer.

PEAT AND COAL.

Mr. Editor:—It would seem from the accounts of geologists, that we are indebted to vegetation for a considerable proportion of the materials now used for fire. In the peat bogs of Scotland and Ireland, the remains of large trees are very abundant; they must have originally fallen with age, and by damming streams rendered the soil unfit for the support of vegetation, so that large forests fell and were buried under the gradual accumulation of vegetable matter. When the levels of Hatfield Chase were drained, vast numbers of trees of all kinds were found buried under the soil, which were overthrown probably by the Romans in order to drive out the natives who had taken shelter among them. In the masses of peat of Scotland, the pines which have been buried for ages, embalmed in their turpentine, still retain their freshness. Similar remains are found in various parts of England and the United States.

I have a peat bog situated near the Ashuelot River, in this town, where in excavating peat for the compost heap I have often found whole trees of various kinds, embedded in the soil to the depth of ten or twelve feet, together with all their natural appendages, in a perfect state of preservation. On this bog are seen the indisputable marks of successive formations; the oak and the hazle are found in the lowest stratum, and in some parts where at the present day the oak is very small if indeed it grows at all, they are found of large dimensions. This stratum of peat is, I think, little inferior to coal. In the second stratum there is a much greater variety of wood, but the birch and ash are the prevailing kinds, and in the third stratum the greater portion is alder.

Though peat is but little valued in this vicinity where wood is abundant, for the purposes of fuel, yet there are many sections of the country where it is important, and we find in countries where wood has been wasted, so that now it is almost gone, and where the transportation of coal would be expensive, as well as difficult, these remains of ancient forests have been kept, by the arrangement of Providence, as "buried treasure," within the reach of man's wants, but safe from his devastations.

Many of your readers know, I presume, that coal, with the exception of anthracite, is of vegetable origin. Geologists, however, are not agreed on this subject; but in some formations there are evident remains of vegetable matter, and many believe they can trace the successive changes from bithuminated wood to coal. De Sac and others believe that the coal formations are the peat bogs of the ancient world, which had become inundated with sea water. The fossil peat, he says, differs only from coal in not having been mineralized and not having ferruginous masses in the strata above it, and it is believed that the same action of water which changes vegetable matter into peat can in due time produce the further change to bitumen, and that the whole process can be traced from vegetable peat; peat to lignite, and lignite to coal.—Thus it appears that a considerable proportion of mankind are making use of the remains of earlier vegetation, for fuel which has been preserved for their benefit, by the liberality of nature.

In regard to the manner in which peat is converted into charcoal, I am not acquainted, but have often burned large stacks of peat in the same manner wood is burned for that purpose, but without any such result; a hard, cinder-like substance is always formed, which I have found exceedingly rich in fertilizing matter, and which I have often applied in a liquid form to growing crops with good success, increasing their growth and productiveness, in many cases more than one-half, and in all to a considerable degree. I have applied the liquid to almost every variety of crop usually raised by farmers in this vicinity, and under every variety of circumstances, and always with satisfactory results.

My method of preparing calcined peat is by dissolving half a bushel in half a hogshead of water, first pulverising the peat, then stirring the mixture often for several hours; after remaining two or three days, a very dark colored solution is formed, and ready to be applied in watering any plant or tree. Care should be taken that the mixture be not allowed to stand too long, as sulphurated hydrogen is formed, which greatly injures the mixture as well as rendering it very offensive; this I suppose arises from the decomposition of the sulphates in the water and ashes by the vegetable matter; some unburned peat and wood ashes are necessarily contained in the mixture of peat and water, and sufficient to produce that well-known odor common to bad eggs, if allowed to stand for a week or ten days in warm weather. H. Blake.

Keene, N. H., March, 1851.

Remarks.—Our correspondent's article is on a subject of great importance to farmers, and we are pleased with his interesting remarks upon it. We shall be pleased to hear more from him showing the result from his practical application of this valuable fertilizer, which is so abundant in many sections of New England. We should also be happy in hearing from him on any other agricultural subject.

For the New England Farmer.

RENOVATING OLD ORCHARDS.

Friend Cole:—Evelyn upon Renovating Old Orchards is well worthy a careful perusal. Millions of old trees in New England are now "cumberers of the ground." Shall "we dig about and dung them, or cut them down?" is the question. Dig about them, brother farmers; you are morally bound to do so. The *old apple tree* shaded you in childhood, the zephyrs of lovely June and mellow autumn were perfumed by it for your pleasure; first its flowers, then its rich fruit pleased your olfactories and your eye and palate; the sweet songster warbled from its boughs, it filled the big pitcher, the fruit dish, the apple dumplin, the rich pie, preserves and sauces; if you had one spark of poetic fire you would have long since sung of its beneficence. It's a superior theme to "Old Straw-hat," "Arm-chair" or "Oaken-bucket." The old tree has fed your fathers, perhaps your grand-fathers, and it will you and your children, if you will not indolently kill it by famine. The old apple tree reminds us of the loved ones that are gone, that with us walked beneath its shade, or shared its bounties by our fireside.

I cannot, I will not, cut down the old venerable trees planted by my fathers till I first try to renovate them; feed them as they have fed me; this is but evenhanded justice. Will it pay? asks one.

Yes, it will pay better than to plant a nursery and wait seven years with a watering mouth for the first blow bud; renovate the old in justice to our fathers, and plant the young in justice to posterity, we may be benefited by both, but certainly by the *old first*. There are several ways to renovate old trees besides tilling. Spread around them straw, brakes, ferns, thistles, flags, leaves of forest trees, stuff too coarse for fodder, shavings or chip manure, any thing to kill the grasses and retain the moisture. Irrigation is excellent; the waste from road-sides, the suds from the wash-room of one family would improve many trees. If you attempt renovation by tilling, cut not the roots or crop the land of more richness than you impart to it, or your improvement will be very temporary. Pasturing with sheep or swine is very beneficial; drive stakes about the trunk to prevent their being marred by knawing or rubbing. Take off not only all the dead limbs and remove rot with a gouge and fill the wounds with some suitable substance; clay mortar does well, horse dung and clay, &c., but at a proper time reduce the old top.

I once had wonderful success with a tree so far gone that it seemed worthless, except to experiment upon. I cut off all the top except a few twigs on the stubs of the branches; I left the stubs well spread; I then on my passage down from the tree stripped all the bark upon the branches and trunk, except about three inches of the upper end of each branch, the better to aid the sprouting of new branches; peel about the middle of June to the first of July, if I mistake not; at any rate, when the sliver is grown, which must not be disturbed or broken, neither should it be violently scorched by sun, or washed by rains; dull cloudy weather is the best. If hot, protect by the shade of a few tall forest bushes in leaf, stick them on the southern side so far off that their leaves will not disturb the sliver. This old tree had a perfectly smooth bark come upon it, the top is vigorous; at the age of three years and perhaps two, your branches may be grafted with success; this mode of cleansing is perfect. I have just been thinning out and pruning it, and a more perfect graft top I never have seen. The outside of the tree and its top are thrifty as a nursery tree, yet the inside of the tree was going to decay before peeling. How it may bear remains to be seen; but, I think in a few years it will bear me many bushels of fine Baldwins; if so, you shall hear from me. I intend to try several more the present season. I shall try the most worthless first, and spread all the small boughs and leaves, bark, &c., to rot under the tree. Some others, after breaking the turf, I shall yard my sheep a few nights around each, enclosed by four lengths of light portable fence easily secured at corners. Try it, brother farmers; perform the operation of peeling about the longest days in June, dock off the top first, and then peel carefully as you come down. Select cloudy days when the sun does not scorch. It is a more effectual way to cleanse than washing Try it on a small scale first; I have only told you of my success. Try it, and let us have the results, in three years from the stripping process. Your scions may be grafted into healthy and vigorous stocks, and their growth will be vigorous, so that in three years the top will be larger than at six years, when grafted into old limbs, so that nothing is lost as to time, and much vexation saved in the way of seeing your scions perish and decay at two or three years' stinted growth.

As the case too often is when you graft into old black-hearted limbs, far better that the old tree die under the operation of skinning than to die after you have grafted and waited several years for the result. Evelyn is correct; never graft till the old tree feels thrift from your care. It cannot bear such an operation when prostrated by famine. Crops of apples impoverish the tree; the best bearers first fail and decay.

Many of the choicest blessings of Heaven are given us upon strict principles of reciprocity, thus teaching man that industry tends to his physical and mental health and happiness. If we would be fed by our *trees*, our *fields*, or our *animals*, we must feed them in turn. JESSE SMART.

Troy, April 5th.

For the New England Farmer.

PROFIT OF FOWLS.

MR. COLE:—As much is said in these days respecting the profitableness and unprofitableness of keeping poultry, it is well sometimes to post up the books, and ascertain how the account stands. One of my neighbors, Andrew Chapman, a very correct man, has done this. He has kept an account of debt and credit with his poultry, commencing Feb. 1st, 1850, and ending Feb. 1st, 1851. Being aware of the fact, and knowing that any statement coming from him might be relied on with confidence, I felt very solicitous to know how the account stood; and called on him for that purpose. His son, a very worthy man, who took the principal charge of the turkeys, furnished me with the following account. Thinking that it might be of some service to many of your readers, and perhaps interesting to more, I immediately determined to forward it to you, for insertion in the New England Farmer.

The account of his poultry establishment for one year, ending Feb. 1st, 1851 stands thus·

Poultry Establishment.	*Dr.*
51 Hens and 3 Crowers,	$16,50
3 Gesee,	4,00
9 Turkeys,	12,00
90 bushels of Corn,	58,58
	$91,08
Contra.	*Cr.*
30 Hens, including Crowers,	$9,50
3 Geese,	4,00
9 Turkies,	12,00
2692 Eggs sold,	32,07
90 Turkeys sold,	101,29
1 Goose,	1,00
Amount of Hens sold,	14,73
	$174,59
	91,08
Balance,	$83,51

Not included in the account, 4 Turkeys used by family; 1 Goose, do. do.; also, dunghill Fowls and Eggs, and several loads of manure.

Leaving a net balance of $83,51 on an investment of $91,08, which is equal to an interest of 91 2-3 per cent. for the capital employed; and had the value of the items above enumerated been placed in the account the profits would have equaled an interest of 100 per cent. on the capital.

The number of eggs laid were 2692, not including those used in the family, and the few that were set. The number sold each month and the price per dozen were as follows: Feb. 8 doz. at 14 cents; March 36 1-2 doz., 12 1-2 cents; April 53 doz., 15 cents; May 25 doz., 11 cents: June 33 1-2 doz., 14 cents; July 30 doz., 16 cents; August 17 doz., 18 cents; September 2 doz., 17 cents; October 4 doz., 16 1-3 cents; November 6 doz., 16 cents; Dec. 1 doz., 20 cents.

The hens, after the principal laying season was over, were killed at different intervals until fall or winter and marketed. This accounts for the small number of eggs during the latter months of the year, and no doubt for some of the profits.

The 95 turkeys raised were all of the first litter. Not one of the hens was allowed to sit the second time, a second crop of turkeys being considered unprofitable. The turkeys were kept till about the 1st of Jan., and sold at 11 cents per pound.

The number of chickens raised was only 15, the hens not being permitted to set; and the geese raised only 2 goslings. Notwithstanding this, we do not recollect of having seen any published account of the same amount (where *high prices* were not paid) that exceeds this. P.

North Stonington, Ct., March 3d, 1851.

For the New England Farmer.

BARK LICE ON FRUIT TREES.

Mr. Cole:—You will recollect that I wrote to you for a remedy for the bark lice on apple trees, last spring. I then washed a part of two trees, one with soap and water, the other with strong ley, but without any apparent effect, except the bark of the one washed with ley has a brown appearance, and I think it is injured; these lice are increasing on my trees, and in this neighborhood to an alarming extent; the apples on some of my trees were quite full of them; they appear to infest the grafted more than the natural fruit. Will you ask through the columns of the Farmer for a remedy, and oblige yours, &c., Chs. Moody.

York, Me., April 1, 1851.

INSTINCT IN A BIRD.

Once when travelling in Tennessee, Wilson was struck with the manner in which the habits of the pennated grouse are adapted to its residence on dry, sandy plains. One of them was kept there in a cage, having been caught alive in a trap. It was observed that the bird never drank, and seemed rather to avoid the water; but a few drops one day falling upon the cage, and trickling down the bars, the bird drank them with great dexterity and an eagerness that showed she was suffering with thirst. The experiment was then made whether she would drink under other circumstances, and though she lived on dry Indian corn, the cup of water in the cage was for a whole week untasted and untouched; but the moment water was sprinkled on the bars, she drank it eagerly as before. It occurred to him at once, that in the natural haunts of the bird, the only water it could procure was from the *drops of rain and dew.*

☞ There are three companions with whom a man should always keep on good terms—his wife, his stomach, and his conscience.

For the New England Farmer.

THE OLD APPLE TREE.

We venerate thee, good old tree;
Thou had'st our father's care,
And to our childhood's happiness
Thou gav'st a bounteous share.

How oft we've breathed thy rich perfume,
When dewdrop's crystal show'rs
Invite the humming-bird and bee
To taste thy nectar'd flow'rs.

Thou fill'st the bowl with Russetts rare,
That graced our winter hearth;
We grasp't with joy the welcome store,
The happiest souls on earth.

But since we've grown to manhood's prime
We see thy sure decay;
Limb after limb presents no green
On each returning May.

Oft filthy vermin taint thy skin,
Few songsters seek thy shade;
O, is it man that thou hast fed
That would thee thus degrade?

We'll free thee from these withered limbs,
And give thy rootlets food;
We'll strip from thee that lousy coat,
And dress thee clean and good.

We'll give to thee a Baldwin top,
A Nonsuch or a Sweeting.
In June and Autumn thou shalt shine,
With youthful trees competing.

For thou wilt pay thy master well
For ev'ry care bestowed;
Each season of the flow'rs and fruit,
He sees thee richly clothed. Smart.

TRANSPLANTING TREES.

In taking up trees for transplanting, regard should always be had to their size, and a due proportion should be preserved between the size of the tree and the amount of root attached. A deficiency of root may be partially but not wholly compensated by a diminution or entire removal of the top; but there should always be root enough to supply nourishment to the body, (which, if large, requires the more to sustain it,) and top enough to digest it. A deficiency of top, however, is less fatal, especially in the early part of the season, than a deficiency of root; for if there be enough of the latter, the tree will readily make enough of the former as fast as it shall be needed; but if there be a deficiency of root, although the tree may live and even grow for a time on account of its innate, vital energies, yet it will probably die before the close of the season.

It is for this reason that many trees that "start well" are often found to die in the latter part of the summer, notwithstanding all other circumstances seem to favor their preservation. It is a mistake to suppose that if a tree once begins to grow all risk is at an end. The first season will not always decide; for if that shall be peculiarly favorable, a small root may sustain a tree through it; but the consequence of a small root may be a corresponding small top, and of both, a dead strip running the whole length of the tree occupying, perhaps, one-third, or one-half of its whole circumference. Some trees have a much greater tenacity of life than others, and hence may grow with a much smaller root, or even with none at all. But with these exceptions there should always be a direct proportion between the size of a tree and its root, and an inverse

proportion between the root, and the tenacity of life; —i. e., the less the tenacity of life the greater should be the root.—*Rural New-Yorker.*

PROFITABLE COWS.

Mr. H. D. Rood, of East Sheffield, in this county, sends us the amount of the butter and cheese he has made the past season from twelve cows—three of them three year old heifers.

1957 pounds of cheese, which was sold for 7 1-2 cents per lb. - - - - -	$371,77
4379 1-2 lbs. of butter, 18c. - -	248,31
The whey Mr. R. values at $3,50 per cow,	12,00
The calves, and milk and cream used in a family of six persons, - - -	18,00
Making a total of - -	$680,08
This divided among the twelve cows, gives for each, - - - - - -	$56,67

Several things worthy of note are connected with this statement.

In the first place, the cows themselves. We have no knowledge as to the size, breed, or any of that thing, but one fact stands out in bold relief—they were GOOD cows. In some conversation with Mr. Rood two years since, he spoke in the highest terms of Guenon's criterion for determining a good cow—the escutcheon marks; that the knowledge he had obtained from Guenon's book, was worth hundreds of times the cost of it. We should like to know whether this lot of cows was selected on this principle.

Again. There is something besides cows here. We have not the pleasure of knowing Mrs. Rood, or whether there is such a lady, but somebody has taken very good care of the milk after the cows had done their part, or the cheese would not have brought 7 1-2 cents per lb.

We add three questions for the boys and girls in our farmer's families to cipher out this summer.

1st. How much more would twelve such cows cost than twelve poor ones?

2d. How much more would it cost a year to keep them?

3d. How much more would it cost to make the butter and cheese so as to bring 7 1-2 and 18 cents per lb. than to make it so that the buyer would get shaved if he paid 5 for the cheese and 12 1-2 for the butter?—*Culturist and Gazette.*

MANAGEMENT OF SOILS.

A soil would never get exhausted, if managed with skill, but would continue to improve in depth and fertility in proportion to the industry bestowed upon it. The food of plants, it is true, may be exhausted from the soil by a repetition of cropping with any one family of plants, if we neglect the application of such fertilizers as may have been taken from the soil by that family; but no part of the growing season is required for the soil to rest, or lie fallow, if judiciously managed by a successive varying of the crops, or by supplying to them such food as may be a compensation for what has been taken off by the previous crop. The first object to be attained for securing a certain and profitable return of produce from the soil must be *the rough drainage;* the next object is, *breaking into the subsoil* to the desired depth—not without first considering whether it is proper and profitable to shift or turn up the subsoil at once to the influence of the atmosphere, or whether it is best to break into it well first, by shifting the surface soil, and allowing the subsoil to remain and receive—first the beneficial influence of the atmosphere, and then—at the trenching, a portion of the subsoil may be safely stirred up and mixed with the surface soil; this practice continued for every succeeding crop, will establish a healthy fertilizing surface soil to any desired depth.

If repeated stirrings of the surface are adopted, according to the nature of the soil and weather, every growing crop will continue in healthy luxuriance, without ever suffering by receiving injury from too much moisture, drought, or frost. In addition, by constantly scarifying, hoeing, and forking the surface soil, not only obnoxious insects and their larvæ are expelled, but weeds would never make their appearance, much less have a chance of committing their accustomed robbery of the soil and crops. Besides, by such repeated stirring, the soil is always prepared, sweet and healthy, for succeeding crops—no mean consideration, either when we observe the loss of time and produce occurring to such a ruinous extent in some localities, by allowing weeds to rob and choke the growing crops, and to shed their seeds, productive of a progeny similarly injurious to the crops next in rotation.

The application of manure is most essential, and may be applied most beneficially when the soil is established in a healthy condition, and maintained thus by a constant attention to surface-stirring. Yet the application of manure is a secondary consideration; for though it may be very liberally applied, and with considerable expense, yet, without first insuring the healthiness of the soil, much property and labor will be sacrificed.—*Cottage Gardener.*

NEW ENGLAND SOCIETY

FOR THE IMPROVEMENT OF DOMESTIC POULTRY.

At the annual meeting of this society at the State House, on Wednesday evening, the following officers were chosen for the coming year:—*President,* Moses Kimball of Boston. *Vice Presidents*—Massachusetts—J. C. Bennett of Plymouth, G. P. Burnham of Melrose; Rhode Island—W. S. King and J. Giles of Providence; Maine—A. H. Gilman, Moses Sweat; New Hampshire—H. C. Parker, C. H. Tufts; Vermont—S. E. Robbins, N. T. Sheafe; Connecticut—C. H. Pendleton, S. O. Hatch. *Treasurer*—H. L. Devereux of Dedham. *Recording Secretary*—J. C. Moore of Boston. *Corresponding Secretary*—Wm. Plummer. *Trustees*—Eben Wight, B. W. Baleh, Frank Howe, John Russell, T. E. Chickering, A. A. Andrews, E. G. Kelley, Francis Blake, Edward Carnes, Jr.

The meeting elected the above by a nearly unanimous vote. A resolution expressive of thanks to the late President, Col. Samuel Jaques, of Ten Hills Farm, for his exertions during his past term of office, was unanimously passed. The Treasurer's report shows a balance in favor of the Society of $202.—*Traveller.*

WORLD'S FAIR.—The emperor of Russia has commissioned his agents to purchase every model at the Great Exposition, which may be useful to Russian manufactures. A letter from St. Petersburg announces that the emperor intends to spend 10,000,000 silver rubles in such purchases.

BROOM CORN.

Statement presented to the Franklin Agricultural Society, by applicants for premiums.

I have a field consisting of 173 rods of land, on which was raised a crop of broom corn the summer past. It was a dry piece of upland mowing, having been manured once in two or three years for a great many years previous to ploughing, which was done early in the spring of 1848, and planted to Indian corn. The corn was ashed immediately after planting, in the following manner. Four rows were ashed, and four left without ashes. I think there were 7 or 8 bushels of ashes put on in the manner described, and there was a manifest difference in the size of the corn throughout the season, the ashed corn being much the largest. I cannot say definitely, but should judge there were from 40 to 45 bushels to the acre. It was ploughed again this year on the 28th of May, and planted on the 23d with 12 bushels ashes in the hill. Finished scraping it the 9th of November. The whole weight of brush 1156 lbs., or 1075 to the acre. The seed was cleaned the 22d and 23d of November, and there was 91 1-2 bushels.

Brush contracted in August at 6 cents per lb. Seed worth probably 25 cents a bushel.

VALUE OF LABOR.

Ploughing,	$1,80
Planting,	1,75
Hoeing three times,	8,25
Harvesting,	3,84
Scraping corn,	3,79
Cleaning seed,	1,58
Horse harrowing,	1,12
Total,	$22,13

JAMES CHILDS.

Deerfield, Nov. 26th.

This certifies that we, the undersigned, have raised the present season on two acres and seven rods of land 2075 pounds of broom corn, the land being the same we leased of D. N. Carpenter, April 1, 1850, and also the same bought by David Wait, of Greenfield, of Asa Stebbins, of Deerfield, at a cost of $25 per acre.

The expense of cultivation was as follows:

Rent of land,	$11,31
Ploughing,	2,00
Ashes,	5,00
Seed for planting,	50
Expense of planting,	4,00
Hoeing—three times,	12,00
Harvesting,	4,00
Scraping seed,	10,62
Total,	$49,43
Broom Corn sold at $6 per cwt.,	$124,00
120 bushels seed,	37,50
Whole amount of crop,	$161,00
Whole amount of expenses,	49,43
Balance in our favor,	$112,57

The above land was sowed with oats and clover seed in 1849, and planted with Indian corn in 1848, with manure in the hill. We ploughed and planted about the 20th of May, 1850, on ashes, without manure or plaster.

Respectfully submitted,

S. G. DUNCAN.
ELISHA WELLS, JR.

From the Boston Journal.

POTATO ROT.

To His Excellency the Governor, and the Honorable Council of the Commonwealth of Massachusetts:

GENTLEMEN:—The undersigned most respectfully begs leave to submit to your careful consideration the following outline of his plan for the cure of the "Potato Disease," so called.

It is well known that the esculent tuber, known as the potato, is indigenous in America.

By long cultivation it has been brought to a high state of perfection, as it is usually termed, differing very matirially from its original stock. It is confidently believed, by the subscriber, that it has passed the height of its perfection, and changed in accordance with fixed laws which govern the vegetable kingdom, not only so as to furnish different varieties under different circumstances of climate, soil, &c., but also in some degree, at least, in elementary constituents, or in the relations of its principles, or both. The most effectual method of remedying the evil, it is believed, is to resort to the original indigenous seed and commence anew. While such a procedure is strongly recommended, the following course is confidently submitted as the most sure and successful manner of preventing the disease with the present seed.

Let ground charcoal and sulphate of lime—(gypsum, or plaster of Paris) be mixed in the proportion of two parts of the former to one of the latter, and used on the land according to the soil.

On land which is rich in nitrogenized matter, one quart of the above compound should be put in each hill at planting; on light, sandy soil, one half this quantity, or even less may be used.

From ten to twenty days before the potatoes ripen, let the vines be pruned of half their branches, and let a handful of the compound be thrown on each hill.

Of course the best seedlings of the later varieties should be selected and planted late, so as to ripen after the earlier fall rains. When the plant is matured, the potatoes should be dug and put into barrels or bins, as usual, and enough of the compound should be intermingled to fill all the principal crevices between them; this may be used the following year at the time of planting.

In the absence of charcoal, peat, tan or other carbonaceous substances may be used, and in the absence of gypsum, (sulphate of lime) copperas (sulphate of iron) or the pyrites of iron, may be used to advantage, or any other substance which yields sulphuric acid to ammonia.

The above is believed to be the only efficient course for preventing the present evil. It is founded upon philosophical principles, after great inquiry into the principal facts connected with potato growing, and is found successful by actual experiment.

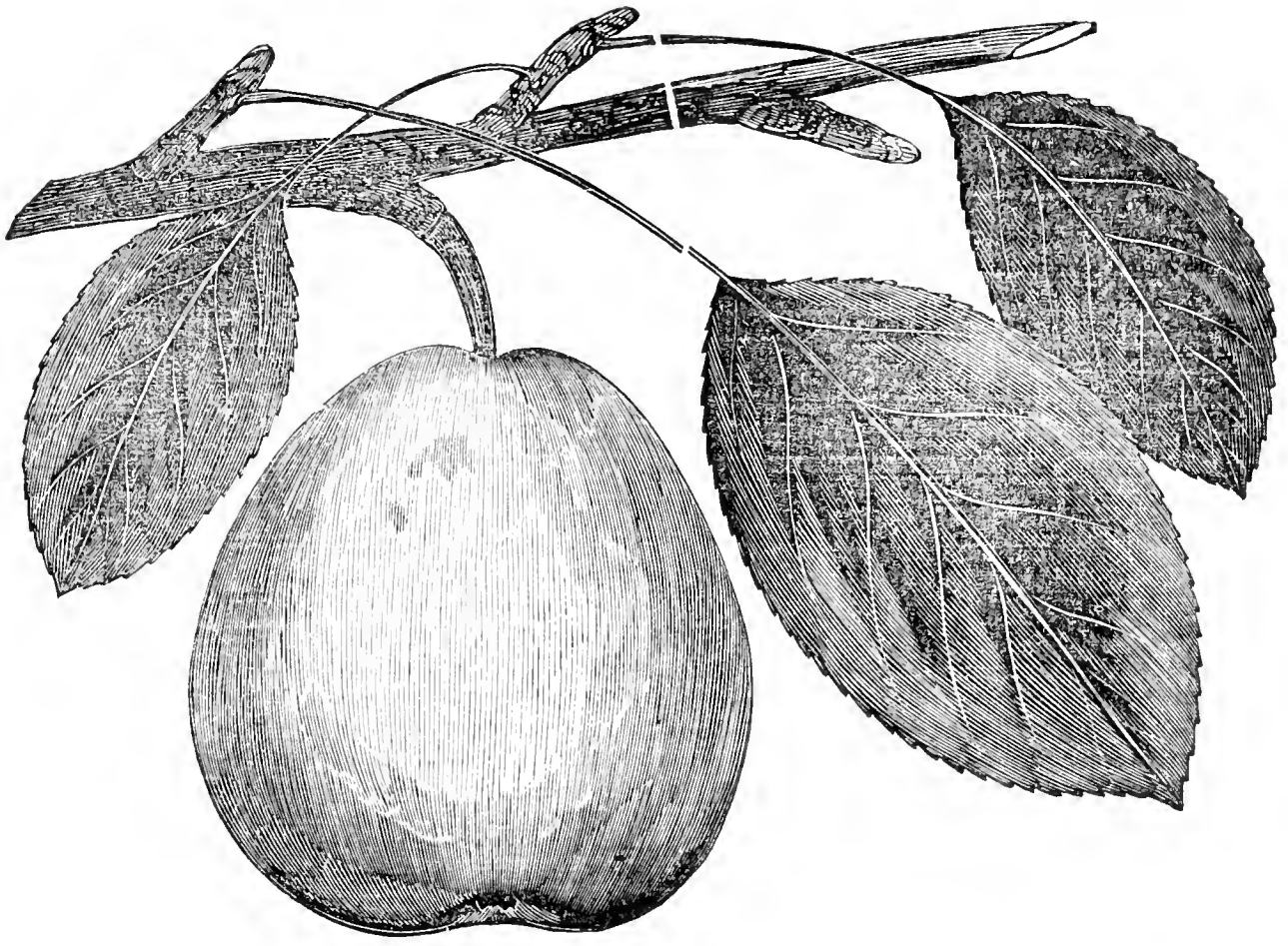
It is based upon the fact that the potato receives nitrogen both from the earth and atmosphere in an undue quantity, and requires the presence of absorbing and neutralizing substances.

In the further prosecution of the claim for the reward offered by the Legislature on this subject, the subscriber will take an early occasion to set forth and illustrate the matter in a more extended manner.

I have the honor to be your obedient servant,

JOSHUA F. HATCH.

Dorchester, April 2d, 1851.



BUFFUM PEAR.

This pear was raised by Mr. David Buffum, of Newport, R. I., from the seed of the St. Michael. It resembles its parent in quality when it comes to its highest state of perfection. The Buffum is distinguished for great growth, production and hardiness, and is one of the very best pears for general orchard culture. Though the quality varies almost from first to second rate, it is a handsome pear, generally of good quality, and sells well in the market.

This pear is of an upright growth, and it forms a very beautiful tree. It often bears so abundantly that it is necessary to reduce the fruit one-half by thinning, and then it will yield a large crop. As the foreign pears of high quality are very delicate, and often fail, it would be well for cultivators to turn their attention more to our native hardy varieties, on which we may rely for a crop. It may be well for amateurs to cultivate their hundreds of varieties of delicate foreign pears, as they have time and money to spend in this way to gratify their taste, and if they do not get half fruit enough for their own use, others need not complain; but the cultivator who raises fruit for profit, will find it for his advantage to prefer our best native varieties generally.

The size of the Buffum pear is medial; the form long-obovate, the color yellow, with specks and patches of red and russet in the sun; the stem short and thick, in a slight cavity; calyx small, open, in a small basin; flesh white, melting, tender, juicy, with a fine spicy flavor. Ripens in October.

For the New England Farmer.

DIRECTIONS FOR MAKING AND PRESERVING BUTTER.

Mr. Cole:—The best farms for making butter are those that lie fair to the sun, where the feed is sweet and of the best quality. Butter made from good sweet feed, will be of good color and of superior quality to that made from feed from pasturing that lies on the north side of a hill, where the sun shines but very little. The land is cold and wet and the feed is sour and of poor quality, and the butter made from it will be light colored and of inferior quality to that made from good rich sweet feed. Dairymen should have plenty of good clear water, where the cows can have free access to it at all times. When cows are obliged to wade into the mud for water, and stand and drink where there is but a scanty supply, and drop their excrements in it, they are obliged to drink an impure mixture that greatly effects the butter.

Cows should not be allowed to lie in close yards, in very warm weather; they should be returned to the pasture, or to some convenient place where they have a good clean place to lie, and fresh air. When cows lie in wet and muddy yards, there will be more or less dirt fall from the cows into the milk, while milking, which gives the butter a very unpleasant flavor. All kinds of feed that are of a strong nature, such as turnips, and onion-tops, or any vegetable that has

a strong flavor, ought to be avoided, for it is injurious to the flavor of the butter. In the spring, every dairyman should feed his cows with a little meal and water, every day, for two or three weeks before they come into milking, and from that time until they can get a good supply of grass. This not only improves the condition of the cows but greatly increases the quantity of butter, and improves its quality.

Dairymen should never undertake to keep more cows than they have plenty of feed for. Twenty cows, well fed, will yield much greater profit than forty poorly kept. Every farmer should be very particular to select such cows as give the richest milk and that which will make good yellow butter. Every one knows it is no more expensive to keep good cows than it is to keep poor ones.

To have good cows and plenty of good feed, pure water, comfortable barns in winter, where they can be kept dry and warm, and good clean places for them in the summer, is the first step toward carrying on the dairy business successfully.

Every dairyman should supply himself with a good convenient dairy-house, which is used for no other purpose, in the season for making butter; this is very important. For that purpose alone, the best and cheapest plan that I have ever seen, is to build of stone, laid in lime mortar. This almost every ingenious farmer can do within his own means. It should be placed in some convenient spot, if possible under the shade of some large trees, where there is good circulation of air, and if convenient, where a good stream of water can be carried into it, as high as the upper shelves; then if you wish to fix your milk-room so that you can set the pans of milk in water, in the hottest weather, it can be done with little extra expense; and it will greatly improve the quantity and quality of the butter. It is done by making the shelves of good boards, and having the ends well secured from expansion or contraction, by putting good wide cleats at each end, and then put a strip of board all round the edge of the shelves; have them placed one above another around the milk-room, and let the water in at the top of one end and carry it to the other end, then let it down to the other shelf by a small lead pipe, and so let it pass back and forward through the whole, and pass off at the bottom.

The shelves should be placed at a good distance apart, and out from the wall so that the air can circulate around and between them. The cream will rise much better than it will in confined air. The dairy-room should be well ventilated, so that it can be aired at pleasure, and it should be kept thoroughly cleansed, so there will be no unpleasant smell about the milk room. It should be kept as sweet and clean as any lady's parlor.

If milk is kept in cellars where there are decayed vegetables, and old cider-barrels, or filth of any kind, it injures the butter very much. In the first place there will not be so much cream before the milk will sour, and what does rise is of an inferior quality.

The cream should be skimmed off while the milk is sweet, and care should be taken to drain off the milk from the cream when it is skimmed, for if it is allowed to sour and go to curd it will remain in the butter, in little white streaks, and render it very unsaleable. Cream should be churned while it is sweet and cool; then the butter will come hard, and the butter-milk can be extracted with much less trouble than when it comes soft. After the butter comes the butter-milk should be turned off and cold water should be put in the churn and churned a little to take the butter-milk from the butter. The butter-milk should be got out with as little working as possible. If butter is worked too much, it breaks the grain and makes it greasy, and it sticks to the knife when it is cut; and it also destroys the flavor. The butter-milk may be squeezed and spatted out instead of working with a machine that cuts and breaks the grain and injures the quality. After washing the butter in the water, it should be washed in good strong brine, that takes the water all out from the butter. If water is left in the butter it will turn it white, where the drops stand.

Butter should not be too highly salted for this market. One pound of salt and four ounces of pulverized loaf sugar to sixteen pounds of butter is enough, if the butter-milk is all out, which it should be before salting. If the butter-milk is left in, it will immediately sour, and injure the flavor and quality of the butter. If butter is to be kept over summer, it is not advisable to put in the sugar; but if it is to be used within a few weeks, it adds much to the flavor of the butter. The best salt for butter is Turks Island, and it should be well washed and well dried, and then ground. In a neighborhood where there are several dairymen, that want salt for butter, they can get their salt all ready at the same time, and appoint some day and notify the miller and have it ground all at once.—Then they will avoid any mixture of meal or flour, which would be injurious to the butter.

After the butter is salted it should be set in a cool place and stand twenty-four hours, and then worked over lightly, and packed solid into the tub. You should be very particular to have the butter packed very tight in the tub, as it keeps much better and looks and tastes much superior to that packed loosely. It has been the practice of some dairy-women to put salt between the layers; this should not be done; it only injures the butter. When you have not butter enough to fill the tub at a time, it is better to keep a large tub of nice brine, made by boiling a quantity of salt in water, having more salt than will dissolve; then pour it off and let it settle perfectly clear, and put into your large tub with the undissolved salt. When your butter is ready for packing, drop it into the tub of pickle and let it remain until you have enough to fill your tub at once. Then the tub should be filled within three-fourths of an inch of the top; have a cloth cut to fit the inside of the tub to cover the butter; be careful not to have it come over the edge, for if it does, it will draw all the pickle out of the butter, which will cause it to grow rancid.

As soon as the tub is filled with butter, and the cloth well fitted on, cover it with fine salt, with a little water mixed enough to make a hard crust. The tub should be filled up to the cover with this, and then have the cover put on tight and kept on, and this will exclude the air from the butter and keep it perfectly sweet. There should be a bench, set at least one foot high, and one or two feet from the wall, to set the tubs of butter on, where they can be kept dry and clean. If the tubs are allowed to stand on the bottom of the cellar, they will become more or less dirty and mouldy, which injures their appearance very much.

The tubs should be made of spruce or white ash

timber, cut in the fall or in winter before the sap starts. It should be cut green, and the staves should be shaved out to a proper thickness. Then have them boiled in three or four waters. This will take out the taste of the wood, which is very injurious to the butter. The boiling seasons the wood, so that it can be worked in a few days after. The tub should be made of all heart stuff; if there is any sap left on the staves or bottom, the pickle will all leak out; even if there is not more than a half of an inch wide in a tub, and it will spoil the butter. When you are making maple sugar, if you can store your sap in your butter tubs, there is nothing more convenient, and that will take out all the taste of the wood better than any other process. I have known them to be filled a few times with hot sap or syrup, after filling them a few times with cold sap, which does the work more effectually.

When the sugar season is over, fill the tubs with salt that you intend for your cattle through the summer; then fill them with water, and let them soak with salt and water until they are perfectly saturated with salt. Then the tub will not take salt from the butter next the staves, which keeps the butter perfectly sweet and it retains the color. But if the butter is put into the tubs, without their being thoroughly cleansed or salted, the butter will often spoil all around the edge of the tub; and often injure the credit of the dairy.

To carry on a dairy successfully, it is of great importance to have a farm well adapted to the work, and the dairy-house well-arranged in every particular, both for comfort and convenience; and to have first rate cows, and plenty of good rich and sweet feed for them; with a good, comfortable and convenient place for them, where they can be kept warm and dry in the winter; and clean and comfortable yard in the summer, with a good supply of good pure water; and a trough of salt where they can have free access to it at all times. In this way, you will avoid over doses of salt and water, which is injurious; but sufficient quantities are indispensable.

Ice should not be used, if it can be avoided, for it is very injurious to butter.

Yours truly,

FORMERLY A BUTTER DEALER
IN F. H. MARKET.

REMARKS.—We commend the foregoing valuable article to the attentive perusal of dairyists, for it treats on some subjects that are neglected by writers on butter-making. As damp dairies are injurious to butter, it is of great importance to keep up good ventilation when water is let into the dairy to cool the milk. It will be a new idea to many that the use of ice will injure butter, but it is a well established fact. It will not only effect its texture, but its color also, as it will bleach out its yellow hue.

BEAUTIFYING THE HOMESTEAD.—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."

For the New England Farmer.

IS HE BLIND?

Many are the circumstances which constrain us, in view of the actions of men, to ask the question, "Is he blind?"

There stands a father, in the presence of his several sons, complaining of his occupation, and bitterly lamenting that he had not, when a young man, been given to some trade or some mechanical occupation. And what is the cause of this complaint? Why, he says he cannot make a living by cultivating the earth. And he does not shrink from exerting all the influence a farther has power to exert over his sons, to make them despise the very calling which was honored by the first command which the Creator addressed to man. Is not that farther blind? Does he know,—does he consider, that he is influencing his sons to choose some occupation which shall be altogether and entirely uncertain?

There are many men in the land who are blind to their own errors of action in the affairs of life, and blindly do they contribute by their influence to the hazards, if not to the ruin, of their children.—In no way are more young men directed in the way of sorrow and disappointment, and perhaps the way of crime also in the end, than by the influence of those fathers who are so often heard complaining of the difficulty of making a profit by farming, and who, indeed, are not farmers in a just and true sense, but only men who have farms, which they do not cultivate like men of true understanding.

I can look about me in every direction and see men who have farms but are not farmers, whatever they may be called. It is true, they call themselves farmers. But would people be willing to call a man a carpenter because he could use a handsaw enough to cut a board in two? It would certainly be improper. And is that man a farmer who only knows how to perform certain formal acts which are necessary to farming?

Suppose that a man says he is a carpenter, and we find he cannot decide the difference between the different kinds of building materials which ought to be used in building a house; shall we be disposed to call him a carpenter? And why should a man be regarded as a farmer, merely because he calls himself a farmer; while he knows little or nothing of the properties and powers of the various soils, in using which he is to produce certain results in the form of absolute crops? Is he a farmer, while he is so ignorant of the uses of his farm?

Let a man come to us with the pretence that he is a painter, who is ignorant of the principles of compounding colors to produce certain desired shades or tints, and knows not how to prepare his oils, and mix his oils and paints to make a body or give a gloss; we would consider it all wrong to class him with painters; and especially if he thought to apply his paints to a floor or other part with a mop, because in earlier times persons had sometimes applied their paint with a piece of cloth, while the paint was perhaps mixed with skim milk instead of oil. And why should a man who knows not how to compost manure so as to raise a cabbage, a turnip, or even a hill of beans, be called a farmer?—True, most men raise more or less of such things,

who are called farmers. But it is not because they know how to prepare a compost that will certainly effect it.

A farmer is one who knows the properties of a farm, and what may be effected by their application; and who also makes the application according to knowledge, not blindly.

What should we think, if we saw a man who pretends to be a farmer, go into the forest and cut down a branching tree, and then sharpen a stump of a limb to plough with, while he used a part of the main stock for a beam? This was the kind of instrument used in ancient times as a plough; but should we think a man a farmer who would be satisfied with such as instrument to use as a rooter of the ground? I think it would not be proper. Nevertheless, we see many men about us, who from day to day may be seen at work with the most worthless and wretched tools, which never did good work. Such a man works two days to get a piece of the ground ploughed, which he might have done in one with a good plough. Then he must harrow it, and he has got twice as much work to do upon it as would have been necessary if it had been ploughed well. His harrow is as bad as his plough, and what could be easily done in one day with a good harrow will take him two days. In addition to all this loss, is the heavy labor of his team, in ploughing with a plough that goes with difficulty through the ground. Then the crop is but half a crop, because the ground was not half prepared. Now a little calculation will show us that it costs such a man four times as much, wear of team and all considered, as it would cost with good tools. Then he raises but half a crop. In harvesting we may find him again wasting time, to make a saving by using worthless tools which ought to have been cast off.

Such a man complains that there is no profit in farming. Truth says that he is no farmer.

We look at him again. What kind of seed does he sow and plant? Why, his economy is to avoid outrages; and he sows and plants such remnants of earlier crops as he has. His products, then, are of second rate quality, and of course quite unsalable. Poor man! He finds farming a very unprofitable calling! He says so, in hearing of his sons; and they long to get into some other kind of business.

We look at his farm, and the fruit trees are moss-covered, the border of his field has become pernicious hedges, and we ask why these things are so. He tells us that his sons take no pleasure in farming, and he is not able to hire and make a living for himself.

There is no young and thriving orchard, no growing pear, cherry, peach or plum tree; for trees cost so much that he could not think of buying them.

Now I ask, "Is he blind!" He thinks he is a farmer, and that there is no profit in farming. I think he is no farmer, but a living, walking, and unconscious *mistake*.

When I shall have learned what a farm is composed of, what use may best be made of it, what tools will work it best, and what trees, plants, and seeds will afford the most profitable crops, and then use that knowledge, I shall be able to report myself a farmer, and say whether a man can live by farming.

It is probably true that in the State of New Hampshire, and perhaps so in all the eastern States, there are a large majority of farms which do not produce enough to pay for the labor spent upon them, the taxes assessed, and give six per cent. profit on the valuation of the farms. But why is it so? Is the soil guilty of ingratitude to the cultivator? Does it return evil for good, cursing for blessing? No, never.

He who feeds the soil according to its wants, and taxes it according to its ability, liberating it from the oppressive hand of up-springing evils, always finds that nature appreciates kindness; and when man blesses her, she smiles upon him with grateful affection, breathes the most agreeable odors in his face, spreads before him the most delicious fruits, and surrounds him with the most beautiful flowers, saying, "These are God's gifts, which are placed at my disposal to entertain and reward my friends. Come now and know my gratitude." C.

Mason, N. H., April, 1851.

For the New England Farmer.

SPRING WORK.

Mr. Cole:—Spring, and particularly the month of May, is a busy and important time to the farmer. The amount and profit of his harvests depend very much upon the manner in which he conducts the farm-operations of this hurrying season. I have a few brief suggestions to offer upon the proper mode of executing a part of the work of Spring, and if you think they can be of service to any body, you can use them for that purpose.

The first and the great point, in attempting to grow remunerating crops here in New England, is, to manure the land well; and if we cannot bring our minds to this, and govern our operations accordingly, we may as well quit farming and go at something else,—for without a liberal application of manure, our primitive and barren soils will not afford us a living. I cannot, at this time, go into the particulars about making manure, for I have neither time nor room to do so; but perhaps at some future time you may hear from me on the subject.

In the application of manure in the Spring, if it is fine, or is a compost of various materials, and is to be used on land to be broken up from grass, it will work the best if spread on the inverted furrows and thoroughly mixed with the surface by the harrow. If it is to be applied to stubble land, it will be well to turn it under with a shallow furrow. Fine manure produces the best results with me when kept near the surface. If the manure is coarse, or unfermented, it is generally best to plough it in, whether the land to be ploughed be grass or stubble land. Manuring in the hill, exclusively, is not good farming. It may produce a good first crop, and the natural strength of the soil may give good crops for the rest of the rotation; but this process soon ends, and sterility succeeds. The only way we can improve land, or keep it stationary as to productiveness, is by giving it liberal broadcast dressings of manure. Otherwise, if we crop it year after year, we surely reduce it as to fertility. If we fail to return to our soil an equivalent for what we carry off in our crops, the time soon comes when we are emphatically reminded of our parsimony. That time is especially when we try to seed the land to grass; for we if have been niggardly towards it, we find it difficult to obtain a good catch of the seed; or, if it starts at all, it forms but a feeble sward, and the crops of hay are light.

In ploughing up grass-land for planting in the Spring, the work should be nicely done; for on that the amount of the crop will considerably depend. Baulks, crooked or imperfectly turned furrows, should therefore find no favor. Some ploughmen are very much afraid of turning up a little of the yellow dirt below; and they therefore use the plough, year after year, in an invariably shallow furrow, thus often forming a hard crust, within four or five inches of the surface of the ground, through which the roots of plants cannot penetrate. Not being able to range much below the surface, these roots, in a dry time, fail to supply the growing plant with mositure, and the harvest is in consequence light. I have derived much benefit from a gradual deepening of the surface soil. At each breaking up of the sward I bring up an inch or two of the poor substratum, expose it to the meliorating action of the atmosphere, mix my compost manure with it, and thus so far improve it that it makes a valuable addition to the depth of the surface soil. I can now take a furrow of eight on nine inches deep, of uniform and good quality; and in a dry season I particularly see the benefit in the superior greenness and luxuriance of the crops. Shallow furrows, therefore, form no part of my farming.

In the hurry of spring work, there is too great a disposition to harrow the ground slightly. This is not true economy. If the harrowing be that of green-sward furrows for planting, the planting and first hoeing certainly will be more expeditiously and better done, if the surface has been brought to a fine tilth by the harrow; and the young plants, of whatever kind, will be more forward for it too. So also in regard to grain and grass; if the pulverization had been fine at seeding time, the plants stand thicker, are more vigorous, and the crop is better than would have been the case if the preparation of the soil had been slighted. If land in corn stubble is to be ploughed and stocked down in the Spring, it is well to harrow down the hills with a heavy hinge-harrow, for the ploughing will afterwards be much more easily and perfectly done.

In laying down to grass, the seed should be sown bountifully. Fill the land well with grass-seeds, and the hay will be fine, foul stuff will be shut out, the sward will be thick, the grass-roots numerous, and when the land is broken up for the next rotation, the extra accumulation of vegetable matter in the sward, in consequence of the liberal seeding, will, by its decay, improve the soil very much. Twelve pounds of clover seed, together with ten or twelve quarts of herds-grass and a half bushel of red-top seeds, is none too much seed for an acre of ground. The clover will not make so good hay as the other grasses; but where one's object is in part to improve his soil, clover cannot well be dispensed with in the rotation. It draws a good portion of its nourishment from below the reach of the roots of the small grains and the other grasses; it forms a large mass of vegetable matter near the surface, partly at the expense of those fertilizing matters that are now low down in the soil; and generally decaying at the end of the second year, the surface soil is thereby enriched. So far as my experience goes, I find barley to be the best grain to sow with grass seed. Oats shade and choke the young grass too much; and if they lodge, they lay flat upon the ground, thus smothering the young grass; while barley seldom falls so flat as to kill the grass. Three bushels of barley is about the right quantity of seed for an acre.

The proper planting of seed in the Spring is a nice operation. This work is quite too apt to be hurried over, without duly considering how much influence it is to have upon the succeeding crop. A desire to plant a large breadth of land in a day, should not so much possess one as a desire to plant well, and give the crop every possible advantage in the outset. So far as I know, planted crops of every name and nature, whether in the field or garden, grow better, and yield better, when planted with better care, than they do when this work is superficially done. Corn will be considerably more forward for being well got in, and will yield more. Potatoes thoroughly planted need little or no hilling afterwards. Indeed, on my land, they do the best where the land is kept about level.

Finally, we farmers labor and toil with the expectation of realizing a profit from our labors; and as a general rule, the largest profits follow the most careful and the highest kind of cultivation. Mother earth is famous for her full and bounteous harvests in return for a liberal and careful husbandry, while she leaves the careless, grudging and parsimonious farmer to shirk for himself as best he can. "Do well whatsoever is to be done," is therefore the true motto in farming. F. Holbrook.

Brattleboro', Vt., April 20, 1851.

TOBACCO DUST,

AS A PROTECTION AGAINST INSECTS.

We last year procured from a snuff mill a barrel of dry, but damaged snuff flour, and prepared drudging boxes, covered with a fine bolting cloth, with which we sifted it over the surfaces of any plants attacked by insects, and with most signal success. The snuff should be applied, if practicable, while the plant is wet with dew, and repeated after every shower. If the boxes are properly made, (like a common flour drudge,) and the snuff is perfectly fine and dry, but little time is necessary to go over an acre of plants. Even the rose bug, cabbage louse, thrips on grape vines, &c., all yield to the influence of snuff, and the most delicate plant of the hot-house is not injured by its application. For field vegetables, caustic lime, made into a fine powder, while dry, and applied before slaking by contact with the air, will produce similar results.

Prof. Mapes.

Nothing Wasted.—The skins used by gold-beaters are produced from the offal of animals. The hoofs of horses and cattle, and other horny refuse, are employed in the production of the prussiate of potash, that beautiful yellow crystallized salt which is exhibited in the shops of chemists. The worn-out saucepans and tin-ware of our kitchens, when beyond the tinker's art, are not utterly worthless. The less corroded parts are cut into strips, punched with small holes, and varnished with a coarse black varnish, for the use of the trunk-maker, who protects the edges and angles of his boxes with them: the remainder are conveyed to the manufacturing chemists, who employ them in making a black dye for calico printers.

☞ To Adam, Paradise was home; to the good among his descendants, home is Paradise.

Mechanics' Department, Arts, &c.

RAZOR STROPS.

Mr. Moore:—It is said that he who makes two blades of grass grow where but one grew before confers a greater benefit on society than all the speculative theorists, from the false prophets of old up to father Miller; and I don't see why he that causes the cutting down of a bad and troublesome growth of human weeds, in a comfortable and expeditious manner, is not also entitled to the meed of praise, and to be elevated another round on the Jacob's ladder of commendation. I am getting on the shady side of three score, and find on calculation that I have cut from my face more than two rods of beard, and sometimes with a most villanous dull razor, which I fear has caused me to add some anathemas to the vocabulary of curses, on cutting edges.

Not having anything else to bequeath to posterity, that they will sensibly feel, do me the favor to publish the following recipe, for renewing or constructing the sharpening properties of a razor strop.

Buy two pennies worth of pummice stone, from the druggist, or paint dealer, in two pieces with flat surfaces; rub these above the strop, letting the dust fall on its surface. When sufficiently covered, invert it to allow any coarse particles to fall off; smooth and rub it down with the blade of a knife, and it is ready for the razor. If the strop is dry and stiff, moisten it, and add a little oil or soft grease before dusting it. If it makes too harsh an edge at first, reverse the manner of stroping from heel to point, to from point to heel, and if proper management and skill is used, it will cut three days under the skin.—*Rural New-Yorker.*

GLAZE FOR COMMON EARTHENWARE.

The glaze usually employed for common kinds of earthenware is compounded of litharge of lead and ground flints, in the proportion of ten parts by weight of the former to four parts of the latter. Cornish granite is sometimes substituted for flint, and used in the proportion of eight parts to ten of litharge. This method of glazing is objectionable, on account of the injury which, notwithstanding every caution that can be taken, it occasions, in its application, to the health of the workmen employed, who frequently are seized with paralysis; and because the lead, which is soluble by means of acids, and highly poisonous, renders vessels thus glazed improper for preparing or containing many articles of human food.

The bad effect of raw glazes upon their health is greatly lessened to the workmen when they can be brought to the frequent use of ablutions. In every pottery the men employed in glazing should be, and in most establishments they are, plentifully supplied with soap, which they are enjoined to use on every occasion of quitting their work. Unfortunately, however, the workmen themselves have become erroneously impressed with a belief in the superior efficacy of ardent spirits in warding off or counteracting the poisonous effects of lead, and fly to the use of this as a specific, to a degree which too often proves, both physically and morally, worse than the evil which it is intended to prevent.

The mixtures just mentioned are called raw glazes; their employment is convenient to the potter because of their cheapness and extreme fusibility. Flint, which remains unaffected in the focus of the most powerful lens, is, when combined with lead, melted and vitrified at a comparatively low heat. The method of using this glaze is to reduce the ingredients to the state of a fine powder, and throw them into as much water as will make them of the consistency of cream. The mixture must be well stirred, that the powders may be kept uniformly blended throughout the fluid. The pieces are first brushed to free them from dust, and then merely dipped into the liquid and withdrawn, when they must be turned rapidly about in all directions, that the glaze may flow equally over the whole surface. The superfluous liquid having been allowed to drain off a few seconds, and the pieces having been set on a board during a few minutes, they are ready for insertion in the seggars.

Chaptal, in his "Chemistry applied to the Arts," has given a process for forming white enamel, which answers well for glazing the superior kinds of earthenware and tender porcelain. Equal parts of lead and tin are kept in fusion until completely oxidated. The powder thus formed is ground with water, all impurities are removed by repeated washings, and being dried it is kept for use. The whitest flints are then chosen, and used with carbonate of potash, the latter being in such proportion to the flint, that the mixture will be soluble in water. To the solution of flint thus made, muriatic acid must, from time to time, be added, until no further precipitation occurs. The precipitate thus obtained is pure silex, which, being washed and dried, is also fit for use. If then one part of this silex, and one part of the metallic oxide, be added to two parts of carbonate of potash, and the whole be fused in a crucible, the mass need only be reduced to a fine powder to prepare it for use in glazing.—*Scientific American.*

LABOR IS CAPITAL.

This adage is strikingly illustrated in a fact that has recently come under our own observation, in the case of the journeymen scale makers, who, some two years ago, without money or other means except their hands and tools, and a good reputation, formed themselves into a company, for the purpose of establishing for themselves a business that was then making others rich, but at merely journeymen's wages, keeping them poor. The result, as might have been expected by those who knew their enterprise, has been exceedingly favorable. The business has continued to increase until their original establishment has become too small for their use, and they have enlarged their factory and are now employing additional hands. They now employ a number of journeymen themselves, whom they pay liberally and promptly. It is said that their sales already amount to more than $25,000 a year, and are constantly increasing. Their manufactory is 13 Green Street, and their warehouse 187 Water Street, in this city. They manufacture every kind of Hay, Floor, Portable Platform, Bank, Gold and Counter Scales, Patent Balances, &c., and every scale made by them is *correct*, and warranted not liable to get out of order. Mr. George G. Sheppard is the sole agent, and we trust their praiseworthy enterprise will be liberally rewarded.—*N. Y. Farmer and Mechanic.*

Ladies' Department.

USES AND ABUSES OF AIR---VENTILATION OF DWELLINGS.

"Buds are breaking, birds are waking,
Time our very breath is taking,
We are jocund, we are drooping;
Shout a welcome, Spring is coming."

We all rejoice in the approach of spring, with its sunshine and showers, its birds and its flowers; but perhaps it would be more warmly greeted if it did not so generally deprive us of the elasticity of mind and vigor of body which have given zest to the enjoyments of autumn and winter, and substitute for them a listlessness and languor which incapacitates for either mental or physical activity, and tends to make us weary of ourselves and all about us. Shall we ascribe this effect to the enervating influence of the warmth and humidity of the atmosphere, and there rest without inquiring whether something may not be done to prevent or diminish this lassitude, inaction, and consequent suffering?

An abundant supply of pure air for the lungs, we believe, would tend greatly to diminish this evil. If you doubt this, we will refresh your memory with a few physiological facts, and support our opinion by quoting a few acknowledged authorities in medical science, showing their estimate of the pernicious effects of foul air upon the system, and the importance of thorough ventilation of our houses.

The blood, in passing through the system, parts with its oxygen, and absorbs so much that is foreign and injurious to the health, that it would in a short time become so clogged and impure as to cease to nourish the system, were it not that in passing through the lungs the blood is exposed to the action of the air which we inhale in breathing, from which it receives fresh oxygen, while it throws off its impurities in the form of carbonic acid gas. Of course when this arterialization is imperfectly effected in consequence either of the deficient quantity or poor quality of the air we breathe, the blood remaining impure cannot properly nourish the body, and the health must suffer.

During the winter the coldness of the air is so exciting and invigorating to the lungs and the entire system, that a smaller volume of air is needed for their support; but when the excitement from cold subsides, if its place is left unsupplied, the system flags, the appetite fails, and lassitude, headache, etc., are the result. Extra care should be taken, therefore, to supply the lungs with an abundance of wholesome air; by active exercise out of doors, forcing them to receive a large amount of the "breath of life," and especially by thorough ventilation of the dwellings, (the sleeping apartments particularly,) prevent the inhalation of confined and deteriorated air.

In one of the "Tracts for the People," published by J. S. Redfield, N. Y., entitled, "Uses and Abuses of Air," the author, in his introductory remarks, says: "Impure air is indeed one of the scourges of mankind, being the direct cause of very many, and an aggravation of *all* the diseases incident to the human frame. No age or sex is exempted from its influences, but especially are they obnoxious to its evils who have adopted or complied with the modern ideas of civilization and refinement."

Dr. Arnott, of England, says: "Our inquiries give us the conviction that the immediate and chief cause of many of the diseases which impair the bodily and mental health of the people, and bring a considerable portion prematurely to the grave, is the poison of *atmospheric impurity*, arising from the accumulation in and around their dwellings of the decomposing remnants of the substances used for food, and in their arts, and of the impurities given out from their own bodies."

In 1832, at Norwood school in England, where there were 600 pupils, scrofula broke out extensively among the children, and carried off great numbers. This was at once ascribed to bad and insufficient food. Dr. Arnott was, however, employed to investigate the matter, and immediately decided that the food was "abundant and good," assigning "*defective ventilation*, and consequent atmospheric impurity," as the true cause. Ventilation was accordingly applied by his direction; the scrofula soon disappeared, and eleven hundred children are now maintained where the six hundred, before a proper system of ventilation was adopted, were scrofulous and sickly.

The celebrated French physician, M. Baudelocque, asserts that "it will invariably be found on examination, that a truly scrofulous disease is caused by a vitiated air, and it is not always necessary that there should have been a prolonged stay in such an atmosphere. Often a few hours each day is sufficient; and it is thus they may live in the most healthy country, pass the greater part of the day in the open air, and yet become scrofulous because of sleeping in a confined place, where the air has not been renewed."

"Sir J. Clark," says the author we first quoted, "who has written the best monograph on consumption in our language, regards the respiration of a deteriorated atmosphere as one of the most powerful causes of tuberculous cachexia, that is, the constitutional affection which precedes the appearance of consumption."

Dr. Say states, "I consider the heated and impure atmosphere of workshops, and a similarly unwholesome state of the dwellings of the poor, as the cause of a large number of diseases in childhood, of inflammation of the lungs, of the febrile affections to which children are so subject, and of those chronic disorders of the bowels which are so apt to terminate in mesenteric disease." Again he says, "The chief cause of the great mortality from pulmonary consumption, is the defective ventilation of houses, shops, and places of work."

One of the series of "Health Tracts," entitled "Breathing Pure Air," estimates that at least 50,000 of those who die annually in the United States, under the age of five years, might be saved, if the time-honored but pernicious practice of half smothering children, whether sleeping or awake, in shawls and blankets, to exclude the free, pure, unadulterated air of heaven, could be abolished. And adds, "Thousands and tens of thousands of others, whose lives extend beyond this period, are yet sufferers from the same cause; and though their natural force of constitution may enable them to live a little longer than those whose constitutions are more feeble, yet are they not more to be pitied!"

It was not our intention when we commenced this article to quote so largely from others, but if you will read and *practice*, we think you will never regret that for once our space was so occupied.

We hope soon to see an article on the best mode of ventilating buildings published in the Cultivator; but meanwhile do not fail to open the windows each morning to secure a thorough change of air, and as soon as the increasing warmth of the atmosphere will permit, keep open during the night some means of ingress to your sleeping apartments, for the external air. If the night air be injurious, (which we do not believe is often the case, certainly not at the height from the ground where it would enter a chamber window.) it cannot well be so deleterious to health as the confined air in which most persons so thoughtlessly sleep. In reference to this point, the author of "Uses and Abuses of Air" says, "We may add that this peculiar *bedroomy odor* is not peculiar to the domitories of servants, for their is not a chamber, however costly its furniture or ample its dimensions, though occupied by the most cleanly and fastidious, that will not exhibit it, *if unventilated.*

The lassitude spoken of at the commencement of this article, we believe to be a minor evil mainly resulting from this prolific source of disease—impure air; and think it might be at least partially prevented by avoiding its cause, and beginning to practice *now*, so as to forestall the approaching warm weather.

The effects of bathing should be mentioned in this connection, but must be deferred till another time.—*Ohio Cultivator.*

EDUCATE YOUR DAUGHTERS.

A writer says:—When I lived among the Choctaw Indians, I held a consultation with one of their chiefs respecting the successive stages of their progress in the arts of civilized life; and among other things he informed me at their first start they fell into a great mistake—they only sent their boys to school.

They became intelligent men, but they married uneducated and uncivilized wives, and the uniform result was, that the children were all like the mother; and soon the father lost his interest in both wife and children. "And now," says he, "if we could educate only one class of our children, we would choose the girls; for when they become mothers, they would educate their sons." This is to the point, and it is true. No nation can become fully and permanently civilized and enlightened, when the mothers are not, to a good degree, qualified to discharge the duties of home education.

Moths in Furniture. — Thoroughly saturate the stuffing of sofas, chairs, &c., by pouring on and in camphine. This may be done without any danger of injury to carpets or clothing, as they are preserved by sprinkling with the same article. I have tried this method of ridding a sofa, which had been stuffed with villanous hair, from thousands of worms and moths. They were instantly destroyed, without in the least affecting the hair seating or varnish of the wood.—*A writer in the North American.*

An Antidote for Bed Bugs.—Take a quantity of whale oil, and about the same quantity of lard or tallow; simmer them a few minutes together, so that they will mix. Apply the mixture with a feather or fine brush, to the crevices and joints of the bedsteads, and these vermin will not only desert the bed, but will leave the room.

Sarsaparilla Syrup.—Purchase of a druggist of known honesty, fifteen ounces of Para Sarsaparilla; split all the stalks in two lengthwise, and cut in short pieces. Soak it in a gallon of pure water for twenty-four hours, then boil it down to two quarts; strain and add, while boiling, fifteen ounces white sugar; thicken all by a little additional boiling, precisely as you make the syrup of preserves. Here you have two quarts of pure syrup for eighty cents. The dose is from a teaspoonful to a wineglassful, according to age, three times a day; but it would do no harm if taken by the tumblerful; it is not hurtful in any dose. If you make it, you are certain that you get the genuine article—which is very doubtful if you buy it.

Disinfecting Agent.—Rooms in which, from any cause, there arises an unpleasant odor, may be freed of the obnoxious effluvia, by placing a few kernels of coffee on a hot shovel, and allowing the aroma, or smoke, to be freely disseminated. It will dispel effectually the most powerful odor arising from putrid animal or vegetable matter. It has been much used and with excellent success, in localities infected by cholera.

☞ The reason why the world is not reformed is because every man would have others make a beginning, and never thinks of himself.

☞ A promise and its performance, should, like the scales of a true balance, always present a mutual adjustment.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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Terms, $2,00 per annum in advance. At the close of the year, the publishers will bind the semi-monthly Farmer gratis for any person who subscribes for both publications, paying one year in advance for each.

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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, MAY 10, 1851. NO. 10.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

PLANTING SMALL POTATOES.

In some parts of the country potatoes are so scarce that farmers find it difficult to get enough to plant. In such cases it is best to plant small ones, for if they do not not yield as good a crop as large ones, there will be but little difference for one year. Owing to the rust last season, which did more damagethan the rot, in this section, potatoes were very small and poor; yet these poor potatoes will probably yield good crops.

If a person has to buy potatoes to plant, it will not, generally, cost him more than one-fourth or one-third as much for small potatoes as for large ones to plant the same extent of land. The small potatoes may be had at a much lower price per bushel, and a much less quantity will be required. Our remarks refer to raising a single crop.

It is yet doubtful whether the constant planting of small potatoes will cause a degeneracy in a course of years. In some cases small potatoes have, for one year, yielded as much as large ones; in other cases they have not.

GRASSES.

We believe that nearly all of our grasses are imported, or of foreign origin; if this be the case, or if it be not so, why should we confine ourselves to a few, very few varieties, while in other countries so many kinds are cultivated to advantage? In this country we have a great variety of climate, in every climate a great variety of soil, and our soils are not only various in their composition, but differ widely in their degree of moisture; some from their situation being extremely wet, while others are light and porous. And besides the advantages of producing almost every kind of grass to advantage, we have nearly all kinds of stock for their consumption.

Then we surely can cultivate, and with profit too, as great a variety of grasses as are now profitably cultivated in any country. In England forty-seven kinds of grasses are extensively cultivated, and each is found valuable by experiment for some kinds of soil or situation.

This doubtless includes several kinds used in lawns intended for ornament rather than food for stock; and some may succeed well in that country of mild winters that would not endure the rigid cold of the north, nor the hot, dry summers of the south. And even in the north our summers are generally hot, and frequently severe drought prevails. Those grasses that are but little known among us, but which succeed well in Europe and are among their principal kinds, and which have succeeded well here too in the small way in which they have been cultivated, should receive more extensive cultivation, that their advantages may be fairly tested, and the best kinds made known to the public.

Many intelligent farmers, after various experiments on grasses, conclude that herds grass, red top and clover are all that we can profitably cultivate. But we do hope that we shall not stop here, for we have indigenous grass, and there are foreign kinds that never have been subjected to thorough trial.

We would not advise large and expensive experiments, but trial of those grasses not well known should be made in a small way, and when the experiment is sufficiently promising to justify it, let the experiment be made on a large scale.

EARLY WEEDING.

There are many pieces of land, particularly in nurseries and gardens, that should be rid of the weeds and the soil stirred thoroughly as soon as it is dry enough to work. There is a double advantage in performing this operation early in the season. In destroying weeds the old adage, "A stitch in time saves nine," is literally correct.

The tender weed, the small bunch of sorrel, or tuft of grass, that can be removed with ease, as it first starts in spring, will soon extend its roots and crowd upon plants, requiring ten times the labor to

remove it when large. By removing the weeds and pulverizing the soil, the plants will grow with vigor, but if neglected they will make slow progress in a hard soil, especially when weeds are robbing them of their nutriment. Another advantage in loosening the soil; it will the more readily receive the rain, and become still more finely pulverized, and enriched, and contain a greater source of moisture, than when the earth is hard at the top, throwing off the water in streams which often do no small damage by washing.

HEDGES.

VEGETATION OF SEEDS.

A correspondent remarks that a friend of his bought seeds for hedge plants, (he does not say what kind,) and soaked them in hot water, and planted them according to direction, and they did not vegetate. These seeds might be kept dry through the winter, (else hot water would have been worse than useless,) of course they would not vegetate until the next spring.

Thorn, apple, pear and quince seeds, also most seeds of forest trees, and the seeds of stone fruit, such as cherries, plums, peaches, (excepting a few of the latter,) should be sowed in the fall, or put into moist earth, preparatory to sowing in the spring, and this general and well and long established principle ought to be well known to every cultivator in the country; yet we find people every year buying and sowing dry seeds in the spring. The perusal of a good agricultural journal and a little reflection would save much waste of time and money, and save also from bitter disappointment and vexation.

THE POTATO ROT.

Mr. Editor:—Allow me a short space in your paper for some remarks on a subject of deep interest to all classes of society in our own and other countries. Although many discoveries of the *cause* of the potato rot, and many *remedies* for the same, have been presented through the press to the public during the last three or four years, the high price of potatoes during the past winter and at this time, and the fact that the Legislature of Massachusetts within the last few weeks have offered a premium of $10,000 to any one in that State *for a remedy*, is pretty strong evidence that the true cause of the disease and the proper remedy are not among those discoveries. The *cause* is undoubtedly the same in all localities, north, south, east and west; and the remedy must be just as universal—otherwise it is *not* a remedy.

Now I undertake to say, and will hereafter *prove*, to the satisfaction of every farmer in the Union, if he will apply the test which I am about to propose, that the disease originates in the deficiency of certain ingredients in the *soil*. The fact that millions of bushels (notwithstanding the loss of one-third or more of the crop by the rot,) of as good potatoes are grown every year in the United States as were ever raised before the appearance of the disease, affords to my mind, without more positive proof, sufficient reason to disbelieve the statement recently made, that the plant dies like an animal, in consequence of "*the feebleness of old age*." I shall not ask the Legislature of our State to give me $10,000 for my discovery. I shall be amply rewarded if, on a fair and sufficient trial, it will settle the question. I shall not be alone if it be proved that I am mistaken; and as my remedy will add to the fertility of the soil in proportion to the extent it may be applied, no one can lose anything by the trial of it.

I therefore assert, as my firm belief, that *charcoal, properly applied, will always, and everywhere, prevent the disease known as the "Potato Rot."*

In the next number of the *Telegraph* I will give directions in regard to the application of this remedy, so that, late as it is, many farmers can make a beginning this season. As I intend to prepare a treatise on this subject, to be ready for distribution after the harvesting of this year's crop, I will be greatly obliged to farmers and others who will try this test, to let me know the result as soon as convenient thereafter, so that I can give to the public as much information as possible respecting the utility of this remedy. In that work I shall review the "discoveries" heretofore made, and give the reasons why charcoal will prevent the disease, with all the useful information on the culture of the potato I can obtain. It may require two or three trials to ascertain the quantity necessary to suit different soils and localities; and if in some instances it should fail on the first trial, I hope the industrious farmer will not charge the fault upon the remedy and abandon it, but try it again the next year—for I am confident that if properly applied, it is *the* remedy so much needed.

Tracy E. Waller.

Rising-Sun, Philadelphia Co., Pa., March 31, 1851.

P. S. On account of the lateness of the season, I would suggest that farmers who may be induced to try the remedy I have proposed, prepare at once a compost for one-eighth of an acre (which will be sufficient for a trial this year,) as follows:

Pulverised charcoal, - -	250 pounds.
Bone dust, or best guano, - -	25 "
Salt, - - - - -	15 "
One large wagon load of wet and well-rotted born-yard manure.	

Mix well together and let it lay until time to plant, say two or three weeks.—*Germantown Telegraph.*

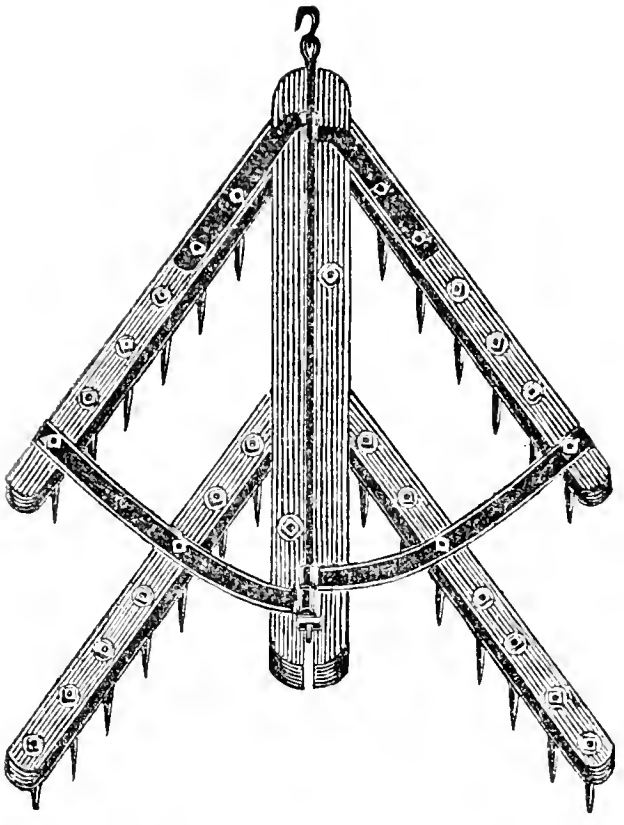
MULCHING GOOSEBERRIES.

The English gooseberry has always hitherto mildewed here: and I have been familiar with bushes of the best sorts for many years, without ever being able to gather any perfect fruit.

I have lately mulched some old bushes, which had hitherto borne this worthless fruit. I covered the surface of the ground under them a foot deep with wet, half-rotten straw, extending this mulching as the branches grew.

Imagine my delight at finding the gooseberries on the bushes so mulched, ripening off finely, the fruit twice as large as I have ever seen it before, and quite fair and free from mildew.—*Horticulturist.*

☞ Pleasure is sometimes only a change of pain. A man who has had the gout, thinks he feels first rate when he gets down to rheumatism again.



GEDDES FOLDING HARROW.

This harrow is very highly esteemed by many farmers who have used it. The two sides are joined by hinges in the centre, so that it adapts itself to an uneven surface, and operates equally upon all parts. By this arrangement one part can be elevated or thrown on the other in passing stones, stumps, fruit trees and other obstructions. And for deep harrowing, or on a tough hard place, it may be used in this way, giving double the usual weight to the part in operation. The teeth are made to fit a mortise tapering to the top, where they are fastened with nuts screwed down on an iron washer, which prevents their falling out, or working up as is the case with some teeth. This harrow is drawn from the centre, with a steady, regular motion, and either side may be conveniently elevated to free it from sods, stones, or other impediments, without disturbing the operations of the other part.

Sufficient attention is not paid to harrowing. It is the most important operation after ploughing. When the harrow is used sufficiently and properly, it causes a thorough pulverization of the soil, which is essential to the production of good crops, and which saves much expense in hoeing and weeding.

The price of these harrows varies from $8 to $14. They have from fourteen to thirty teeth.

The Way Domestic Animals collect their Food.—The horse, when feeding on natural herbage, grasps the blade with his lips, by which it is conducted between the incisors, or front teeth. These he employs for the double purpose of holding and detaching the grass, the latter action being assisted by a switch of the head. The ox uses the tongue to collect his food. That organ being so directed as to encircle a small bundle of grass, which is placed by it between the incisor teeth, and an elastic pad opposite to them in the upper jaw, between these the herbage is pressed and partly cut, its complete severance being affected by tearing. The sheep gathers his food in a similar manner as the horse, but is enabled to bring his cutting teeth much nearer to the roots of the plants, in consequence of the upper lip being partially cleft. For his upper lip is thin and susceptible of considerable mobility; while that of the ox is thick, hairless, with a very limited action.

REARING COLTS.

The raising of this kind of stock is rendered profitable where the right blood can be obtained. The colt requires but little attention after he is one week old. Until then, he is so feeble that it may be necessary to confine the mother to a limited pasture, as too much exercise for the first few days greatly injures him. Judicious farmers confine the colt in the stable if the mare is obliged to perform a large day's travel; but care should be taken, when the mare returns at night with a bag distended with milk, that the colt be kept from her until three fourths of the milk has been extracted by hand, for, by remaining in the bag so long (especially if the weather be warm,) it is rendered impure. When colts are five months old, they can safely be weaned, after which they will require fresh tender clover, and rowen. They need warm stabling for the first two years. If the breaking process is commenced carefully at two years old, it renders them the more valuable.

Charcoal in Cisterns.—A writer in the *Horticulturist* says, that six quarts of charcoal, nicely pulverised, and put into a cistern of the capacity of fifteen hogsheads, will make the water perfectly sweet at any time. Well worth the trial.

FIFTEENTH AGRICULTURAL MEETING

At the State House, April 22, 1851.

Hon. John C. Gray, of Boston, in the chair,—Subject, "Fruit and Fruit Trees."

At the last two meetings, it was very stormy, and only a very few persons attended. This evening, though it was bright and pleasant, the meeting was rather thin, showing the propriety of a final adjournment, when there is only a small attendance.

Mr. Gray addressed the meeting. He said that the question had been started as to the decay and decline of fruits. The fact that some fruits decline seems to be well established. Some varieties produce good fruit for several generations, and then they fail. We must raise new kinds from seed to take the place of the old ones that fail. We have some valuable seedlings. Among them is the Downer cherry; and Mr. Hovey has raised seedling strawberries that are among the first in the country.

Trenching the land for fruit trees has been recommended. But this is an expensive process. Subsoil ploughing though not quite equal to trenching, will answer a good purpose, and it is much cheaper. When the land is once loosened by subsoiling, it will not become consolidated again. The good effects last a long time. Our trees often suffer from drought. There are two remedies. One is the frequent stirring the soil; the other mulching.

Mr. Cole, of the New England Farmer, said that in cultivating fruit, there was one important point not sufficiently attended to; that is the selection of apples that will keep late in spring and into summer. The Baldwin Apple begins to fail in March, growing mealy at the core. The Roxbury Russet is uncertain, very liable to fail from unfavorable weather in spring, and the fruit is too dry for the dessert, and it does not cook well. We want good cooking apples late in spring and in summer till new apples are ripe. Dried apple is a poor substitute for green. He was not prepared to recommend the best late apples, but the Table Greening, Norfolk, Size, and Northern Spy were worthy of experiment, and a great many are trying the last. It is a fine apple, and if hard to raise, as some suppose, it may pay well for extra pains [Mr. Cole showed fine specimens of the N. Spy, which were tried at the close of the meeting.] Very early apples should also receive more attention. Almost every man who raises fruit for himself or the market is setting Baldwin apples; and before a long time there will be ten times as many raised as at present. He thought it was a mistake as to there being a very great market in Europe for our apples, for a great part of the population find it difficult to get bread, and next to bread they will get meat if they can, before luxuries. As to the decline of fruit, he thought it was generally owing to the exhaustion of the soil; and indiscrimate manuring, without supplying the specific ingredients the tree needs.

Mr. John Perrim, of Lymeborough, N. H., presented some specimens of the John's Sweeting apples, which he recommended as a superior variety.

Hon. Mr. Hubbard, of Sunderland, recommended the cultivation of seedling peaches, as more hardy than those that are budded. If seed be planted from good fruit the product will generally be good. Some farmers have the finest of peach orchards formed in this way.

Hon. Isaac Davis, of Worcester, remarked that our finest fruit was from seedlings. At the horticultural shows in Worcester, the premium peaches are generally seedlings. He said that he obtained much fruit from a small space. He treated his trees as he did his children. He keeps them clean, and takes good care of them.

Mr. William J. Buckminster, of the Ploughman, said that we did not raise fruit enough. Grapes were sent to this market from New York and sold at high prices. He thought that early apples would not pay for raising, unless one was constantly attending the market. He considered winter apples more profitable. He recommended the cultivation of more sweet apples.

Hon. Dr. Gardner spoke of the importance of good culture, and attention to fruit trees, in order to succeed. He said that the Russet succeeded well with him, and he considered it a good apple. He thought there was no danger of raising too much fruit, as had been apprehended.

Mr. Cole explained that he would not speak against raising large quantities of fruit, but against all cultivators going very largely into one kind, as was now the case. He would have more late, and more early apples, that we might have a good supply through the year, and thus increase the amount of fruit, by supplying it in a season in which there is a deficiency.

Mr. Davis mentioned an instance of an excellent peach orchard, which lasted long and was very productive, that was covered with meadow hay. In some cases, the hay was opened and cabbages set, which flourished finely.

Adjournment without time.

Leaning of Trees.—Mr. Wm. G. Churchill, Deerfield, N. H., says that the article in the Farmer of April 5 does not express his views as to the leaning of trees. It should read thus: "He observes that a large part of the old trees in that vicinity lean in a north-eastern direction, which he attributes to the prevalence of south-westerly winds during the time of their growth."

Number of Grains in a Bushel of Wheat.—A writer in the *North British Agriculturist* states that the number of grains in a bushel of wheat weighing 62 lbs., is upwards of 639,000.

For the New England Farmer.

THE POTATO ROT.

At a time like the present, when disease has attacked the potato crop with such violence as to threaten its entire destruction, it should be the aim of every farmer to preserve a portion of that valuable crop, if he cannot find a remedy for the disease.

With a view of ascertaining, as nearly as practicable, what variety of potatoes is most hardy, I planted *twelve* varieties last spring, several of which were entirely healthy at harvest time, and remain so. I commenced digging about the 20th of 9th month. At that time potatoes were badly diseased in many parts of the country, and here it was thought that but few would be saved; but fortunately, the malady was soon checked, and farmers sustained but little loss from its ravages.

I planted several varieties on rich land, and manured them in the hills;—some with manure from the hog-pen, and some with horse manure.—Where the latter was used, but few infected potatoes were found; with the former, disease was much more prevalent. Some hills that had no manure in them were nearly free from rot. My Chenangoes on this piece were about *one-fourth* rotten, while some planted without manure, on light, new land, were nearly free from infection.—*Finger* potatoes yielded well, and about one-sixth were infected. *Kidney* potatoes I consider worthless to plant; they are excellent for the table when sound, but mine were nearly all rotten. I planted two varieties of red potatoes, which are new in this neighborhood. Not knowing the particular name, I will describe them. One is nearly a purple, and resembles the old white potato in shape. The other is colored like the Long Red, but is larger in circumference and not so long. Both varieties produced well, but the former was more diseased than the latter. These are fine table potatoes, and, if they continue healthy, will probably take the place of the Chenangoes and other varieties that are so liable to rot. The *Cow Horns* were healthy and produced well. One variety which I planted was produced from the seed a few years since. They are generally uncertain, but mine were sound last year.

The greater part of my potatoes were planted without manure, on new land containing a considerable portion of what we call *scurf*. On such land the potato disease has seldom done much damage. I planted the *long reds*, and the common white potatoes. But very few infected ones were found in either variety, though fewer among the *long reds* than among the whites. This strengthens the opinion I have a long time entertained,—that the red potatoes are more hardy than most other varieties, and, *in these times*, more profitable to plant for a main crop. The common white potato is an old and a hardy variety, but it is by no means free from rot.

I have now given the result of the past year's experience. I hope others will try experiments, and give *their* results to the public. This will enable us to come at correct conclusions.

L. Varney.

Sandwich, N. H., 2d Mo. 25, 1851.

Remarks.—The course pursued by friend Varney is a very good one, and one which has been too much neglected. On planting many varieties—which experiment may be made in a small way—we not only learn the very important fact, which is most hardy against the rot, but other important facts also, as we learn which are the earliest, the most productive, and of the best quality, when raised under the same circumstances.

For the New England Farmer.

TO PREVENT THE TASTE OF TURNIPS, &C., IN BUTTER.

Mr. Cole:—Mr. Weeks, of Vt., makes an inquiry in Nov. number, '50—for a cure of the taste communicated to butter and milk, who use turnips and other roots for their milch cows. When I have used roots and washed them, and sprinkled a little salt on them, I have found *no bad taste to the milk*. I was acquainted with a farmer who milked 20 cows, and knowing he used a great quantity of turnips; and I made a remark what good butter he had, and asked him how he managed to have it so good, using so many turnips. He replied, "My wife has a very simple receipt, which is this. When she churns she reserves a portion of buttermilk from the last churning, adds to the cream when she churns, and a small portion of saltpetre, about a pint to six cows; if this should not have the desired effect, add a little more."

If you think the foregoing receipt worth a place in your columns, it is at your service.

I remain yours, A Subscriber.

April 14th, 1851.

For the New England Farmer.

PRUNING FRUIT TREES.

Mr. Cole:—I seldom see a man in the act of trimming fruit or ornamental trees, or hear the axe resound from the orchard, but that the poetic expression, "Woodman, spare that tree," comes vividly to mind. Too often the attempt at pruning, or trimming, bears strong marks of mutilating. I know of no general, or in fact of any rule for improving trees in their appearance or condition. And I presume that many others are as much in the dark upon the subject as I am. Each one that practices, or attempts pruning, seems to me to be guided by his own taste or discretion, or by his ambition to equal or excel others in relieving trees of their limbs. All appear to be desirous of being considered in the height of fashion, or at least fashionable in this respect. The limbs of trees are undoubtedly as useful and necessary in the growth and support of the tree as the roots are. And a tree is no more likely to have a superabundance of the one, than the other. There will be no more unnatural growth of the one than the other. And it would seem that a limb would not grow, unless agreeably to the nature and condition of the tree. No branch or sprout puts forth, but must be in accordance with the necessity and wants of nature in the plant. It is not for man to say where limbs shall grow and where they shall not grow, unless he can discern the mystery of the vegetable growth and support. It cannot be possible that the limbs of trees grow at random, and that it is a lottery whether any grow in the right spot, position or form. The leaves are said to perform the office of lungs, and the roots that of the stomach, in the veg-

etable economy. The leaves absorb oxygen from the atmosphere, and thus convert into the support and growth, the nourishment that the roots take into the circulation for the purpose. If the roots are in a soil where they can grow extensively, and to perfection, the trunk and top will grow extensively and to perfection. If they are in a rocky or unnatural soil, they will be stunted and deformed, and the top will correspond. Improve the soil and you will improve the tree. It is better to have a tree of many branches in a prosperous state, than to have two trees, each pruned to one-half the extent of top of the one natural an untrimmed. Each root corresponds to a portion of the top and helps to preserve the center of gravity of the tree, and when the branches are cut mostly from one side, the stability of the tree may be very much weakened thereby. One in an enriched or fertile soil, in its natural state, will be of longer duration, and from its natural vigor, preferable for fruit or ornament, to one tastefully trimmed or mutilated.

OSCAR.

For the New England Farmer.

MANAGE WELL YOUR TREES.

MR. EDITOR:—In a neighboring town there is a gentleman who has been so successful in raising fruit, that I cannot but think that an account of his *modus operandi* in the fruit-growing business will be interesting to your many readers, and also it may perhaps stimulate them to new efforts in the production of that to which so much attention is at present directed.

Mr. M——, of C——, has doubtless paid more attention to the cultivation of apples than any other man in this vicinity; and the result is that he has obtained more money as proceeds of his apples than many farmers have from all sources. But I would not have you infer that his whole attention is directed to the raising of apples, for this is so far from the fact that perhaps he is more employed in other matters pertaining to the farm than to the before-mentioned business.

This gentleman a few years since had a large orchard of young trees an inch or thereabouts in diameter; and it occurred to him that he might graft them, and thus be sure of the right kind of fruit. He did so; but as is too often the case, he did not leave them afterwards to take care of themselves, that is, to their own destruction; he not only pruned them, but he dug around them and put on manure. He has annually cut off all the sprouts necessary, and usually has hoed them; and by yearly increasing the size of the place hoed, he this year has a place hoed around each tree about twelve feet in diameter. He also often applies chip-manure, and occasionally bones, ashes or other fertilizing substances. The result of all this is, his orchard is most beautiful, consisting of thrifty trees, which in the autumn are laden with the richest fruit. This orchard bears every year; even in years of the greatest scarcity this orchard yields, if not its accustomed quantity, yet considerably.—In this region, the year 1849 was noted as being a year of great scarcity of apples; but notwithstanding very few were raised, yet Mr. M—— obtained for his apples a large sum over what he used in his family.

Now if this man is so abundantly rewarded for all his labor and anxiety, others may go and do likewise and obtain the like recompense; but so long as neglect is a predominant principle in the creed of our farmers, we may not with reason look for that prosperity which otherwise might be expected. There is no doubt but it would have been somewhat easier, after he had planted his orchard, to have "let it alone;" but he had that keen foresight which especially every farmer needs, and he put his plans into operation, with what results I have shown.

There seems to be an inconsistency in the actions of most farmers; for, while they acknowledge that money is the object desired,—they go in a wrong direction to obtain this, in the most economical manner. They work long and hard to raise grain for market; but if half the labor each year which is employed in producing grain, &c., for the market, should be expended in renovating and grafting old, and making new orchards, in a few years not only would the gain be doubled or quadrupled, but their land would not be exhausted so rapidly. Hence I would advise farmers, if they have not yet commenced, to forthwith enter into the business of raising fruit. POMUM.

REMARKS.—Fruit growing is like every other branch throughout the whole routine of terraculture,—it requires good management in order to success. But as some farmers have succeeded well with their orchards, by setting the trees in a fertile soil fresh from the forest, and allowing the limbs to grow at random, they are not aware of the attention that trees require in old lands, that have become exhausted of some of their most essential elements.

For the New England Farmer.

FLOWING NECESSARY IN THE PROPAGATION OF THE CRANBERRY.

MR. COLE:—Within a few years considerable attention has been paid to the cultivation of the cranberry, but the question often arises, is wet or dry cultivation congenial to this excellent luxury? Owing to this diversity of opinion their proper management in some measure has probably been neglected. The veracity of this question is difficult to be attested, as the experience of different writers conflict one with another, but having been engaged in the propagation of this plant for a number of years, we give the reader what we have experienced on and from our "Old Meadow."

For many years we have paid no attention to the cranberry vines, consequently we mowed them off, but the vines continued to spread and they now nearly cover the whole meadow. Some dozen or fifteen years since, a square rod would have contained all the vines then on the meadow; but by what means they became generally seeded or disseminated, we know of no other reason than this. About twelve years ago a school-house was built near this meadow, and as a matter of course the scholars flowed it, that they might have a place for recreation; since that time the vines have continued to spread and increase in bearing. Six years ago, cranberries were so scarce on this meadow that they were not worth gathering; last year, twenty-five bushels were gathered, and many were left. We have written these facts in a plain manner, hoping by this means the more surely to attract the attention of the general reader, and thereby draw

out the opinion of others versed in the cultivation of this luxurious production. We think that the flowing of meadows from the time the cranberries are taken off, (or by the first of Nov.,) until the first of May, or until the frosty nights are over, is of great advantage in the management of the cranberry. MIDDLESEX.

Winchester, 1851.

REMARKS.—It is a well-established fact, we think, that flowing cranberry lands is beneficial. There may be exceptions, but they do not disprove this general rule; for this rule is according to nature. In numerous places, in Maine, we have noticed on the margin of ponds, where the land was flowed in winter, and from which the water receded in summer, yet remaining moist from its nearness to the pond, cranberries grow spontaneously; but they did not grow above high-water mark.

For the New England Farmer.

PEACH TREES.

MR. EDITOR:—It has been a general complaint in our vicinity, that peaches cannot be raised with success among us on account of the liability of the trees to disease and failure.

I have known of several cases where healthy trees have been transplanted into fertile soil and subjected to good cultivation, and yet after luxuriant growth they have suddenly failed, much to the disappointment of their owners. After close observation I have concluded that most of the failures among peach trees are occasioned by that insidious enemy of the peach-tree, the peach-borer.

On my premises are some 200 peach trees of from 2 to 8 years' growth; from among them four have been removed on account of the *yellows;* the others are in a healthy, flourishing condition; this has been preserved only by great care and exertion.

I have tried various remedies to prevent and destroy the insect, yet few of them are sure in their operation. The following is the most effectual remedy I have tried.

In April I remove the earth to the depth of 2 or 3 inches immediately around each tree, then with a sharp knife carefully examine the trees, laying open every cavity under the bark of the tree where the *borers* may have secreted themselves. This having been done, pour two or three quarts of boiling soapsuds around each tree, and the insects are destroyed while it injures not the tree in the least. Let the trees be examined again during the season, and in like manner each ensuing year, and little need be feared from the ravages of the peach-borer. Some of my most flourishing and productive trees are those which have been reclaimed in this manner.

Yours most respectfully,

PHS. M. AUGUR.

Middletown, Ct., April 21, 1851.

REMARKS.—There are many places where the peach-borer is not found. In other regions it is very destructive; the better way is to take some effectual means to exterminate them wholly, and then with little attention they may be destroyed, as a few make their appearance afterwards.

The yellows is a very destructive disease, and in all cases where it makes its appearance in a tree, or a tree has the appearance of being affected, it should be eradicated at once.

CLEANSING THE BARK OF FRUIT TREES.

This operation should be performed in early spring, as well as in mid-summer. The rough, loose parts of the bark should be scraped off, as well as moss and other parasites. The bark should then be covered with the following mixture, as high as the operator can reach, with an ordinary long handle whitewash brush:

5 pounds whale oil soap,
1 pound fine salt,
1 pound fine sand,
2 pounds potash,
2 ounces nitrate of soda,

dissolved or mixed with water to the consistency of cream, and thoroughly rubbed upon the bark.

Many kinds of insects are kept from trees by a solution of whale oil soap alone, and many such as are resident in the crevices of the bark, are destroyed by salt. The fine sand is intended during the rubbing to scratch the outer coating of the bark and thus assist the other ingredients for more perfect action. The potash and nitrate of soda will decompose or soften the dead parts of the bark, so that during the summer they will be thrown off by the healthy action of the growing bark. If the above mixture be applied in dry weather, it will become so hard as to remain during several showers, and thus have time to perform its office. Trees with smooth bark, such as the plum, many of the cherries, &c., should be rubbed with a wet rough woollen cloth in a few hours after applying the mixture; this rubbing will cause the sand to clean the surface so perfectly as to give the bark an improved and more healthy surface. Trees so cleansed are not as likely to be revisited by insects as those left with their natural surfaces, nor are they as likely to become bark-bound. Indeed we have never known a tree to exhibit the disease called bark-bound, the surface of the trunk of which had been softened by a soap wash in early spring. The cherry, apricot, peach and nectarine are subject, when left to their natural state, to this disease, and it has usually been attributed to too rich or too moist a soil; and under-draining and slitting the bark lengthwise with the knife are the usual remedies. The one is expensive and often impossible where choice trees are planted, and the other is barbarous and unsightly, causing exhalation of gum and consequent canker. In any case, a few applications of soap to the surface of the part hide-bound will remove the difficulty, and the mixture before recommended may be applied, slightly warmed, when required to soften the bark of a hide-bound tree.—*Prof. Mapes.*

ASHES AND PLASTER FOR MANURE.—J. Johnston, of Geneva, says that on his soil, which is a gravelly clay, one bushel of plaster will do more good to his clover than forty bushels of ashes—and that on muck soils he never perceived any benefit from plaster, though ashes may be useful. All the experiments we have tried on sandy and gravelly loam show the superiority of plaster to ashes, applied to grass lands. J. Johnston also says, that he has found the best way of applying stable ma-

nure in autumn is to spread it over the surface, and plough it in the next spring. This entirely accords with our own experience, whatever hypothetical reasoning may say to the contrary. It is perfectly evident, however, that little evaporation can take place during winter, while much that is soluble may become diffused through the soil.—*Ex.*

CHARCOAL AND WATER.

The following useful hints we abridge and copy from the Agricultural part of the Patent Office Report.

About one-half of the dry weight of all plants is *carbon* or *charcoal*. Of the other moiety, more than four-fifths are water, or, more correctly, the elements of water, called *oxygen* and *hydrogen*. Without the presence of moisture, both in the soil and the atmosphere above it, no plant can grow; and the presence of carbon, in a dissolved or gaseous form, is equally indispensable to the production of all vegetables.

It matters little whether carbon is accumulated in a solid form by imperfect combustion, as in the making charcoal from wood in a common coal-pit, or by the slow decay of plants (*eremacausis* of Liebig) in forming mould, muck and peat. The power of these carbonaceous and exceedingly porous bodies to condense the gaseous food of cultivated plants should be universally known.

Gaseous compounds of phosphorous obey the same general law. All well pulverized earths have a similar property of condensing oxygen and other gases; and thorough tillage greatly promotes the condensation of vapors and gases about the roots of plants, to nourish them. Charred peat, muck and wood are exceedingly valuable to mix with all manures to prevent the escape of fertilizing elements which are volatile and liable to rise into the atmosphere.

Charred muck, peat and wood are coming into extensive use in deodorizing night-soil, aided by gypsum and common salt. By these means a fertilizer of great power, and perfectly inodorous, may be formed, suitable to be planted or drilled with all seeds. Well dried and finely pulverized clay is a valuable deodorizer, and is used by many millions of people in China and some parts of Europe, to mix with night-soil. In this way it can be thoroughly dried and not part with any of its gases. Copperas-water and diluted oil of vitriol poured over night-soil convert all the volatile into involatile elements.

To command water in dry weather, and get rid of the excess in rainy seasons, *deep tillage* is equally valuable. In the former case, moisture *ascends* from the subsoil by capillary attraction; and in the latter, the excess of water in the surface soil *descends* into the subsoil to meet an exigency of an opposite character. The skilful control of water is the first lesson in good farming.

EFFECTS OF DEEP PLOUGHING.

Mr. Editor:—As you seem desirous to obtain the results of actual experiments in raising crops, I venture to give mine, in raising a crop of wheat upon a field containing 35 acres, which had been cropped without intermission for fifteen years previously, without the use of fertilizers, except some portion of the straw produced, during the time.—As might be expected, the sorrel had full possession of the soil. I procured a No. 3 subsoil plough, and two strong pair of oxen, to break up the fallow, letting the plough run from nine to twelve inches deep, which turned up about four inches of new soil.

This I thought was the stuff for producing wheat. I designed to use the cultivator during the summer in dry weather, to keep down the sorrel, should it make its appearance—but wheat harvest came on quite early, and after that was over with, the ground was too wet for some time; however, I resolved to try the cultivator on part of the field, (by way of experiment,) and cross-plough the rest.—The cultivator left the sorrel lying on the top of the ground, where the sun killed it completely in a day or two. On this portion of the field, at seeding time, the wheat was sown and covered with the cultivator—upon the remainder, the harrow was used for covering the seed; the quantity of seed was equal, being 1 1-2 bushels to the acre.—There was no perceptible difference in the wheat at harvest time, put in as before mentioned, excepting 10 acres upon one side of the field, which received thirty pounds of plaster to the acre, the spring previous; upon that portion there was decidedly the best wheat. The product of the field was 805 bushels, being an average of 23 bushels to the acre.

Adjoining this, was a field of like soil and condition, which was ploughed twice with a single team, at the same time as mine, which averaged only 12 bushels to the acre.

Yours, respectfully, Geo. W. Kennedy.
—*Michigan Farmer.*

BEDDING FOR STRAWBERRIES.

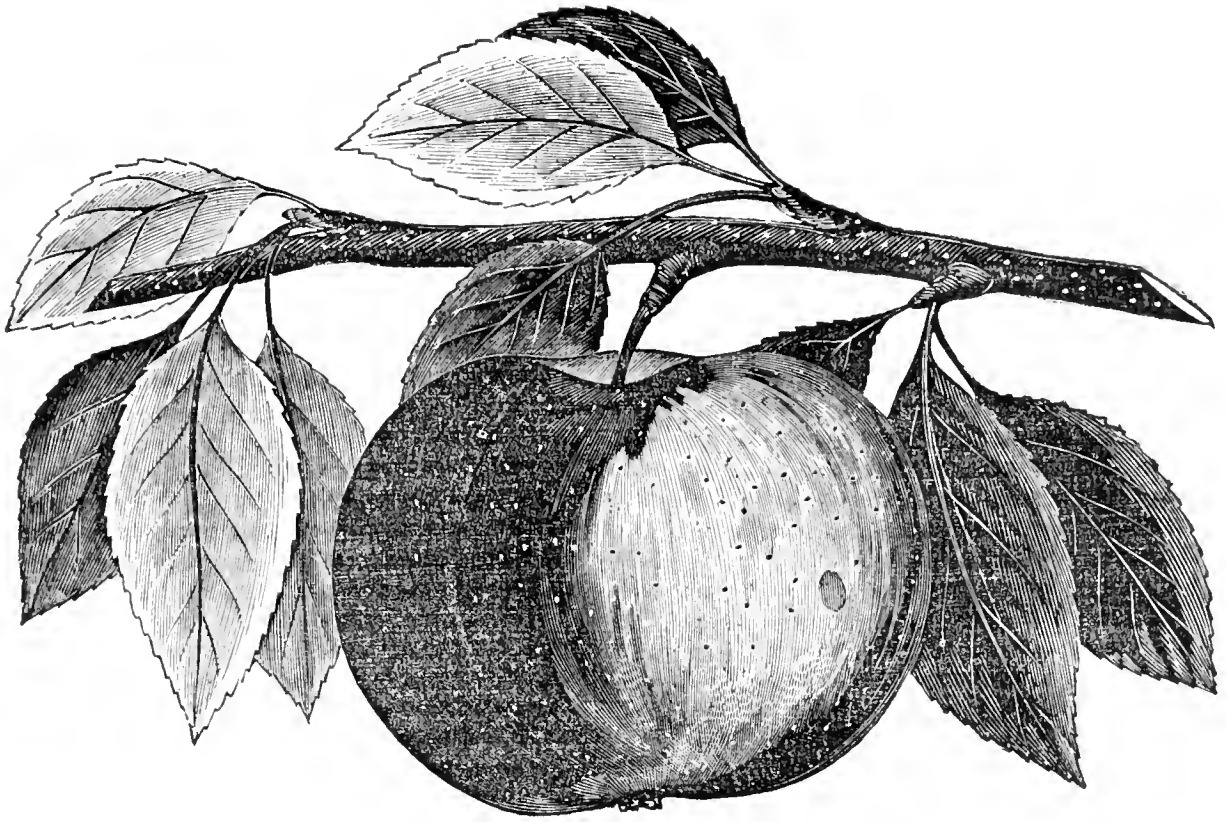
It is an excellent thing to cover the ground around your strawberry plants. It keeps the soil light, warm, and moist, keeps down the weeds, and keeps the fruit from being covered with sand. The *Prairie Farmer* says:

"The English use straw—hence the name *strawberry*. Of late, spent tan bark is much recommended; and where plenty, is no doubt a first rate article; we have seen it stated somewhere that it is apt to *flavor the fruit*. This would be fatal to it if true to any great extent. Saw dust—which, by the way, is a first rate manure—would be unexceptionable, and would be far better employed in mulching lands than in floating down creeks, or going off in smoke to the clouds. Let those who live near saw mills look out for the saw dust—it will pay for hauling."

Destructive Effects of the Tomato growing near Grape Vines.—Mr. Holmes described an instance of this kind in his own experience, where a healthy and exceedingly thrifty grape-vine, seven or eight year sold, was nearly ruined (poisoned) by the contact of a tomato vine which had been planted within six or eight inches of the grape.—*Minutes of the N. Y. Farmers' Club.*

Mr. Reuben Brackett, of Denmark, Iowa, exhibited to us last fall several specimens of grape vines which could not be made to thrive in the vicinity of peach trees.

The difference is very great indeed between those vines within reach of the roots of the peach trees, and those a few feet more distant—the soil and all other circumstances being equal.—*Eds. N. Far.*



GARDEN ROYAL APPLE.

This apple originated on the farm of Mr. Daniel Bowker, Sudbury, Mass. The tree is a rather slow or moderate grower, and a good bearer.—The fruit is of the highest quality for the desert, being remarkably tender and of a fine spicy flavor, resembling a good pear in its fine qualities. It is a very good looking, but not beautiful fruit. We consider the Garden Royal one of the very best apples of its season, for the garden, or for orchard culture for one's own use, and it sells well in the market; but some varieties of more rapid growth, and of larger and more beautiful fruit, though not of so high a quality, may be more profitable for the market.

The Garden Royal is small; roundish flat; of a dull greenish and russetty yellow ground, but mostly covered with dull, deep red in the sun, with numerous large light specks; stem short, slender, in a medial sized cavity; calyx medial, open, in a broad, shallow basin; flesh very fine, tender, almost melting, crisp, juicy, and of a delicious, highly aromatic flavor. In use during September.

REMARKS ON BREEDING.

As an illustration of the effects of *in-and-in* breeding, the following is related as having occurred in a particular neighborhood in this country. A farmer of a sour, unsocial disposition, who as much as possible avoided all intercourse with the rest of the world, and shunned asking the slightest favor of a neighbor, lest he might at some time be desired to reciprocate the kindness shown him, for a long series of years bred his cattle entirely from his own stock. In consequence of this course, such a herd of misshapen, ungainly, big-headed quadrupeds were produced that they could scarcely be recognized as belonging to the cattle kind; and "——'s wolverines" were for a long time the butt of ridicule in the whole vicinity.

The careful breeder, upon either system, will avoid using, even for a single season, any animal possessing obvious defects; for such defects, once introduced in but the slightest degree, are liable to be transmitted and re-appear even after several generations have passed. To the many curious and valuable facts already on record relating to this subject, the following may be added:—A portion of the fowls possessed by Constant Clapp, Esq., were formerly of the "downy" breed. But this variety, so strongly marked, had run out and entirely disappeared from his premises for eight years, when three of these downy individuals, perfect in every particular, reappeared among his flock, showing that the blood, though apparently obliterated, had yet been lurking there, generation after generation.

It was a favorite theory with the late distinguished General Schuyler, a man of extensive observation, of deep penetration, and sound judgment, that the true character, either of a man or beast, could be ascertained by looking at the parentage from which he had descended; and as an illustration of this, he used humorously to relate the incident, that in the early years of the Dutch trade with the East Indies, one of his ancestors, being a sea captain, had gone thither, and returned with a wife—a Mongolian lady, whom he had married in his absence. And the blood of that cross continued still to cling to the descendants two centuries afterwards, despite of all their efforts to eradicate it—so that down to the present day, in one branch and another of the family, one of these confounded East Indians would occasionally be making his appearance!—*Trans. N. York Ag. Society.*

For the New England Farmer.

POTATO ROT.

Mr. Cole:—Having been informed that the legislature of the commonwealth of Massachusetts have offered a premium to the person who shall discover and make public a remedy for the vegetable disease commonly called the "potato rot," and having no personal acquaintance with any of the officers of your State government, I beg permission to submit a brief statement, through the columns of the New England Farmer, to those functionaries that have cognizance of this matter.

I have strong hopes that I have discovered a sure remedy or preventive of this formidable disease, and the discovery was made by a mere accident. I am a very small farmer, improving less than two acres of land, but for the last fifteen years have invariably cultivated a small "potato patch" for the supply of my own family with this almost indispensable esculent.

In the fall of 1849, on harvesting my little crop of potatoes, I found them somewhat diseased, but not to any very serious extent. After they had been in the cellar some weeks they began to rot, and continued so to do during winter, till they were nearly all destroyed. By some mistake or negligence a few hills of this crop of potatoes were left in the field through the winter, and on digging them out in the spring, a large proportion of them were found to be sound and free from any disease, and I have good reasons for believing that among those left out, not a potato was attacked with disease after the frost penetrated the ground so as to reach it. These potatoes thus renovated by that most powerful disinfecting agent, *frost*, were again planted, and produced the only sound potatoes which I raised last season; the remainder of my crop, about thirty bushels, all rotted during the fall and winter.

I am not qualified to "discourse learnedly" on the foregoing facts, yet they appear to me as having an important bearing on the subject which has attracted the attention of the Massachusetts legislature.

The potato is indigenous to this country, and grows in its greatest perfection in the northern and middle latitudes of the temperate zone, and nature points to the frozen ground as the place of rest for the bulb during winter. The "potato rot" appears to be a malignant, putrid and contagious disease, attacking a species of the vegetable kingdom as putrid fevers, cholera, &c., do the human species; and if severe frost is the great disinfecting agent and specific in the latter case, may it not stand in the same relation to the former?

The potato, like a pampered child, has been "killed with kindness," or possibly like the chronic epicurean, it may be diseased by over repletion; but whatever may be the cause of its decay, it would seem that it can only be restored to its primeval health by a return to the stern and chilling regimen pointed out by nature's unerring index. To reduce the foregoing theory to practice is very simple. Let the crop of potatoes remain in the ground through the winter, and dig them after the frost is entirely out of the ground in the spring; those which survive will be renovated and probably exempt from future disease.

To plant in the fall without any manure in the hill, might perhaps answer for an early crop, if the disease has not made too great progress in the potatoes which are planted. Leonard Loomis.

Tolland, Conn., April 29, 1851.

Remarks.—After having a great many old things on the potato rot repeated, our correspondent has presented a new idea, and we hope it will be tested. But from our experience we should think that potatoes not dug would be very liable to be destroyed by frost in a climate as variable as it is in this section. Sometimes we have a snow late in fall or early in winter, before the ground freezes, and the snow lies on all winter, and the ground is not frozen. Again the ground is bare most of the winter, and changes from severe frost to comparative heat and the reverse are great and sudden, and in such cases the potatoes at the usual depth would be frozen and thawed frequently. Yet we are pleased to offer this new suggestion for consideration.

For the New England Farmer.

FARMERS AND FARMING.

Mr. Cole:—Notwithstanding farming is looked upon by many as not so honorable a business as some other kinds, in my opinion there is no business or occupation more honorable and independent than tilling the soil. The man who owns a farm, and has a clear title to the same, is the most independent of "Nature's noblemen." There is no occupation in the known world about which so many good things may justly be said in its favor. It may not bring so many dollars directly into one's pocket, but like casting "bread upon the waters," after many days the husbandman will reap the rewards of his labors.

But suppose the farmer does not increase his stores like the manufacturer, or others pursuing different occupations; he is the partaker of his own toils. He earns the bread he eats by the sweat of his *own* brow, and can repose under the branches of his own vine and fig-tree. The great desire of mankind seems to be to get wealth—and while striving to do so, they can have no more than they wish to eat and drink, and even after they have amassed all they desire (if that ever happens,) nothing but a living can be had out of it,—and this the farmer, with his small means, is pretty sure always to have.

The farmer possesses many advantages over those of other occupations. The first of which is, he is generally blest with health and a vigorous constitution. Certain it is, that there is no healthier business carried on than tilling the earth. Another advantage the farmer has, he leads a serene, quiet and peaceful life; is not troubled in his mind about the fall and rise of stocks,—like the manufacturers, merchants, speculators, &c. To the lover of nature, there is nothing more pleasant and delightful than spending his time in the fields, cultivating the ground. In the spring of the year, there is no other place so musical as the fields and groves which skirt them. The very air is alive with the merry little songsters. From every shrub and hedge the tuneful warblers pour forth their enlivening notes to cheer and gladden the farmer in his labors. The every day scenes of a farmer's life are

enough to give him pleasure and satisfaction in pursuing his humble and praiseworthy occupation.

How natural it is for boys, and young men even, as soon as they think they are old enough to take care of themselves, to hie to the city, to obtain situations in stores or counting rooms, thinking by so doing they are raising themselves to distinction, in the minds of society. They think it is more honorable to be in situations where they can wear a little finer cloth, and show a softer and more delicate looking hand. One great cause of the sons of farmers leaving them may be attributed to farmers themselves. If they would give their sons privileges—give them a piece of land to cultivate for their own special benefit,—and furnish them with tools suited to their age and strength, they would then have some interest at stake.

Boys ought not to be turned off with old rusty tools—those that have been laid aside as unfit for service. You let every boy have his bright shovel and hoe—his light scythe—his handy fork and rake—his painted wheelbarrow and other necessary implements, and my word for it the little fellows will manifest as much pleasure in wending their way to the fields, as ever Benjamin Franklin did in going round the house with his whistle. They will take pride in working on the farm; and if encouraged in this way—if each can have his little patch of ground and necessary tools, how anxious they will be for the appearance of spring. They will long to be putting their seed into the ground. As soon as the lark peeps forth from her hiding place at early dawn, the little fellows will be out to watch the appearance of their corn, potatoes, &c. By giving boys such privileges, they will be likely to become interested in farming, and will be pretty sure to grow up farmers. It is highly essential that there should be those growing up who will be prepared to fill the places of those who must ere long resign the places *they* now occupy in the agricultural community. A. Todd.

Smithfield, R. I.

Remarks.—It is a great mistake that men generally grow rich in other than farming business. Almost every farmer who is industrious and economical, acquires a competency, which is all he can enjoy, but in other professions property is very unequally divided. Frequently where one is rich, one hundred are poor. There is an ardent pursuit for gain, but there are more than two blanks to a prize.

There is one great evil attending boys and young men who go into large mercantile places for employment, that is generally overlooked by parents. It is an evil that is constantly besetting them, and more than any other tends to their ruin. There is a great deal of deception in trade, and in cities a great many young men are trained to deceive. And if their employers teach them to deceive and cheat the customer, and they are pliant enough to bend to so base a purpose, is it strange that they should say in their hearts to their employers, "With whatsoever measure ye mete, it shall be measured to you again!" Here, in a great measure, arises the extravagance of clerks, who spend far more than their wages, and make up the deficiency from the drawer of the employer. Perhaps from the very same money that they have aided in taking unjustly from the customer. Those persons who are well acquainted with trade know full well the propriety of these remarks; and it is a subject that receives too little consideration, both from the parents and employers of clerks.

For the New England Farmer.

ON GROWING FOREST TREES.

Mr. Cole:—I noticed in the New England Farmer of Jan. 4th an article in relation to woodland, which I was much interested in; and I would, with your permission, make a few inquiries. I wish to know what method you would take to make old land produce a crop of wood,—by ploughing and sowing seed, or by transplanting. I have an old ledgy pasture on which I should be glad to grow a crop of wood, but do not know how to start it. I think it is well adapted to oak, ask, chesnut or maple.

If you will have the goodness to give the desired information through the medium of your valuable publication, you will confer a great favor on one at least of your interested readers.

Very respectfully yours,

Claremont, 1851. Charles N. Goss.

Remarks.—In starting to raise forest trees in the spring, it is better to transplant trees, unless seed is already prepared for sowing. As to the better mode, when one is prepared to attend to either, no conclusion that is reliable can be made, excepting by one at the place of operations, where he can judge of the expense of procuring seed and preparing the land for its reception; also of the advantage of obtaining good forest trees to set out, and the expense of setting. Either mode, with good management, will be attended with success.

For the New England Farmer.

WINTER WHEAT IN MAINE.

Mr. Cole:—A large quantity of winter wheat was sown in Maine last fall, and as the snow has left, it presents quite a favorable appearance, or at least what was sown on suitable ground and in proper season. The winter has been quite favorable; the snow coming on early and continuing late, has protected it finely from the thawings and freezings which not unfrequently occur. Should the season prove favorable on account of the wevil and rust, Maine will raise a much larger amount of wheat than has been, of latter years.

Yet that some may find themselves under a mistake in regard to the large crop they anticipate, is to me quite probable. Some individuals have taken hold of it rather strong, putting in from ten to fifteen acres, with the ground but poorly prepared, and some of it sown quite late in the fall, which now presents rather a meagre appearance.

I think we shall find, (in Maine, at least,) that it will be best to sow no more than we are able to prepare the land suitably for, giving it as much dressing as needful, and sowing it early in the season, ploughing in or putting in pretty deep with the cultivator, that the roots may not be easily thrown out by the late frosts of spring.

Vassalboro', 4th Mo., 1851. D. Tabor.

RULES OF HEALTH.

Various and almost innumerable systems of regimen and dieteties have been devised to keep the body in order; and manifold are the causes alleged as originating disease. A very simple medical philosophy was that of the celebrated and able, but eccentric Dr. Abernethy, who maintained that all diseases are originally produced by one of two causes—FRETTING and STUFFING!

This is not very choice phraseology we are aware; but Dr. A. was not remarkable for refinement. He was singularly rude and uncouth in his manners, and felt a sovereign contempt for effeminacy, which he was so far from attempting to conceal, that he delighted to parade and to exaggerate it. On one occasion he was visited by a North County Squire, from whom he extracted a circumstantial account of his daily round of feeding, betraying the unsuspecting man, by an ill assumed blandness, into admissions of all his gastronomic and Bacchanalian enormities. When the cross-examination was finished, and the patient looked for a prescription, he was astonished by a most furious denunciation. Dr. Abernethy told him he was, by his own confession, a glutton and a drunkard, and ordered him to go home and live like a rational being; and not expect to repair by drugs the effect of inordinate indulgence.

The doctor was right. But next comes the question, what is inordinate indulgence? Tried by strict rules, we fear very few could escape, even those who consider themselves temperate. A coarse but practical method of illustration has been suggested, in the putting into a vessel, bit for bit, and piece for piece, and drop for drop, a duplicate of every thing that one eats and drinks in twenty-four hours. The medley would not only astonish, but disgust; and we are inclined to suspect that there are few of us who do not err in this way; even among those who are considered temperate, their sin is palpable, and their punishment evident.

Now for the *fretting*. Nothing is better understood, or more readily acknowledged, than that sorrow, care and uneasiness impair digestion. We cannot escape sorrow, or avoid disappointment. But we can be resigned or patient under either. And we must, in this working-day world, eat the bread of carefulness—else in the jostle of competition we should soon have no bread left to eat at all. Care, however, in a reasonable and proper degree, is not incompatible with cheerfulness; but reasonably directed, may be made to minister to it. Prudent forecaste saves the occurrence of harrassing anxiety, by preparing us for exigencies. Fretfulness usually finds a vent more in complaint against others, than in acknowledging our own short comings. Those who impair their digestion by mourning over their sins are far the fewer number.

Since, then, temperance and cheerfulness form the Panacea which, if it will not cure, will at least alleviate all diseases, we must set these in our list of remedies, and in our selection of preventives above all other. The first can only be followed in a life of reasonable activity and wholesome excitement, as otherwise we may be tempted to try anodynes and stimulants. And the last can only be enjoyed by the man with a large heart and open charity; for if we think ill of our kind, we cannot have cheerfulness. Suspicion and fretfulness go together. And finally, as the homilist would say, we can only be temperate and cheerful by putting a true value upon things and events, neither magnifying trifles which concern ourselves, or undervaluing things and interests which affect others.—*Arthur's Home Gazette.*

NEW METHOD OF PLANTING POTATOES.

MR. EDITOR:—The opinion has generally prevailed, that the potato cannot be successfully grown without the assistance of large applications of energetic and strong manure. My experience, however, with this crop, since the prevalence of the "rot," has induced me to adopt a different opinion. Finding that in every instance where green, unfermented manure was applied, and even where gypsum was used as a substitute both on old lands and on those recently broken up, the rot, or "murrain" as it is denominated in Europe, prevailed to a most fearful extent, I have, for the last two years, planted my crop on green sward, turned over early and deeply in the spring, without any other stimulus than that contained in the soil itself, and with complete success, so far as regards immunity from the rot. Plaster, or gypsum, I consider the very worst application that can be made, even in dry seasons. Indeed, I have never known an instance of its being applied, where the tubers were not most injuriously if not fatally affected. Why it is so is a point equally as obscure to my comprehension as the cause of the disease itself. It is true that a less yield results from this system of non-manuring, but then there is this important advantage attending it,—the product we do obtain IS SOUND. My method of planting, is as follows:—

Early in the spring I break up my sward land—choosing for this purpose such portions of my mowing lands as are not very rich, roll and harrow. I spare no pains to bring the surface to a fine and even *tilth*, as by so doing I in a measure obviate the necessity of manure. Having accomplished this important preliminary part of the performance, I next draw my furrows three and a half feet apart, and drop my tubers, which I select from the smallest or medium sized portions of the previous crop, as they produce earlier potatoes—placing them two feet apart in the rows, a closer stand having a tendency to induce a stagnation of air, and thereby induce disease. Before planting, I expose the seed for a week or so on the sunny side of a fence or out-building, covering them carefully at night to prevent their being frosted, and plant them whole. I cover with a "*coverer*." This is a very simple implement, and is made thus: Two pieces of plank, two inches thick, six wide and three and a half feet long, are attached at one end by an iron hinge so as to admit of the instrument being contracted or expanded at pleasure. At the narrow end, a portion of the wood is cut out, say from one-fourth of the distance forward, to the extremity, leaving just enough at the point to hold the hinge. The wide end is the forward part, and is kept expanded by a cross-bar to which the horse gear and handles are attached. This, when drawn longitudinally of the furrows, draws on the dirt, and the scarfed opening behind, leaves a ridge over the potatoes, of uniform width and depth. The inner sides of the main pieces ought to be protected by thin plates of iron, extending half an inch below the edges, and running the entire length. One of these "coverers" will save its cost in a single day. —*Germantown Telegraph.*

CONVERSION OF PEAT INTO MANURE.

As along the whole range of the *Atlantic States*, as well as upon the margin of those rivers, bays, creeks and estuaries which abound therein and find ultimate outlets in the ocean, there are to be found vast deposits of peat, and kindred vegetable bodies, the utilization of these substances as manure becomes an object of the very last importance, and the more so, as, from a long continued course of improved culture, most of the arable lands in those States have become greatly exhausted, and the ordinary sources of manure have failed, thus far, to arrest the course of deterioration to which they have been subjected.

Peat, as we know, is composed of vegetable matter, the accumulation of centuries, in certain locations, there deposited under circumstances which but slightly favor decomposition, and may be said to consist of decomposed, partially decomposed, and undecomposed vegetable matters, which may be very readily presumed to be somewhat varient in their constituent elements, and which, according as they may have been more or less excluded from the influence of atmospheric air, by superincumbent water, to have undergone a greater or less degree of decay. But as peat once possessed life, its power of reproducing life in living bodies can, by the application of proper agents, be restored, and restored so effectually too, as to make every pound of it equally good for the fertilization of the soil as would be an equal weight of barn-yard or stable manure. The means by which this desirable end can be brought about is the object of the writer of this essay, whose purpose shall be to state them in so plain and practical a way, as to place the *modus operandi* within the comprehension of all.

Peat, operated upon by local circumstances, may vary, to some extent, in composition, but the difference is too trifling to effect its value as manure, as will be made manifest by the following facts.

The mean of 20 analyses of the peats of Rhode Island, by Dr. Jackson, gave the following results:

Water from - - -	10 to 25 per cent.
Ashes, when burned, - -	24.07
Vegetable matter, - - -	72.39
Silica, - - - - -	4.31
Iron and Alumia, - - -	1.34
Lime, - - - - -	1.32
Magnesia, - - - - -	.32

The average of 10 analyses of Massachusetts peat, agreeably to Dana, was as follows:

Soluble Geine, - - - -	29.41
Insoluble Geine, - - - -	55.03
Salts and Silicates, - -	15.55

This average comprises various kinds of peat, as the kind usually used as fuel, turf and swamp muck, so that it takes within its range the ordinary kinds of substances available to farmers, in different situations, and, therefore, presents a fairer view of the real value of such substances than it would be, had the analyses been confined to fuel-peat proper, as the two latter bodies are more frequently to be met with in most localities than the former.

A more recent analysis made by peat found on the estate of the Hon. James A. Hamilton, of Nevis, near Dobbs' Ferry, in your State, gave the following results.

100 parts of the dried muck contained as follows:

Soluble and insoluble Geine, -	81.03 parts.
Silica, - - - - -	12.46
Alumnia, - - - - -	4.80
Oxide of iron. - - -	1.11
Lime and Magnesia, - -	.60
	100.00

The average of the preceding 31 analyses give us above 79 per cent. of vegetable matters in various stages of oxidation, the greater part of which is in an insoluble condition.—*American Artizan.*

INSECTS ON TREES.

A subscriber of Clarksboro', N. J., is informed that the common bark louse is easily and effectually destroyed by washing the trees with a solution of potash and water, or ley of ashes.

The leaf insect to which he alludes is only more difficult to destroy, on account of its position under the curled leaves. A suds of whale oil soap and water, or tobacco boiled in water, will soon end their destructive career. It should be applied with a syringe or brush, so as to reach all the insects. It may be necessary to repeat the operation, especially after rainy weather. These insects are not mentioned in any fruit books to my knowledge. The Wooly Aphis is the most destructive insect to the apple tree yet known. There appears to be two kinds. The native are more harmless. The foreign kind are more destructive, and are seldom seen in this country, except on imported trees. It is a small white downy insect, lodged in the crevices and crotches of the tree. Sulphuric acid of the shops, three-quarters of an ounce diluted with seven and a half ounces of water, will destroy them. Be careful of your skin and clothing in using the acid.

"A Subscriber" is mistaken in supposing that the leaf insects are the young of the ant. If he will take the trouble to visit the ant's nest, he will discover that they are enveloped in a tough case of the size of the full grown ant, and are perfectly developed when they first come to light, by bursting their prison-house doors. Why they are attracted to these lice I cannot tell, unless it is to obtain their eggs for food, which I think very probable.—*Dollar Newspaper.*

Mechanics' Department, Arts, &c.

IMPROVEMENT IN THE MANUFACTURE OF STARCH.

The *London Patent Journal* discusses an improvement in the manufacture of fine starch which has recently been patented by Mr. James Coleman, of Stoke, Norfolk county, England. The process is described in the Journal as follows:—

Take one ton of rice, either whole or broken, with or without the husks, and submit it to the action of caustic alkaline ley, in the manner at present performed, using soda in preference to potash, as affording a less deliquescent product. Wash the rice so prepared, and then pass it through the grinding or levigating mills in the usual manner, so as to reduce the starch matter to a pulp, in a fine state of division. The washed pulp so obtained is next to be placed in a churn, together with 40 gallons of a solution prepared in the following manner:—Take 20 lbs. of borax, and dissolve it in such a quantity of hot or cold water as will suffice to form a cold saturated solution; for

which purpose about 20 parts of water are requisite for 1 part of borax; pour 40 gallons of clear solution of borax thus made on a bushel of unslacked lime, placed in any suitable vessel; stir the mixture, and add to it enough of water to make up the quantity used to 50 gallons. Allow the undissolved portions in the mixture to precipitate, draw off the clear superlatent solution, and place it in the churn with the starch pulp, prepared in the manner before mentioned. The contents of the churn are next to be subjected to agitation for two or three hours, so as to bring each particle of the starchy matter in communication with the alkaline solution. When the desired effect has been produced, the mixture is to run from the churn into the separating vessel, and about as much water as the churn will hold added to it, (dimensions and capacity of churn not given,) the whole is to be now well stirred, and the starch washed, boxed and dried, in the usual way. Instead of borax and lime, as above mentioned, the same quantity of solution of borax alone may be used, or a solution of bitartrate of potash and lime, or a solution of bitartrate of potash alone may be employed. In either case, the process is to be conducted as above described. In the case of any other farinaceous or liguminious substance than rice being employed, the material used must be reduced to a fine pulpy state, as in the case of rice, proceeding as above directed.—*Farmer and Mechanic.*

WHITEWASHING.

As the time is now at hand for whitewashing on a large scale, we will give a receipt which is the best known for out-houses. Take half a bushel of good unslacked lime, slack it with boiling water and keep it covered during the slacking process. Strain the liquid through a seive, and add a peck of clean salt dissolved in warm water, add three pounds of boiled rice or wheat paste and half a pound of dissolved glue. Add five gallons of water to this mixture, and it is best to put it on hot, but in that case use only old brushes, or make allowance for the spoiling of them.

It has been found that our dry winds bite off, as it were, more of the whitewash than do rains. The salt is to obviate this evil. For whitewashing the interior of dwellings, do not use any salt, as it absorbs moisture; and to the above lime, add about two pounds of Spanish whiting. It makes the white more *clear* looking if a little indigo is squeezed through a cloth amongst it. Amongst the lime, Spanish brown or ochre may be stirred to make a colored lime paint. The sulphate of iron (copperas) makes a buff color; the sulphate of copper, (blue vitrol) a blueish color.—*Scientific American.*

The Electric Piano.—Mr. Davenport, of Salisbury, Vermont, we learn, claims to have made an improvement in pianos, causing the musical chord, by means of electric magnets, to continue an equable and free vibration for any length of time. The perpetual and hitherto incurable defect of the piano forte is the impulsive and evanescent nature of its tone, and though great improvements have been made upon it, and various devices have been elaborated to prolong its notes in some degree, yet the want of a sustained vibration is still an inherent defect in that beautiful instrument.—*Scientific American.*

Ladies' Department.

OUT OF DOOR OCCUPATION

COMPATIBLE WITH INTELLECTUAL REFINEMENT AND CULTIVATION.

The opinion is too common among females in this country, that intellectual refinement and cultivation are not consistent with any considerable degree of attention to out of door matters; and for a lady to manifest any special interest in, or acquaintance with the affairs of the farm, the barn-yard and the stable, is thought by many to be very unbecoming if not really vulgar. But surely it is as appropriate and decorous to study the works and the wisdom of God in the grain fields and among domestic animals, as among the birds and flowers; and no more vulgar to become useful or capable of being so, in these departments, than in the kitchen and garden.

If our educated and accomplished young women would take a deeper interest in these things and spend more of their time amongst them, we should see less of sickly delicacy and more of healthful beauty than now, and if those whose tastes or situations lead them more or less to out of door occupations, would devote a portion of their time to study, and a portion to the cultivation of whatever tends to refine and ennoble them, all classes would be benefited. Many such there are both in our own and other countries, and may their number rapidly increase.

We find an instance of this, that pleases us much, in the March number of the Horticulturist, by its editor, A. J. Downing, in one of his recent series of letters from England. The writer is speaking of a visit he enjoyed at the country house of a distinguished authoress, well known both in England and America; and after describing the scenery, grounds and dwellings, he adds:

"It would be difficult, perhaps, to have a better opportunity to judge of the life of the educated middle class of this country, than in such homes as this. And what impressions do such examples leave upon my mind, you will ask? I will tell you, (not without remembering how many fair young readers you have at home.) The young English woman is less conspicuously *accomplished* than our young women of the same position in America. There is, perhaps, a little less of that *je ne sais quoi*—that nameless grace which captivates at first sight—than with us, but a better and more solid education, more disciplined minds, and above all, more common sense. In the whole art of conversation, including all the topics of the day, with so much of politics as makes a woman really a companion for an intelligent man in his serious thoughts, in history, language, and practical knowledge of the duties of social and domestic life, the English women have, I imagine, few superiors. But what, perhaps, would strike one of our young women most, in English society, would be the thorough cultivation and refinement that exist here, along with the absence of all false delicacy. The fondness of English women, (even in the highest rank,) for out of doors life, horses, dogs, fine cattle, animals of all kinds, for their grounds, and in short, every thing that belongs to their homes—their real, unaffected knowledge of, and pleasure in these things, and the unreserved way in which they talk about them, would startle some of my young friends at home, who are educated in the fashionable board-

ing school of Madame ———, to consider all such things 'vulgar,' and 'unlady-like.' I accompanied the younger members of the family here this morning, in an exploration of the mysteries of the place. No sooner did we make our appearance out of doors, than we were saluted by dogs of all degrees, and each had the honor of an interview and personal reception, which seemed to be productive of pleasure on both sides. Then some of the horses were brought out of the stable, and a parley took place between them and their fair mistresses; some favorite cows were to be petted and looked after, and their good points were descanted on with knowledge and discrimination; and there the *basse cour*, with its various population, all discussed and shown with such lively, unaffected interest, that I soon saw my fair companions were 'born to love pigs and chickens.' I have said nothing about the garden, because you know that it is especially the lady's province here.

"An English woman with no taste for gardening, would be as great a marvel as an angel without wings. And now, were these fresh looking girls, who have so thoroughly entered into these rustic enjoyments, mere country lasses and dairy maids? By no means. They will converse with you in three or four languages; are thoroughly well grounded in modern literature; sketch from nature with the ease of professional artists, and will sit down to the piano-forte and give you an old ballad, or the finest German or Italian music, as your taste may dictate. And yet many of my country-women of their age, whose education—wholly intended for the drawing-room—is far below what I have described, would have half fainted with terror, and half blushed with false delicacy, twenty times in the course of the morning, with the discussions of the farm-yard, meadow and stables, which properly belong to a wholesome country life, and are not in the slightest degree at variance with real delicacy and refinement. I very well know that there are many sensibly educated young women at home, who have the same breadth of cultivation, and the same variety of resources, that make the English women such truly agreeable companions; but alas, I also know that there are many whose beau ideal is bounded by a circle that contains the latest fashionable dance for the feet, the latest fashionable novel for the head, and the latest fashionable fancy work for the fingers.

"If I have unconsciously run into something like a sermon, it is from the feeling that among my own lovely country women is to be found the ground-work of the most perfectly attractive feminine character in the world. But of late, their education has been a little vitiated by the introduction of the flimsiest points of French social requirements—rather than the more solid and estimable qualities which belong to English domestic life. The best social development in America will, doubtless, finally result from an internal movement springing from the very bosom of our institutions; but before that can happen, a great many traits and refinements will necessarily be borrowed from the old world—and the larger interests, healthier home tastes, and more thorough education of English women, seem to me hardly rated so highly by us as they deserve. Go to Paris, if you will, to see the most perfect taste in dress, and the finest charm of merely external manners, but make the acquaintance of English women if you wish to get a high idea of feminine character, as it should be, to command your sincerest and most lasting admiration and respect."—*Ohio Cultivator.*

SCIENTIFIC MODE

OF ROASTING MEAT, AND OF PREPARING STEWS AND SOUP.

Cooking meat by boiling it slowly in a large quantity of water, which is afterward thrown away, is probably the most wasteful manner of preparing food that has ever yet been devised; and roasting it is a little better, as a great portion of nutritious juices must fly off during the process of its exposure before the fire; and yet how many families pique themselves on their economy, because they never have any thing but plain roast and boiled.

When meat is exposed to the fire, to undergo the operation of roasting, "the albumen of the juice of the flesh begins to coagulate at a temperature of 105.5 degrees, and it is completely coagulated at 140 degrees (Berzelius.") At this temperature, however, the coloring matter of the blood is not coagulated, and it requires a temperature of 150 or 158 degrees to make even the outer part of the meat appear what we call done. "In the interior of a large piece of meat," Liebig observes, "we can tell with certainty the temperature which has been attained in the different parts, by the colors which they present." In all those parts which appear underdone, the temperature has not reached 144 degrees. "In the cooking of poultry, the flesh of which is white, and contains little blood, the temperature of the whole need not exceed 130 or 140 degrees." The flesh of poultry or game is, therefore, much sooner cooked, and with a smaller fire, than an equal weight of beef or mutton.

By enveloping small birds with slices of fat bacon, "the extraction of the sapid constituents from the flesh by its juices, and the evaporation of the water, which causes hardening, are prevented; and the surface is kept in a tender state during the process of roasting."

In making soup, the opposite process to that required for boiling meat must be adopted. If the meat "be placed in cold water, and if this be brought gradually to the boiling point, there occurs, in the process, an interchange between the juices of the flesh and the external water." The soluble and sapid constituents of the flesh are dissolved in the water, and the water penetrates into the interior of the mass, which it extracts more or less completely. The flesh loses, while the soup gains, in sapid matters; and by the separation of albumen, which is commonly removed by skimming, as it rises to the surface of the water when coagulated, the surface of the meat more particularly loses its tenderness and shortness (as it is called,) becoming tough and hard. The thinner the piece of flesh, the more completely does it acquire the last mentioned qualities; and if in this state it be eaten without the soup, it not only loses much of its nutritive properties, but also of its digestibility, inasmuch as the juice of the flesh itself, the constituents of which are now found in the soup, are thus prevented from taking part in the digestive process in the stomach. The soup, in fact, contains two of the chief constituents of the gastric juice.

In making stews, the same process is observed, but the heating is stopped short before it reaches the boiling point.

☞ Brave actions are the substance of life, and good sayings the ornament of it.

ACKNOWLEDGMENTS.

Of Benjamin Meriam, Roxbury, some very early rhubarb, which we received last week on Friday. This is not only a very early variety, but it is remarkably tender. Mr. M. has not the name.

Of J. A. Kingsbury, Medfield, a bottle of wine, doubtless made from fruit, but as it was left in our absence, we have not learned the kind, nor is it recognizable in the liquor. We are informed that this wine is prepared without alcohol. It is pleasant, and would probably be useful, in some cases, as a medicine; and for such purpose should wines be made. Those that are whole need not a physician.

NOTICES OF PUBLICATIONS.

The Fruit Garden.—This is the name of a new treatise on fruits and fruit trees, by P. Barry, of the Mount Hope Nurseries, Rochester, N. Y.—The able manner in which Mr. Barry has conducted the Horticultural department of the Genesee Farmer has earned him a high reputation as a pomologist, and shows conclusively that he is well qualified for the production of a work of the character of this now before us. He has dwelt particularly on the laying out and managing of orchards and nurseries, training of trees, &c., &c. The work contains a large amount of valuable matter from a practical cultivator and accurate observer. Published by Charles Scribner, New York. Sold by Tappan & Whittemore, Boston.

Episodes of Insect Life.—This is a very beautiful work in its typography, binding and engravings; and the subject matter is very interesting indeed, showing the wonders of nature, and the philosophy and admirable design in many curious creatures around us, of which, too frequently, we are negligent or ignorant. As a source of amusement, and valuable instruction, we would recommend this interesting work; but it is not designed to give information in the science of entomology for the practical utility of those who cultivate the soil, and find that insects are among their most formidable enemies. B. B. Mussey, Boston; J. S. Redfield, New York.

Farmer's Guide.—No sixteen of this valuable work is received. It is the best foreign work on the general subject of agriculture; and it is adapted to the condition of American Agriculture by notes of Prof. Norton. Sold by Redding & Co., 8 State Street.

Pathfinder Railway Guide contains much valuable matter for the small sum of only *five cents* Snow & Wilder, 5 Washington Street.

The Water-Cure Journal.—The execution of this work is in a superior style, and the matter is highly valuable. Many a stubborn disease that will not yield to medicine, may be washed away by the simple means, every where abundant, of cold water, or it yields to the constant application of baths and wet bandages. By this agent, so common and simple that many will not try it, wonders have been performed. Fowler & Wells, 131 Nassau Street, New York.

American Phrenological Journal, published by the same, contains a large amount of valuable matter besides that strictly relating to the science to which it is principally devoted; and the articles on that subject are well worthy the candid examination of every individual.

Knowlson's Complete Farrier contains various receipts and directions for curing the diseases of horses. Published by T. B. Peterson, Philadelphia.

Knowlson's Complete Cow and Cattle Doctor, published also by Mr. Peterson, treats of diseases to which neat cattle are generally incident.

The Complete Kitchen and Fruit Gardener is another work published by Mr. Peterson, containing much valuable matter in a small space. Hotchkiss & Co., of this city, sell the last three works which we have noticed.

Fifth Annual Report of the Ohio State Board of Agriculture, for 1850.—We are indebted to our friend A. H. Ernst, of Cincinnati, for this work. It is much larger than the previous reports, consisting of 636 pages. We have not yet examined it.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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☞ The Semi-Monthly Farmer contains nearly the same matter as the Agricultural department of the weekly.

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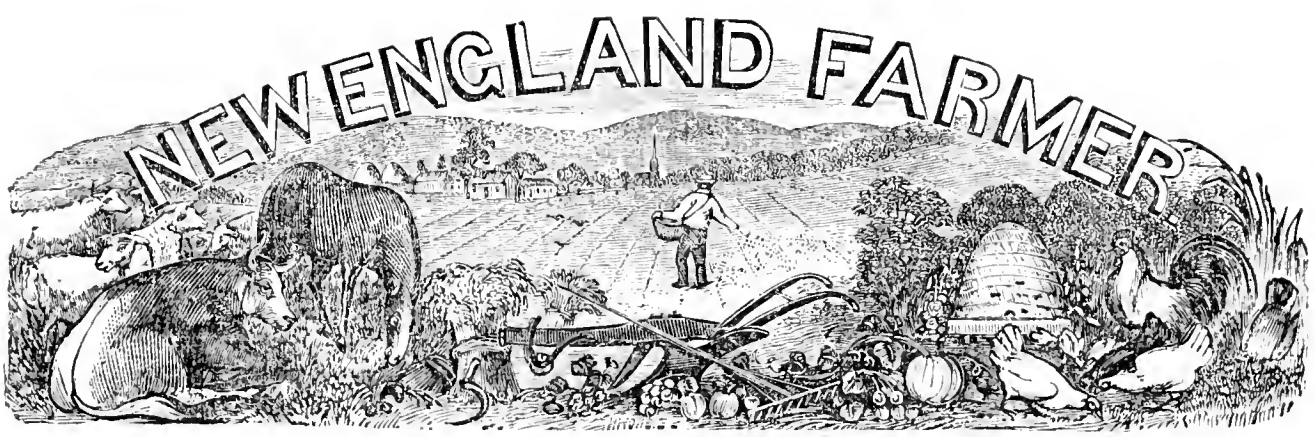

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

NORTHERN SPY APPLE.

This beautiful and excellent fruit is in our market this spring, in moderate quantities, selling at high prices. It is fresh and juicy, and is in use in a good time, as it becomes ripe about the time the Baldwin is failing. The Spy apple is in use in spring and early summer. It is large, generally fair, and of the best quality. We have had this fruit every year for six or seven years, and have examined the subject well, comparing it with various other apples.

A few years ago, we found a stray barrel of the Spy in the market, without name, and we bought it at the usual price of apples. From exposure, these ripened up in winter when the Baldwin was in its prime, and we found the Spy finer in texture and much superior in quality to the Baldwin as a table fruit. As a winter apple, the Baldwin stands unrivalled for its great growth and production, and it is a popular apple in the market; but in the spring, it grows mealy at the core, and loses its quality, though still preserving a fair exterior. When one side of the Spy is decayed, the other side is fresh and juicy, so that in attempting to keep them long, they are not lost, before exhibiting indications of decline.

In favorable locations, in western New York, and with good culture, the Spy produces large crops of fine fruit, and as our climate is similar, we hope that it will succeed well here. Whether it will ripen up well much farther north, remains to be tested. One thing is certain, that it is very hardy against cold, more so than the Baldwin.

From the facts we already have on this subject, we believe that we must have a good strong soil, and high culture, for the Spy apple, and as the shoots run up very thick, they will doubtless need thinning to let in the sun. We have observed that those specimens of this fruit that lack color, are wanting in quality also, showing that exposure to sun and air are requisite to bring them to perfection.

As a limestone soil is said to be best for the Spy apple, we advise those who cultivate it where there is probably a deficiency of lime, to put a little old lime around their trees. Ashes, and a small quantity of bone manure and salt, are also very good for all kinds of fruit trees on old lands.

Some nurserymen who have not kept pace with the improvement of the times, have discouraged the cultivation of the Spy apple. We wish that such persons would compare it with the best fruits in the market, and then judge whether it is not better to cultivate some late fruits for spring and early summer, than for all to cultivate one kind extensively, which fails in the spring.

GRAY DOYENNE PEAR.

A subscriber remarks that in the list of good pears approved by the Fruit Grower's Convention is the Gray Doyenne, with qualifications, "in certain situations;" and he inquires whether reference is made to soil or exposure, or both. In reply we would state that reference is made to soil, location, climate, or any other circumstance that may affect the fruit unfavorably.

The St. Michael pear generally fails, by blasting and cracking, in New England, near the sea; but it flourishes in the interior of this section of the country, and in the middle and western States, it is one of the best, richest and most profitable pears, being hardy both in tree and fruit.

The Gray Doyenne resembles the St. Michael (White Doyenne), and generally fails where that fails. It is more round than the St. Michael, has much cinnamon russet, and is a little later, and rather better. The Gray Doyenne blasts in the northern part of Ohio.

Large Oxen.—Mr. Increase Robinson, of East Weymouth, brought a pair of fat oxen to this market, last week, which weighed 4200 pounds. He sold them to Potter & Leland.

SALE OF STOCK.

At the public sale of the stock of Wm. S. King, Esq., at Woodland Farm, near Providence, R. I., May 7, the following animals were sold at the prices and to the purchasers as follows. We have not the residence of the purchasers generally:—

BULL.

Tempest, short horn, to J. Thompson, for $85,00

COWS.

Brindle, to M. P. Wilder, Dorchester, for $100,00
Pink, seven-eighths Devon, to John Lane for 105,00
Daisy, to A. W. Brown, for 50,00
Brighton, a native, to Wm. Goddard, for 37,50
Kate, polled or hornless, to W. A. Howard, Providence, for $31,00
Rose, native, to J. S. Cabot, Salem, for 70,00
Jessie, Ayrshire, to B. Balch, for 47,50
Flora, short-horn, to J. E. Crane, for 50,00
Jessica, Holstein, to S. J. Capen, Dorchester, Mass., for $170,00
Pansy, to W. S. Simmons, for 32,50
Judy, to W. Whipple, for 35,00
Gypsey, to V. Bump, for 50,00
Bountiful, to E. Wood, for 70,00
Lucy, to Keith, for 30,00
Sybil, to G. A. Kenyan, for 35,00
Rosette, polled, to J. Dunnell, for 75,00
Becky, to M. P. Wilder, for 40,00

HEIFER-CALVES.

Atalanta, to John Giles, Providence, for $35,00
Linnet, to M. P. Wilder, for 17,50
Die Vernon, to Charles Bradley, for 17,50
Fanny, to W. A. Howard, for 18,00
Cora, to S. Amey, for 22,50
Blanche, to E. Wood, for 25,00
Flirt, to S. J. Capen, 40,00

PLOUGHING UNDER GRASS.

If greensward be ploughed the latter part of May, or early in June, after the grass has got a good start, and the sod completely inverted, it will decay very rapidly, from the fermentation of the green crop, and very soon become available food to the growing plants. When grass lands are ploughed late in the season, with a good crop of green matter to turn under, the sod will decay sooner than if ploughed in fall, or early in spring.

One not experienced in this mode of cultivation will be astonished at the rapidity of decomposition in the sod. We ploughed a rather tough grass sod the 20th of June; then spread manure; harrowed thoroughly, and planted potatoes. In only a few weeks they were ready for hoeing, and at this operation, the sod was already decaying and becoming mellow,. At harvesting it seemed completely decomposed. From the large crop, with only light manuring, it was evident that the sod and grass contributed principally to the production of a large crop.

Sward land, with a good crop of grass, ploughed late, is in good condition for corn or potatoes, or almost any other crop, with suitable manuring. By repeated harrowing, so as to produce fine tilth, it is suitable for squashes, cucumbers, melons, pumpkins and cabbages, and they will generally succeed better on rich lands than on old ground, which often abounds in insects. It is also good for buckwheat, and for rutabagas and other turnips; and if the land is a deep loam, and ploughed deep, and well pulverized, it will answer well for beets and carrots. It is also good for fodder corn.

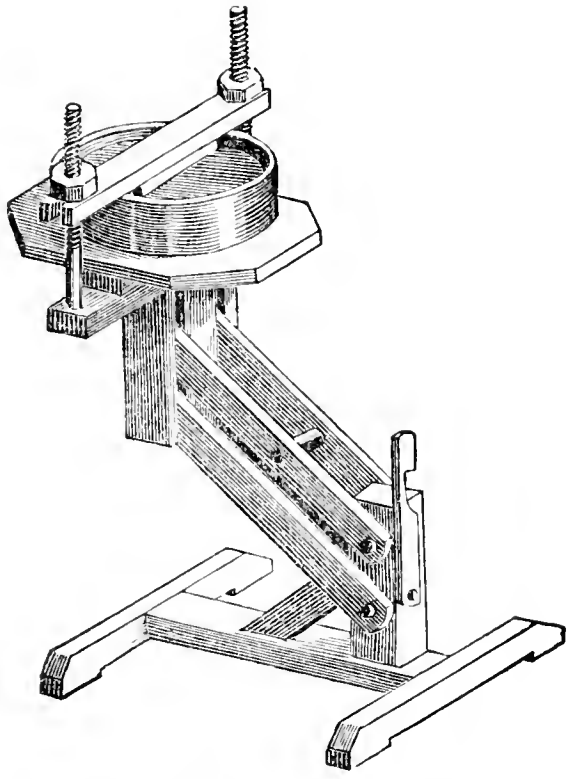
CARROTS.

Carrots bear a succession of crops very well; better than most other crops; yet it is not an established fact that they will bear good crops for a series of years so profitably as they would by a change of soil, and by being brought into a rotation once in three or four years.

Generally there is no advantage in cultivating one crop on the same land for a series of years; for, in order to get good crops, higher manuring will be necessary than in a rotation. As different crops differ in their constituent elements, they, of course, draw different elements from the soil.—There is, generally, economy in a rotation of crops, as less manure is required. There are some exceptions. The onion, for instance, not only bears a succession of crops with success, but it is said that it flourishes better on land that has been long under its cultivation. An instance is named of a piece of land in England that has borne good crops of onions for 400 years in succession.

VARIETIES OF ASPARAGUS.—Some have given asparagus very high culture, and christened the product, Giant Asparagus, and other great names, and in this way they have deceived many. We have never known but one variety cultivated here, which is called simply asparagus. It is astonishing what high culture and good management will do for a crop; and it is no wonder that those who have never seen it tried should be ready to believe that the result is the effect of a superior variety of vegetable. We should investigate causes, and not judge too much by appearances.

LUCERNE.—We have an inquiry whether Lucerne (French clover) will pay for cultivation as far north as nearly forty-five degrees. Thorough experiments have been made with this clover in a milder climate by several degrees, and we have never known a successful experiment. Lucerne requires as rich a soil, as fine a tilth, and as much cultivation the first year, as a crop of beets or turnips. It is liable to be winter killed, in colder climates than this, and in this latitude it is frequently thrown out of the ground in winter and spring.



PATENT SELF-ACTING CHEESE PRESS.

This is a light, strong, portable press, affording many conveniences to the dairy woman. It is in reality a table on which to turn the cheese. There is no forcing of screws, no lifting of weights; but the cheese creates a constant and regular pressure of twelve times its own weight, whether large or small, and if a greater pressure is needed, one pound laid on the cheese or table adds twelve pounds increased pressure, and so on in the same proportion. The cheese is not removed from the press until the pressing is completed.

For the New England Farmer.

EFFECTS OF COAL TAR ON FRUIT TREES.

Mr. Cole:—In the fall of 1848 I was desirous of obtaining a preventive against the ravages of the field mice, some of my fruit trees in a previous season having been destroyed by them. I found in Downing's "Fruit and Fruit Trees of America" the following, to prevent mice or rabbits from girdling trees. "The most effectual remedy is the coal tar made at the city gas works. Before winter commences, a coat of this is, with a common painter's brush, laid on the lower part of the trunk, from the ground to the height of two feet. Experience has proved that it does no injury whatever to the tree, while it completely prevents, for that season, the attacks of mice, rabbits and bark devourers of every kind."

He mentions also soot and milk as a preventive; this I tried first, but finding it difficult to make a satisfactory composition of such ingredients, I obtained some coal tar from the "city gas works."—This I applied to thirty or forty trees, principally strong, healthy Baldwins, some six or eight years old. In the following spring I examined the trees, and certainly they were uninjured by the mice. I next endeavored to remove the tar, but here was the rub, and a hard rub it proved, for the strongest whale oil soap solution I could apply had not the slightest effect in removing the tar. I then endeavored to scrape it off, but I found, to get the tar off in this way, I should be obliged to take bark and all. This not being exactly what was desirable, I suffered the trees to remain with their unsightly black coats. Since that period the greater number of them are dead or dying, and I can account for the fact in no way, except from the influence of the coal tar, not only from its binding the bark of the tree, but from its excluding from the parts covered by it, air, light and moisture.—These effects I am certain that it has.

Most if not all of my trees were as strong and healthy ones as I have ever seen; in most excellent situations in all respects; the ground about them kept open by ploughing, and free from grass and weeds. Within a day or two I have examined those which were among the best: these, some six or eight, look well *everywhere but where the tar was applied;* there the old bark is peeling off, and that beneath appears more like the bark of the buttonwood than the Baldwin apple tree.—The trees look, now that the tar is wearing off, as if a strong caustic had been applied to their trunks. I have no doubt that the coal tar has or will be the destruction of three-quarters of them. Everywhere that it has been applied, the bark looks unhealthy; in some parts utterly dead, in others pale and weak. In some fine green gage plums, the effects are very obvious—all the way down the trunk where the bark remains covered with the tar, it is entirely dead; in spots and strips which were accidentally left untouched by the tar, the bark is full of life—and these dead and living strips are side by side. Now this being the case, and such being the effect of this vile stuff, I think it highly improper for a man of Mr. Downing's reputation to publish such advice, giving it the sanction of his name. By following it I shall lose forty trees, I suppose, comprising some of the best kinds of apple and plum trees, which have had in my ground a growth of seven years. Thus besides the original expense and labor, I have lost, which is of vastly more consequence, the seven years growth. If you have any experience in this matter, or can give any information upon the subject, you will oblige me. Yours respectfully, A.

Cambridge, April 28, 1851.

Remarks.—Soon after the publication of Mr. Downing's work, experiments were made in the use of coal tar, and several cases were published in which it had the same destructive effects as named by our correspondent. We published these cases as a caution several years ago, and from the extensive publication of these cases, we supposed that its use was entirely discontinued; but in addition to the preceding case, a gentleman informs us that he has lost fifty apple trees this year by the use of coal tar.

A Mammoth Tree.—On the land of Mr. Rife, three miles from Hagerstown, Md., near Salem Church, stands the dilapidated trunk of a hollow sycamore tree, the circumference of which is, at the ground, thirty-nine feet two inches. The Hagerstown Herald says:

"The cavity is entered by an aperture which ad-

mits a man without stooping; and the inner diameter averages eleven feet four inches. Mr. Gelwicks and twenty scholars, from 8 to 17 years old, stood in a circle of one deep on the extreme of the circle of the cavity, and an additional number of from fifteen to twenty might have stood within."

For the New England Farmer.

AGRICULTURAL SCHOOLS.

Mr. Editor:—What benefit may be derived from agricultural colleges in Massachusetts remains to be tested by experiment. The student of agricultural books, without practice, can no more become a farmer than the carpenter could a good workman by reading books of architecture. The tendency of a protracted course of study at any college or public school is not favorable to habits of industry, especially to create an appetite for practical labor, however enthusiastic the student may be in theoretic notions. A lad or young man, even if he has been accustomed to labor, retires from it and enters a school or an academy; he soon becomes debilitated, and loses that firmness and vigor of muscle which he retained while he continued to labor, and after a while, as langor and debility increases, by a sedentary life, a dislike, then a dread, and at length in some cases an abhorrence of labor takes place in the pupil, whose mind is often as much enfeebled as his corporeal part. This I know by experience.

There are other considerations which would render the utility of agricultural schools questionable; the pupil forms new acquaintances, he imbibes new ideas, and is exalted in the scale of being, in his own estimation, and ascends to a higher grade, and if he gains knowledge of good, he is full apt to contract habits and visionary notions and theories from his associates, which would not have a tendency to make him an industrious farmer. The boy that is educated to fill a professor's station, will commence life with high expectations, and the idea of high life will take possession of his mind, without any adequate means of supporting himself in his imaginary self-conceived important standing, and he would be as liable to make a "compromise" with his creditors as the merchant himself.

How a poor graduate from an agricultural college can sustain himself without labor would be a puzzle to all practical farmers. There are but very few farmers but what would prefer to be their own professors, instead of paying a salary equal to supporting one of these graduated scientific students. A better plan would probably be to settle him down a dead set upon the parish. The public is now burdened with hosts of unnecessary professional men, office holders, office seekers, mountebanks and would-be somebodies, which are like the horseleech, never satisfied, but cry more money, more money, and are actually squandering the hard earnings of the industrious portion of the community in extravagances, under the pretext that their services are indispensable to the public good.

How long the community are doomed to suffer the impositions of these supernumeraries, and have their little pittances extracted from their pockets by unprincipled pretenders which are flooding the country and committing indiscriminate depredations upon the credulous, unsuspecting multitude, is beyond the knowledge of the present generation to prognosticate.

I think a school endowed with professors for the detection of impostors would be quite as much to the purpose, and as conducive to the public good, as a college to instruct boys to hoe corn and weed onions.

The process to go through to become a good practical farmer requires time, accurate observation, and habitual labor from day to day, till love of industry becomes second nature. After a boy has been well instructed in the several branches taught in our excellent district schools, I know of no better course he can pursue to extend his knowledge of farming than reading the agricultural papers of the day, filled with the productions of able and enlightened editors, and communications of practical and observing correspondents. The expense would be but a trifle when compared to a protracted, debilitating, dissipating course of study at a school whose professors might be more ignorant of practical farming than the pupils themselves. No ambitious young man desirous of information, as every farmer ought to be, will spend his leisure hours moping about or loafing at grog-shops, when he can be storing his mind with useful knowledge which he can derive from such a source. If a farmer wishes to have his soil analyzed, it would be abundantly cheaper to employ a practical chemist to do it than fit himself out with the necessary apparatus, if he were competent to perform it himself.

All New England farmers know that the income of their farms is not adequate to paying the price of labor, and supporting a superintendent, educated at an agricultural college, from the sale of his crops; this may be done in Europe, where the laborer does not draw wages enough to pay his board in America. The superintendent here, whether he is proprietor educated at an agricultural college or otherwise, has got to exercise his muscles like a man instead of dictating a group of half-starved peasants. I am among the last to discountenance any institution for the dissemination of useful knowledge, but to suffer a burdensome tax to be laid on the people of this commonwealth upon a project which at best looks more like multiplying a new horde of professors to leech the farmers than render them any permanent benefit, seems an act destitute of that wisdom which the old Bay State has been renowned for in past time.

Wilmington, May, 1851. Silas Brown.

Remarks.—For some years past we have occasionally received communications from Dr. Brown that have been marked with solid sense and accurate observation, therefore we give him a hearing, though we do not endorse all his views, and though he is very severe in some respects.

The article contains important truths, which the advocates of agricultural colleges in their zeal for a splendid establishment, (and we might say expensive one too,) seem to have over-looked.

At the late Agricultural Convention, where this subject was discussed, the utility of agricultural papers was not mentioned, if we remember; and the speakers, composed of delegates from the several agricultural societies, claimed, generally, that what little improvement had been made was accomplished through the influence of those associations.

Notwithstanding the favorable influence of societies and other means, it is generally allowed by the most intelligent farmers that books and papers on agriculture have been the most effectual means of enlightening farmers, as by them the most reliable and valuable information among the best practical farmers is collected, and then disseminated widely over the land. The farmer, even of humble means, may sit down in his own retired home and consult the most skilful farmers in different parts of the country, and learn what they are doing. If he would have more light on any subject, he can call it forth, for farmers, more than any other class, are ever ready to communicate, and *freely* too. The idea that a student of an agricultural school will soon learn to analyze soil, which seems to exist in the minds of many, is a ridiculous one, and shows that those who possess it do not understand the subject. As well may a student of a school learn the English grammar in two or three weeks, or get a good knowledge of Greek or Latin in a month or two. No person can analyze soil until he becomes a thorough chemist, and has much experience in the manipulations of the laboratory, and in addition he must have a sound and discriminating judgment. We appeal to those who can analyze soil for the correctness of our statements.

Those who contend for the immediate establishment of splendid and expensive schools as the most effective means to promote agricultural education, are less familiar with the practical operations of farming than our most skilful cultivators, have schemes so Utopian, that something in opposition as a salutary check is necessary to save the public coffers from excessive drainage.

For the New England Farmer.

THOUGHTS ABOUT POTATO ROT.

Among many men it is very natural to suppose that many minds will be found to speculate upon a subject of importance, while it remains true that no one is able to settle the mysterious question to the satisfaction of others. Thousands ask the question, "What is the cause of this fearful evil, the potato rot?" Many attempt to answer, but very few, if any, are entirely satisfied upon the subject.

A general answer, which seems most entitled to credit, in the opinion of thinking men in general, is, "The cause of the disease is atmospheric." To this answer the writer has been inclined to give at least *some* credit. But it is not satisfactory.

If the original cause is in the atmosphere, another question arises. Is it in the *temperature* of the atmosphere, or in the *dryness* or *dampness* of it?

All my investigations fail to satisfy me that the temperature of the atmosphere, aside from other circumstances, has anything to do with introducing the disease. If we have a dry time when the tubers are forming, it may be very warm or very cool, it matters not which, the potato is sound and healthy.

The effect of dampness or wet claims an inquiring thought. Is the dampness of the atmosphere a producing cause of the disease? To me it is not evident, for the whole time that the tubers are forming may be wet weather; but if it is also cool, potatoes will usually be sound.

The potato has heretofore been raised without any difficulty of the kind now under consideration in very hot countries. It has also been raised upon the islands of the sea, where the atmosphere is almost always filled with dampness.

If the cause is in the atmosphere, does it float in the atmosphere, and thus strike upon the leaves and stalks of the plant first? Or does it first produce an effect upon the soil, and rapidly extend its deadly power, through the plant? If the former, there are difficulties in my way which perplex me. First, I cannot see why potatoes which grow within a few feet of each other, and the same kind and quality of seed, should fare so differently. In 1847 I observed a case as follows. An individual planted some potatoes in a piece of ground through which was a narrow foot-path. The hills on the opposite sides of the path were not more than five or six feet apart. The potatoes on one side were all sound, the stalks ripening in due time, while on the other side of the pathway a large portion of the tubers were diseased. There was this difference in treatment; on the side where the tubers were sound, during the dry weather in July, soap suds from the washing room had been poured upon the hills; thus giving the ground some properties which the hills on the other side did not possess. My suspicion is that the *warm and wet* weather, when the rot appeared, produced a fermentation in the soil, producing a gas which is deadly to the potato.

The second instance which it appears proper to introduce, is of a farmer in 1848, who put ashes upon his corn hills, and when he finished his corn, started for his house with a bucket or measure nearly full of ashes, and through the middle of a potato field ashed two rows of potato hills freely. At the time of digging his potatoes, the two rows were subject to disease only in a very slight degree, while a large proportion of the potatoes were worthless on both sides of the two rows. My suspicion is that the soil was subject to an acid fermentation during the warm and wet season to which was ascribed the potato blight, and that the alkaline properties of the wood ashes applied served materially to check and destroy its power.

In a garden, in 1848, in a low and wet corner, where the soil was evidently very liable to such an effect as I feared from the warm and wet weather that might come on in August and September, I thought it not safe to plant potatoes, and therefore sowed flat turnips and some ruta bagas. Within thirty feet of them I planted some potatoes, but upon a soil which was judged to be capable of easier protection from the dreaded evil. The potatoes were perfectly sound, but the turnips were nearly all subject to a hard and black rot, when I pulled them, and were worthless. My opinion is that water rot will produce potato rot, in certain circumstances. I say, my *opinion*, but I mean only my *suspicion*, for I dare not yet form an opinion fully upon such a difficult and perplexing subject. By *water rot*, is meant that fermentation or change which water undergoes, producing an offensive smell, and so forth, which men of science have often proved, seamen have often suffered from, and practical men have known.

In a close, rich, and warm soil, water, falling in

rain, is subject to a chemical change in a very short time. In an open, sandy soil, it is not subject to such an immediate change; and as it runs through silica, it is subject to a continued purifying action. Again, the water which descends into a sandy soil is still to a degree subject to atmospheric influence, which serves to keep it sweet. Every one knows, or every man ought to know, that water in a well will not remain so pure and sweet, if undisturbed, as it will be if it is often thrown open to the atmosphere by the plunge of the bucket. Water is hardly fit for the use of man, in a well from which none has been drawn for a long time.

In 1850, when the first indications of disease appeared upon my potato vines, I went into my field of potatoes and selected a spot where I thought the circumstances of the soil were most unfavorable for the health of the potato. I opened several hills and found the tubers almost entirely rotten and soft. I went to other parts of the field, where the soil was sandy, the tops of all yet mostly green, when I found upon the surface of some of the tubers numerous little specks of whitish frothy matter, which upon close examination I found to exude from the tuber. Upon cutting the tuber I found the portion next the skin to be absolutely subject to decay, but retaining its usual color, or nearly so. I have not been able to discover that the stem or root leading from the stalk to the tuber, in such cases, gave any fair signs of conveying the disease to the tuber from the stalk or tops. As far as my observation has gone in the matter, I have found no proof that the part of the tuber most immediately connected with the stalk is the part affected, in potatoes but partially diseased. It is an easy matter for a man when digging potatoes to satisfy himself upon that point.

If some have thought they had saved their potatoes from rotting by pulling the tops when they began to be affected, they have thereby opened the ground to a greater degree of atmospheric influence, which it is necessary to consider.

This article has become longer than was intended in the beginning of it, and the further consideration of the subject must therefore be postponed.

With a desire for truth and understanding, I will subscribe myself, c.

Mason, N. H., May 10, 1851.

CULTIVATION OF SAND HILLS.

At a recent meeting of a society in Liverpool, some papers were read by Mr. R. V. Yates, relating to the mode used in Flanders for reclaiming sand hills—a mode which we think might be used with benefit in some parts of our own State. The face of the country near Dunkirk naturally consists of large sand hills blown up by the winds. The first thing to be done is to level these heaps into an extensive plain, with divisions into large fields. Then they bring, from the sides of some extensive lakes of sea water, an argillaceous soil, and with this they cover the plain of sand to the depth of two inches or rather more. The chief object of this is to prevent the sand from being blown about by the winds; it is also useful in preventing the manure from sinking into the ground too rapidly. The plough is then used to the depth of about four inches, and thus the argyle, or clay and sand, are mixed. Then the fields are well manured, and the first year they yield a good crop of potatoes, the second year barley, the third year lucerne. Potatoes and lucerne thrive particularly well in sandy soil, and the lucerne, especially, flourishes in a most remarkable manner. Potatoes thus grown have escaped the disease when others not grown on sandy soils have suffered by it.

Another mode of covering the sand with argyle is as follows:—Under the sand, at a depth of from four to eight feet, is found a layer of argyle. This is subsoiled; a broad trench is made to the bottom of the argyle; then the sand is thrown to the bottom of the trench, and the argyle thrown on the top of the sand; so they work on regularly, throwing the sand below and the argyle above.

A large proportion of the land in the neighborhood of Dunkirk is used for gardens, and produces the most excellent vegetables, both for town and export—cauliflowers, peas, turnips, carrots, potatoes, &c. But the conversion of the sand hills into these gardens has for the most part been the work of a long, long time; still, however, some additional plots are continually gained. They go on using manure in the same way from year to year, and it is said not to sink into the sandy soil.

At Calais there is a cultivation of the sand hills, partly similar to that already mentioned. There are opposite the town, (on the side of the river next the sea,) about fifteen acres belonging to the government, who will suffer them to be used as pasture. The sands are levelled by laborers, and then covered to the depth of half a foot with argyle, which is dug in with a spade; they are then manured and sown with lucerne, and protected, though very imperfectly, by low fences of reeds, poplars and willows.

In some parts of England the earth, after being covered to the depth of two inches with clay, or rivet mud, is sown thickly with star grass, which being planted three or four inches deep, throws out a great number of fibres, and the roots become eight or ten feet long. The sands are bound very effectually, and in two or three years the ground becomes quite green with this plant.

These modes of reclaiming and fertilizing sandy soils strike us as being thoroughly practical, and well adapted to the use of our own farmers, or more particularly to the inhabitants of that hitherto sterile district, Cape Cod. The clay or muck can always be procured with but little trouble or expense from the low swamps of the interior, and we doubt not the land-owner would be well repaid for his labor. At all events the experiment is well worthy of a trial.—*Journal.*

THE SHAD BUSH AND MOUNTAIN ASH FOR PEAR STOCKS.

The common shad bush, or, as it is sometimes called, "Planting Bush," and also called by many Swamp Pear—Pear berry, (*Aronia ovalis* of botanists,) has been found to be a very good stock into which the pear may be grafted, in order to make dwarf trees. This is abundant among us, and will soon be throwing out its profusion of white blossoms, in all parts of the State. Those who are desirous of trying the experiment are reminded that now is the time to do it.

The common mountain ash, which is so abundant in our low woods and swamps, makes a very good stock for pears. Those who may have them already growing in their yards or pleasure grounds can now put in a graft or two into their tops, and in a couple of years be rewarded with a crop of pears instead of little berries.

CANADA THISTLES.

The subject of Canada thistles is often spoken of, and the modes of eradicating them suggested. But some who have succeeded in destroying them once, do not seem confident that the same mode will always be equally efficacious. Now a word on this subject. I have been greatly annoyed with thistles—have supposed it impossible to extirpate them—have mowed them in all times of the moon—have salted them—and have ploughed them two or three times in a summer—and still they have been the victors. And they will continue to be the victors, whenever the ground is tilled, unless the design and determination is to till them to death. If ploughing is the mode resorted to, it will be absolutely effectual in a single season, if repeated so often that the shoots cannot come to the surface and there enjoy the light and heat. But if ploughed only once or twice, or even thrice, in a season, and the shoots be permitted to come to the light, and grow two or three inches, it amounts to nothing more than a transplanting of the root. A broken piece of root, only three or four inches in length, will send up a shoot almost equal in size to the root itself. I am confident that in breaking the roots in ploughing our summer fallows and other grain fields, and scattering the pieces by the harrow, the plant is spread more than by the scattering of the seeds on the wings of the wind. In hoed crops they can be entirely destroyed in a single season, by going through the field as they appear, and with the hoe cutting them off a little below the surface. But even then, the inch of the root thus cut off must be turned up so as to wilt and dry, or it will continue to grow. In small patches, as in the garden, and ornamental grounds around the mansion, I have entirely destroyed them in a single season by cutting them below the surface with a weeding trowel, as often as they appeared. The process of repeated ploughing as stated herein, when the patch is extensive, or the use of the hoe or towel, as suggested above, can be confidently relied upon as entirely effectual. —*Genesee Farmer.*

Remarks.—We have tried many modes of destroying the Canada thistle, and the most effectual mode, and the most economical, when it can be conveniently attended to, is to put the land to mowing. The first year there may be a pretty good crop of thistles with the grass, but cut as soon as they are in blossom and horses will eat them. After the first year, but few will be seen, and in a few years they will be all gone.

No matter whether the land is in pasture or tillage, put it to mowing and the effect will be the same. But thistles may be mowed for years, in pasture or tillage, and several times a year, without destroying them.

IVY ON BUILDINGS.

It is a mistaken idea that ivy renders a structure damp, and hastens its decay. On the contrary, nothing so effectually keeps the building, as may be seen by examining beneath the ivy after rain, where it will be found that the walls are dry, though everything around is deluged with wet. Its exuberant and web-like roots, issuing as they do from every portion of the branches, and running all over the surface on which it grows, bind everything together that comes within their reach with such a firm and intricate lace work; that not a single stone can be removed from its position without first tearing away its protecting safeguard. In proof of this, we refer to ruins of ancient castles and buildings; for, while in those parts of the structure that have not the advantage of this protection, all has gone to utter decay; where the ivy has thrown its preserving mantle, everything is comparatively perfect and fresh, and oftentimes the very angles of the sculptured stone are found to be almost as sharp and entire as when first they came from the hand of the builder.—*American Agriculturist.*

SHEARING LAMBS.

Some flock-masters recommend the practice of shearing lambs, but I have my doubts as to the utility of divesting young animals of their fleeces, though, perhaps, in certain cases, they would be far better with it off than on. This, indeed, may be the fact when they are infested with vermin; or when, having come early the preceding winter, their fleeces may render them uncomfortable in the sultry and close days of June and July. But would not the comfort thus secured to them in hot weather be purchased by a more than commensurate degree of suffering when it becomes cold? As to the "tick evil"—a sore one it is true, when unmitigated by remedial appliances, and one that, perhaps, will sooner exhaust the vital energies of its victim than almost any to which these innocent animals are exposed, I would recommend either New England rum or tobacco smoke—the former applied as a wash to every part of the fleece and skin, and the latter as a fumigation, blown into the wool by means of a "smoker."

The application of either of these will immediately rid the animal of their parasitical enemies, and without involving any unpleasant results. Lambs that are of good size by the last of June or the first of August, may furnish quite a good fleece; but the value of this is a mere trifle in the estimate, if its removal is to operate unfavorably to the animal's health, which I think it inevitably must. B.

Bensalem, April 21, 1851.

Germantown Telegraph.

ASHES AS MANURE.

The true value of ashes to the farmer has long been unknown, and even now is just beginning to be appreciated. The soap-boiler's agents have long been allowed to carry away the most valuable fertilizer produced by the farmer, and leave in return poor brooms and worse tea. Many an anti-book farmer has hauled plaster miles to his farm, and paid a high price for the same, when there was no lack of the element in his soil, and he was but "carrying coal to Newcastle," while at the same time he sold his ashes at 10 cents per bushel, *nominal price*, his soil being exhausted of potash. It is no wonder that his lands should become "worn out," and himself exceedingly dissatisfied with the seasons and moon.

Every plant contains inorganic elements which are, as all know, indispensable to its growth: these elements are the ashes of the plants. Those resulting from the combination of wood contain many of the most important constituents of both the grains, grasses and roots. Wheat and corn contain a large

proportion of potash, consequently ashes are a most valuable manure for those crops. Fifty-nine per cent. of the ash of corn is composed of the carbonate of potash (pearlash.) The abundance of this ingredient in wood ashes constitutes their great value as a fertilizer for that important crop, which value as a general rule is double that of plaster. I have used both, separately and mixed, and find that a compound of two bushels ashes and one of plaster give a better result than either when applied singly. I take a small shovel with which I put about 1 gill upon each hill; I carry the ashes into the field upon a barrow, and use a pail to distribute them from.—The best method of application, is to put it on the hills immediately after planting, which precludes the possibility of injuring the young plants, as is sometimes done by applying the mixture after they have come up. Corn to which this mixture has been applied, will ripen several days earlier and give a much greater yield than rows through the same field which are not so treated.

One half of the earthy matter of potatoes is pure potash, from which fact any person can see their value as a fertilizer for this crop. It is from a lack of potash that many farmers lose from 50 to 100 bushels of potatoes per acre every year. If a farmer has in his soil potash enough to form 200 bushels of potatoes per acre, and other constituents sufficient for 300, it is evident that the result will be a loss of 100, which the application of ashes would have prevented. Such cases often occur. Yet, in a ton of potatoes there is but 12 pounds of potash; thus it will be seen that the cost of the ashes necessary for the production of the other 100 bushels would have been but trifling.

Ashes should never be mixed with barn-yard manure, as they contain caustic alkali, and will neutralize the acid which fixes the ammonia in the manure, setting the latter free to the great depreciation of the value of the manure. I will conclude by advising my readers to save your ashes, *not for the soap-boiler*, but as food for your hungry crops, and if you have any neighbors who prefer 12 1-2 cents to a bushel of ashes, you will find it a profitable investment to make the exchange. A. G. K.

Dollar Newspaper.

CORN CROPS.

The following are statements of corn crops presented for premium to the Franklin Agricultural Society:

I submit to your society the following statement of the produce of an acre of corn raised on my farm the past season. The accompanying certificate will show the quantity per acre, and the mode of ascertaining it.

The soil is a stiff, heavy loam, not well adapted to raising corn. A thick grass sod was turned under in the autumn of '48. The field was planted with corn in 49. Eight cart loads of compost manure were put in the hill. Last spring 22 loads of long manure were plowed in, and 8 loads of compost put in the hill. It was planted the first week in June—the rows 3 feet and 4 inches apart, hills 2 feet 6 inches—hoed three times, a cultivator used at each hoeing. Care was taken to destroy all weeds, and to keep the surface level as possible. The ground was very wet when planted, and for some weeks after, which seriously injured the crop. Top stalks cut the last of September—the bottom stalks with the corn cut up the 8th of November. Produce eighty-four bushels. The compost put in the hill was a mixture of stable manure and swamp muck in equal parts—the mixture lying over one season under cover before used. The long manure was mostly brakes on which sheep had been yarded during the winter and spring—carted on to the field when wet, and ploughed under with as little exposure to the sun as possible. I do not consider this a large crop. I have had with the same cultivation in favorable seasons one quarter more. Very respectfully,

Austin Rice.

Statement of D. & H. Wells.

Broke up a piece of grass land the 10th of May, spread about 25 cart loads of green manure to the acre, which was well dragged in. Then manured in the hill with green manure, about 10 cartloads to the acre. A little plaster paris was sprinkled on the manure before planting. Planted the corn the 20th of May, hills 3 feet apart each way. Hoed 3 times. It was cut up the latter part of September, and harvested the last of October and the first of November. The result was 105 baskets full of sound corn on 172 rods of land. Spread some of the corn on the corn house floor to dry. Shelled 1 basket full the first of December—it contained 1 bushel and 3 pints to one basket.

This will make 109 bushels, 3 pecks, 5 quarts, or 102 bushels, 7 quarts, 1 pint, on an acre.

FACTS FOR THE CURIOUS.

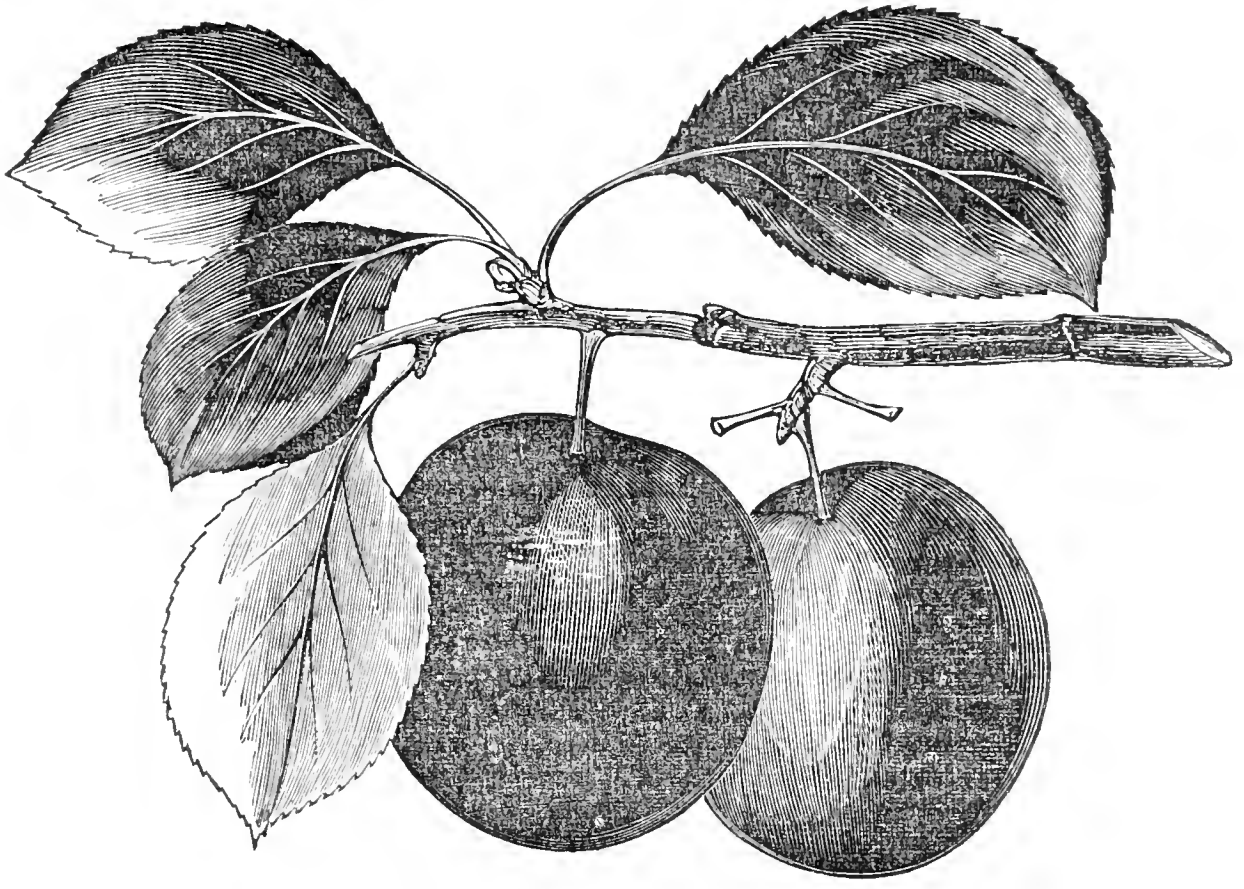
Close in the vicinity of Hudson is an apple tree, which to my mind is quite a prodigy in the world of nature, bearing as it evidently does some five or six entirely different species of fruit, all interspersed throughout the tree; so that upon the same limb are found fall, early winter, and three or four grades of late winter apples. Those keeping the best, are good as late in the season as April.

The apples are generally fair, of good size and an excellent flavor. This latter quality, however, with the color and shape, vary in the different species according as they keep for a longer or shorter period. Those ripe in the fall are of a reddish color and flat, and will not keep more than two or three months; while those which keep till February or even later, are much sourer, of a yellowish green color, and long, so that the diameter of the apples are completely reversed. There are about six different grades. The change from one to the other is but slight, yet sufficient to indicate with a good degree of definiteness the class to which each apple belongs. Those which become fit for use in December are considered the best.

The tree is a graft inserted when the stock was small, by sawing of the top. Its branches do not shoot upwards as in the case of most trees, but extend out horizontally. Grafts from this tree have been inserted upon two different trees in a neighboring orchard, and produce the same kind of fruit in all respects, and a similar top.

Such are the facts relating to this singular tree. Who will give an explanation of them?—*Family Visitor.*

☞ Teach children to love everything that is beautiful and you will teach them to be useful and good



ITALIAN DAMASK PLUM.

As this plum is rather early, and a good bearer, it is a very good variety, particularly for the market, as it comes in at a season when this fruit is not very plenty.

Medial size; nearly round; slightly flattened at base; suture distinct, passing from base to top; violet, changing to brown when very ripe; stalk half an inch in length; slender; cavity small; flesh yellowish-green, firm, sweet, high-flavored. Freestone. Last of August and into September.

Middlesex, Ct., Agricultural Society.—We have the show-bill of this association, containing the list of premiums, regulations, and officers of the society. The cattle show will be held at Middletown, Oct. 1, 2, and 3. Charles Hubbard, President; Linus Coe, Secretary.

Indefinite.—A reader inquires "what will cure poison internally." Now we do wish that those who make inquiries would let us know what they mean, and not be so indefinite. What poison does "A Reader" refer to? and does he refer to an internal poison, or to an internal remedy?

Ancient Farming.—It is stated in an article on this subject, in the July number of the London Quarterly Review, that the average product of wheat in the home provinces of Rome, in the time of Varro, was 32 bushels to the acre, far more than the present average in Britain, and probably three times as much as that of the United States.

For the New England Farmer.

THE VETERINARY ART---POISONING WITH WHITE LEAD.

Mr. Cole:—Dear Sir—The veterinary art, which has for its object the restoration from disease of some of the most noble specimens of God's workmanship, is at the present time most sadly neglected. How long our citizens will suffer this most important branch of study to be neglected, remains to be seen. Judging from the rapid improvements that are daily making in every other department of science and skill, surely at no very distant day New England will follow in the footsteps of the mother country, and the sons of the former will be able to say that America can boast of her veterinary colleges—that as the car of progression rolls so gracefully over her extensive territory, scattering in its train untold blessings and converting the home of man into an earthly paradise, that in the midst of such enjoyments he is not unmindful of those who, though our slaves, have common feelings with us.

I need not remind you that the poor dumb brutes, of whom I write, have common feelings with us—that they think and reason as we do—that their faculties of perception differ not from ours, only in degree. This is a familiar subject to you. In your editorial capacity you have furnished the world with abundant evidence that you believe—

> "When crime is sentenced, man shall not
> Go unrewarded, because no tortured brute
> Stands there accusing,"

and that—

> "Our Father careth when a sparrow dies."

You have done much towards rescuing our domestic animals from the barbarous and cruel modes of medication hitherto practiced by the "*hereditary*" horse and cattle doctors.

I was led to make these remarks in view of the

great loss which this country sustains, in this peculiar department of agricultural husbandry; which, to set down at the lowest figures, would approximate *one million* of dollars annually! To show the benefits that this country would derive from the veterinary art, when, instead of being practiced, as it is often done, by the ignorant and intemperate, who assume the honors of the profession, without a knowledge of its fundamental principles, it shall be taught in our public institutions, and practiced in a spirit of kindness and mercy, by intelligent, high-minded and honorable men,—to point out the benefits arising from a definite knowledge in relation to this science, which has hitherto been shrouded in mystery, and associated with degradation, is not, at the present time, my object. I would merely call the attention of your readers to a subject of great importance, which is, — The Poisoning of Cattle with Lead.

During my professional career, many cases of disease in the brain—spinal marrow—nervous system, (generally,)and of the stomach, have come under my observation, when in some cases the cause of such maladies were as obscure and unsatisfactory as the treatment. In some of these cases it came to my knowledge that the animals were in the habit of licking painted buildings, and tearing off small portions of wood, on the surface paint, and *carbonate of lead* was detected. At that time it never entered into my mind that sufficient carbonate of lead could be obtained in this way to poison cattle, yet I have generally supposed that the article, even in minute quantities, was capable of impairing the physiological operations of the animal; yet knowing that the *vis medicatriz natura* was efficient under ordinary circumstances to restore the balance of power when occasioned by trifling causes, I admit that I did not give the subject that attention which its importance demands. I shall, however, for the future, pay more attention to the subject. This poisonous mineral may, like arsenic, &c., &c., (although introduced into the system in very minute doses,) accumulate there and produce its specific results. It makes no difference whether an animal obtains carbonate of lead from the sides of a painted house, or barn, or if he shall imbibe it at the trough supplied from leaden pipes. The result is the same, provided, however, lead is found to accumulate in the system. And who doubts it? See that young man in the prime of life, (a painter,) suffering from paralysis and rheumatism—his nerves unstrung—living, yet half dead, suffering all the horrors of our great national disease—dyspepsia. Ask his opinion of the matter. It does not enter his system in the same manner just alluded to, (by the stomach,) yet in as certain a manner it enters his system through the medium of absorption and circulation, and is finally deposited in a tangible form within the cellular tissues. The following communication from the "London Veterinarian," (the editor of which is a man distinguished for his veterinary talents,) is worthy the attention of your numerous readers.

The best treatment I know of with a view of counteracting the effects of carbonate of lead in cattle, is to give as an aperient one pint of olive oil, and if that does not operate at the end of twelve hours, another dose may be ventured on; in the intermediate time a generous supply of weak lemonade may be allowed. The following injection may be given:——

Powdered Indian turnip, one ounce;
Boiling water, two quarts;

Mix. When sufficiently cool, inject.

If the animal is evidently in pain and the excrement soft, omit the lemonade, and substitute a tea of powdered poplar bark.

I am, Sir, with respect,
Your ob't servant,
G. H. Dadd, *Vet. Practitioner.*

Boston, May 15, 1851.

The Poisoning of Cattle with Lead, *popularly known as* Staggers or Head Disease. *Read before the Veterinary Medical Association, Edinburgh,* 1847. With an Appendix and Additional Notes. *By* M. Cuming, *V. S., Ellon.* Pamphlet 8vo, pp. 28. Avery, Aberdeen; Sutherland and Knox, Edinburgh.

A medical man never experiences greater satisfaction than when his anxious searches after the origin or cause of some fatal sporadic or endemic disease among living beings, be they men or animals, have in the end been crowned with success. Having made the desired discovery, he exclaims in ecstasy, *J'ai decouvert le pot aux roses!* He feels as though he had the lives of those still living in health in the region of the pestiferous agent at his command; while he loses his regret for those that have fallen victims to it in the joy he experiences at their dead bodies having auspiciously furnished him with the knowledge by which he is empowered to save others from the same grave. The disease, the subject of the pamphlet before us, had been rife, and as fatal as rife, in the part of the country in which Mr. Cuming practised. During May and June, 1845, his attention was first called to it. Ten or twelve cases of what were called "staggers, or head disease," occurred, which at the time appeared to him "most anomalous." Animals were taken unwell; from being slightly became alarmingly ill; and in from thirty to sixty hours afterwards were dead corpses. And to render matters worse, their opened bodies exhibited but the appearance of lesions of too trivial a nature to warrant deductions from them of any practical or useful description. Although there was not that uniformity of symptoms and post-mortem relic, however, which epidemic diseases are wont to bewray, yet did there exist, on reflection, sufficient "points of coincidence" to suggest the inference that in all the same indentical cause had been in operation.

"I had seen," says Mr. Cuming, "the same disease frequently before, although I had never had to do with treating it. It is no stranger in the district where I then practised, as I could reckon up, upon the authority of the owners of the animals, as many as *fifty fatal cases of it within the circuit of three miles, and a period of twelve years.* By the farriers in the quarter it is called 'the ill trouble,' and allowed to pass as a visitation with which there is no use contending. And in other districts it is popularly known as the *head disease, staggers, wudness in the head, &c.*, names graphically characteristic of the symptoms observed."

Being called in, ignorant as he was of the nature of the malady and hopeless of its cure, Mr. Cuming was, as a matter of course, expected "to do something." He tried one remedy; he tried another. All to no purpose; the patient died. He

essayed another and another plan of treatment. Still the patients died.

"Time rolled on, and the month of June, 1846 brought with it a recurrence of the disease on the same farms as before, and with all its former fatality. I applied to its treatment all that the previous year's experience and the thoughts and inquiries of the intervening twelve months had suggested; but, as usual, death in most cases closed the scene. I was, however, determined not to give up. I had observed in all the cases I examined in the summer, 1845, as a thing worthy of being noted, but nothing further, that there was a large quantity of earthy matter—sand, pieces of brick, tiles, leather, &c.—in the passage from the second and third to the fourth stomach; and in one case I collected and washed a portion of this foreign matter and laid it aside, thinking it of no use, however, but as a cabinet curiosity. In summer, 1846, I invariably met with the same appearance, and on inquiry was told that all the beasts affected had been addicted to eating bones, old shoes, rags, or whatever trash they could get hold of. In making a post-mortem examination of the last fatal case of the disease which I saw, I was struck by the appearance among the earthy matter in the stomach of small particles of a soft, white, putty-like substance, and the idea of white paint (*carbonate of lead*) immediately came into my mind. I collected and took with me a portion of this matter, and at the first convenient opportunity made an analytical examination of it; the result of which was, such a quantity of carbonate of lead as left no doubt of the cause of death, in this case at least. And on making an examination of similar matter taken from the stomachs of the previous year's cases, I found exactly the same results. Being now satisfied that I had found a solution to my two years' difficulty, I applied to the owners of the (dead) cattle for leave to exhume and examine two of them, on different farms, that had been buried without their stomachs being cut up. One of them had been eight, the other eleven weeks in the ground. I, however, managed in each case to obtain a portion of the contents of the stomach free from any admixture, and on subjecting these to analysis, had my views still further confirmed by the large quantity of lead I obtained."

For an account of "the physiological action" of the poison, which, owing to certain peculiarities in the structure and functions of the digestive organs in cattle are different in some respects from what they are in man; as well as of the "symptoms and post-mortem appearances," "treatment," and "analysis," we refer the reader to Mr. Cuming's practically interesting pamphlet.

It would not be doing the author justice, however, were we to conclude this brief notice of his work without setting forth, and in his own words, that "the claim" he rests upon is, "not that he has discovered that the salts of lead are poisonous to cattle; but that he has investigated and traced to its true origin an affection among this class of animals (cattle) of mysterious character; of general and extensive prevalence and extreme fatality, &c."

In an "Appendix," Mr. Cuming adds, he has since met with "a number of cases confirmatory of his expressed opinions;" and concludes with the following very pertinent remarks:—"Last winter a deal was written in some of the medical journals about a few poisoned partridges that somehow found their way to the London game markets. But the carcass of an ox or quey would outweigh a vast number of partridges, and it would not be difficult to tell of many such being slaughtered after being incurably poisoned, and finding their way in the shape of butcher's meat to the same city whence the poison had emanated: a curious instance, certainly, of retribution. It would be hard, however, to say that such meat was hurtful, until examination and experiment have proved it to be so; on the other hand, it would be equally unsafe to admit its being wholesome without sufficient investigation: and in treating the subject as I have done, I would have judged myself short of my duty to the public had I failed to notice this view of it. Having pointed it out, it is for others more interested to carry it further, if they think fit."

Remarks.—Some years ago, when conducting the Yankee Farmer, we had inquires for a remedy for cattle poisoned by licking buildings newly painted with white lead. Several animals were lost by this poison. We asked several medical men to investigate the subject, but they could prescribe no remedy.

We hope that the judicious remarks of Dr. Dadd on the veterinary science in this country will receive the particular attention of the humane and patriotic, and that some able and liberal gentlemen will do something to establish a school of veterinary science and practice. The saving of animals from disease, and curing them when ill, in the most skilful manner, is not only important as a matter of humanity, but as a matter of general prosperity and wealth to the country.

Dr Dadd is well skilled both in the science and practice of the veterinary art, and we would recommend him to the consideration of those who want advice or assistance on this subject. The brute creation has been too long subject to the cruel treatment of ignorant pretenders, who not only know nothing of the important sciences of anatomy and physiology, so essential to successful practice, but they often pursue that severe course of practice which argues a want of common sense. —Ed. N. E. Farmer.

For the New England Farmer.

GOOD STOCK AND GOOD KEEPING.

Mr. Editor:—Noticing not long since a cut in your paper exhibiting the cow "Cambridge," with some remarks on the short-horned breed of cattle, you will allow the expression of some additional facts and the views of a correspondent. Aware that the freedom accorded to this New England state of society induces many persons to take the liberty of suspecting almost any man who advocates or disparages an object, article or measure, *warmly*, of being interested, or having selfish motives in so doing, and that to such the confident language of experience is labor lost, I have long since concluded to write less frequently, and less confidently. I entertain no doubt of the *justness* of

most of those remarks, nor as to your *general object* in editorial labor, to elicit and present the most reliable and useful matter to your readers, which I think is manifest by your closing remark, viz—"Our columns are open to our readers for the expression of their views, whether they are in accordance with ours or not."

It is some ten years since I purchased two of the best cows I could find of this breed—having for *years previously* taken my native cows out of town, and paid two dollars each for the benefit of a cross with a Durham bull. The first I bought at one hundred dollars was a very fat Roan, four years old, near to dropping her first calf. Her dead weight I computed at one thousand pounds. Her milk was considered the first best for richness and color. Though I have taken the *first premiums* in both Hampshire and Hampden Counties for different cows as *milkers*, I think this *Durham* surpassed them. I paid one hundred dollars for another cow and her calf one month old, and kept her till she brought me five calves. She was larger than the other, a good milker, and a better breeder. I have now a bull from her (coming 3) probably the best in the county, a picture of his sire, "The North American."

So far as I know, those who have bred this stock are satisfied with the best animals of pure blood as *paying well* for high keeping; considering their docility, early maturity, beauty and power as *working oxen*, and their ready sale at remunerating prices for this and the slaughter. I know of several cows that could not be bought for one hundred dollars *each*, and oxen each worth that for the yoke, and not less for fattening. When such cows and oxen have done, they cannot die in debt. The young stock, at proportional prices, pay handsome profit for raising. When a calf will bring from twenty-five to thirty dollars, at or under one year old, I think those serve society who introduce and encourage the raising of diminished numbers, of surpassing value.

I would recommend the keeping of bulls of the *best* blood, whether Durham, Devon, or other breeds, to *each town*. To able individuals, the same, with only prime cows, fattening all others. To those who keep a small stock or only one cow, *get the best* you can. Put her to such a sire and your calf will pay for *raising*, or will sell to profit, though a half-blood. Let every one lend his whole influence to improve the stock, the soil, the fruit, the mind and character of his neighborhood.

Every well-informed farmer knows that every rood of ground that does not *produce* or *improve* by culture or otherwise, equal to the outlay, is a loss of capital; or every creature in his stock or piggery that gains nothing and produces nothing, he loses all the cost of keeping. Common sense responds, the same is true of half-feeding, half-seeding, half-weeding, half-plouging, half-manuring, half-fencing, or do anything else to the halves. It is like half-catching a fish. If their growth, or milk, or wool but half equals their keeping, they lose in proportion. Hence it is manifest, if any kind or quantity of stock, or soil, or cultivation, will pay handsomely, each one should say, "that's the kind for me."

Yours truly,

Lancaster, 1851. BENJAMIN WILLARD.

Why is the Prince of Wales like a cloudy day? —He is likely to reign. (*Rain.*)

For the New England Farmer.

IMPROVING THE SOIL BY SUMMER TILLING.

MR. EDITOR:—I do not recollect of seeing anything in agricultural papers respecting improving the soil by summer tilling. I had a piece of pine plane, about four acres, which I ploughed in June, and in two or three weeks I harrowed it; and so I ploughed and harrowed it alternately, once in a week or ten days, till the first of September; then I sowed it with rye one bushel to the acre.

People that live near me thought if I had five bushels to the acre, I should do well; the produce was eighteen bushels to the acre. Ploughing and harrowing, I only worked while the dew was on; and I consider this of great importance. If we sow rye, wheat, or oats, in the spring, where we have summer tilled, it is best to get them in as early as possible. JAMES S. PARKER.

Leominster, May 8th, 1851.

REMARKS.—We have several instances of the improvement of soil by frequent tilling. A few years ago, a farmer promised us the results of his experience on this subject, showing that great success attended it; but he departed for some distant region before he could get time to prepare the article.

In connection with this subject, we would present for consideration the ploughing in of green crops; and suggest to experimenters to summer till half of a piece of land, and raise and plough under green crops on the other half, and see which will make the greatest improvement, at the least expense. On light lands, as they admit of early sowing, two green crops may be raised and ploughed in, in one season.

CARROTS FOR HORSES.

We have received the communication of W. R., who is mistaken as to our not having written on the use of carrots as food for horses. There are several articles in our early numbers on this subject, but as many of our subscribers have not our early numbers, we will give a synopsis.

Two bushels of oats and one of carrots is better food for a horse than three bushels of oats; and when used for light work, the quanity of carrots may be increased. With such food horses will enjoy good health and spirits, a loose hide, shining coat, and improved digestion. It may be thus explained:—The carrot is very nutritious, and, in addition, has the curious property of gelatinizing the watery solutions contained in the stomach of the horse. Carrots contain *pectic acid*, a single drop of which, when mixed with the juice of an orange or other fruit, immediately turns it into a jelly, and the Paris confectioners use it for this purpose. Soups in which carrots have been boiled are always gelatinous when cold, and are more easily digested when used as food, than soups otherwise made.

The bene plant has similar properties. A thin slice of this plant thrown into a glass of water, renders it ropy and gelatinous, and for this reason it is a specific for summer complaint with children.

By examining the dung of a horse fed in part on

carrots, it will be found to contain no undigested hay or oats, and therefore less quantities of those materials are necessary than when half the amount swallowed is parted with in an undigested state. For fattening animals the carrot is equally valuable, and for milch cows they surpass any other food. The milk of a cow at mid-winter fed on carrots, is equal in flavor to that supplied from clover in summer, while the butter made from the milk is finely colored and highly flavored.

In soils containing proper proportions of bone-dust, sulphuric acid, potash, and common salt, 800 bushels of long orange, or 1100 bushels of white Belgian carrots, may be easily raised per acre, while the same land will not produce one-tenth the quantity of oats. We have sold our crop of carrots this year to the livery stable keepers of Newark, at 50 cents per bushel, and we could have sold another thousand bushels or more at the same price.—*Working Farmer.*

FOOD FOR PLANTS.

A specimen of a soil of good appearance was given to Sir Humphrey Davy, from Lincolnshire, in England, as remarkable for sterility. On analyzing it he found sulphate of iron. He recommended a top dressing of lime; and the sulphate of iron was forthwith converted into the sulphate of lime; a noxious substance was at once changed into an object of fertility. It was the boast of Franklin that he had stripped lightning of its perils and chained the thunderbolt. Chemistry does more. Poisons are changed by its alchemy into the means of subsistence.

The Hon. Reverdy Johnson purchased, in 1849, a small farm near Baltimore, in the last stage of impoverishment. Such was its reduced condition that the last crop of corn was not more than one peck to the acre. He states that all the vegetable matter growing on the two hundred acres of cleared land, including briers, sassafras and other bushes, if carefully collected, would have been insufficient for the manufacture of one four-horse wagon-load or manure. He applied to Dr. David Stewart, of Baltimore, an able chemist, who rode out to the farm and procured specimens of the soil, which he carefully analyzed. He found that it contained an abundance of lime, potash, magnesia, iron and organic matter, duly mixed with alumina and sand. One element only of a fertile soil was wanting, phosphoric acid; and of this there was no trace. He recommended an application to the soil of the biphosphate of lime, a preparation of bones, as the best mode of supplying the deficient element. The remedy was given at the expense of ten dollars per acre. It was the one thing needful. Health was restored to the exhausted patient, and the grateful soil yielded last year twenty-nine bushels of wheat per acre to the proprietor. Nothing else was wanting. Here was a beautiful triumph of science. There was no doubt about the facts; the experiment came under our observation. It was detailed to the writer by Mr. Johnson himself.

☞ Major Amasa Stetson, of Stetson, the great dairyman of this county, brought into market on the 20th fifteen slaughtered hogs of his own raising, which averaged over four hundred pounds each.—This is believed to be the largest quantity of pork ever brought to market in one season, the product of a single farm. These hogs were purchased by our marketman, Mr. Rice, for which he paid over four hundred and forty-six dollars.

We have obtained a brief statement of the income from the farming operations of Major Stetson for the past year, as follows:

Received for butter sold, . .	$1807 73
" for pork, ...	446 33
" for pigs sold, . . .	207 15
" for lambs and wool, . .	61 75
" poultry, ...	23 71
	$2,549 67

The major has raised his own bread stuff and about fifty dollars' worth of wheat for the market. The amount paid out for labor has been about $600 00.

We like to record these facts as specimens of Penobscot farming.—*Bangor Courier.*

DISEASES OF POULTRY---ROUP.

We find in the March number of the *Genesee Farmer* a communication from R. H. Foster, of Lyons, N. Y., in which he says—addressing the editor—

"I take the liberty of asking you a few questions respecting a disease in poultry which has prevailed here this fall and winter to a considerable extent among dung-hill fowls. In the first place they appear stupid, their eyes heavy and almost entirely blind. In the next place there is a swelling of the neck and head, succeeded by a cough peculiar to hens, and making a noise as if partially choked. In this way they linger along two or three weeks, and either die or become very poor. During this time they discharge at the nose a viscid matter, in some few instances quite offensive to the smell. If you can tell us what the disease is, or what will cure it, you will oblige many of your friends."

Reply.—To this the editor of the *Farmer* makes the following reply:—

"The disease with which your fowls are affected, we should judge to be the *roup*, though a very different disease is sometimes called by this name. Fowls thus affected should be kept warm and have plenty of water and light food, such as scalded bran, Indian meal, &c. The English authors say give calomel in grain doses, made into a pill with bread, but we never had much success in "physicking" fowls. Washing the head in warm milk and water sometimes gives great relief, and if it does not effect, hastens the cure."

In the April number of the *Farmer*, we find the following additional notice of this disease, from L. Rogers, of Willowvale, N. Y., who gives the same name for the disease, and offers a remedy.—He says—

"Having noticed a letter from R. H. Foster, in the March number of the *Farmer* asking you a few questions respecting a certain disease in poultry, with which his neighbors' fowls have been troubled, I take the liberty of writing to you of the experience I have had in the same disease, which I called the roup. Last fall I purchased a pair of fowls of one of my neighbors, which showed symptoms of disease, which were the same as Mr. Foster speaks of. It soon went through my flock of twenty fowls, and for some time seemed incurable; but as a last resort, I mixed with about

four ounces of fresh butter, one tablespoonful of finely pulverised sage, one of rue, and one of soot, and gave each fowl a pill of this, about the size of a cranberry, once a day for three or four days; and within two weeks they had all recovered."

We would also remark, that the same disease was among our Polish chickens the whole of the past winter and in early spring, by which we lost several valuable fowls; also, that during the last six or nine months we have lost, evidently by the same disease, as it exhibited all its symptoms, full one-half of our stock of fancy pigeons. We shall try the remedies presented, should there again be occasion.—*Germantown Telegraph.*

PRUNING STONE FRUIT TREES.

It has been but a few years since the cultivators of fruit have been in the habit of pruning peach trees at the extremities of the branches, instead of cutting off limbs at the trunk. This system of shortening-in, as it is called, is gaining ground, and it is a great improvement. The reasons for this mode of pruning are evident on examination. Most kinds of stone fruit grow rapidly, and bear the greater part of their fruit on new wood, which is, of course, near the ends of the limbs. In this way a tree spreads over much land, and has naked branches near the trunk; and pruning at the trunk causes the gum to ooze out, which sometimes endangers the health of the tree.

On the contrary, by pruning at the ends of the branches, the tree is confined to a small space, the wounds have no unfavorable effect, or only affect the twigs, and not the trunk, and much new wood is produced for the production of fruit.

Great Agricultural Movement in Growing Flax in England.—A company comprising many of the leading nobility and land owners, is seeking from government a royal charter to give encouragement to agriculturists and farmers to bring into immediate cultivation at least one hundred thousand acres of land, for the production of flax straw; which substance the promoters of the charter have, (by new and peculiar processes never hitherto adopted,) the power to convert into a fit state to hold competition with the best flax imported from foreign nations, without the aid of steeping, kiln-drying, nor mill scutching. The machinery by which the fibre is separated from the stalk, without steeping, is of a very simple and inexpensive kind, requiring no previous knowledge to work it. The unsteeped flax is uniform in strength, and free from stains, so that all after processes of manufacturing and bleaching may be conducted with a facility and exactness not hitherto attainable.—*Agricultural Gazette.*

Skill in Farming.—Skill adds more to the profits of farming than hard work. In the article of butter, for instance, the same outlay is required, or nearly the same, to make a hundred pounds of poor butter, as would be required to make a hundred pounds of that which is good. But, when the articles are marketed, there may be $5 or $6 of clear extra profit in the pocket of the skilful dairyman. The importance of scientific farming is realized by those who have found such benefit as is noted above in every department of their labor.

Mechanics' Department, Arts, &c.

STONE WARE PIPES FOR WATER.

Eds. O. Cult.:—It is fair to presume that it is entirely within the scope of the objects of your paper to notice the various improvements of our time, even though they may not relate directly to the cultivation of the soil, or the raising of stock. The northern and eastern portions of the Union being mountainous or rolling, are happily furnished with running brooks or fountains in the hill sides, by which nearly every tract of one hundred acres is supplied with water. Not so, however, with Ohio and the western States. Here, that great desideratum, water, must, in numerous instances, be procured by cisterns or from springs or fountains, from which it must be conducted, often times, a considerable distance, to a convenient point for use at a dwelling, or for farm purposes The cheapest and best method of conducting water has been a subject of much discussion, and will probably engross the attention of scientific men for a long time to come. Iron and lead have been generally used, notwithstanding the objections to the use of either of these materials. The first is expensive, and liable to corrode. The latter is also expensive, especially if a large size is used; and is said to be injurious to health. Hence it is very desirable to find some material to which none of these objections can be made. This I am strongly inclined to believe has been done by Messrs. Hill, Foster & Co., of Middlebury, Summit Co., by reviving the use of Stone Ware. These gentlemen now manufacture quite largely a very superior article of pipes, from clay which is found in that vicinity. I procured about six thousand feet of three and a half inch pipe, which was well laid by Mr. Charles London, of this town, and the water has been passing through it since November last, without any appearance of discharge at the joints, or bursting of the pipes. This pipe is made in pieces two feet long; well *glass glazed* inside and *salt glazed* outside. The inside is very smooth, resembling the inside of a fine stone pitcher, presenting no obstruction to the free course of the water. The joints are cemented with water lime cement, which, on an examination a few days ago, was found, even at this early day, to be nearly as hard as common freestone. The fountain from which the water is taken is forty-five feet above the place of discharge at my house, and the surface of the ground over which the pipes pass is quite undulating. At one point on the line we cross a ravine where the pipes are seventy-six feet below the fountain. At this point, if any where, we anticipated difficulty in making them tight, or perhaps in the bursting of pipe; but after five months' use no defect has been discovered. The water, though very excellent at the fountain, is believed to be improved by passing through the pipes, which are laid two feet below the surface; which proves quite sufficient to prevent injury from frosts. I have great confidence that this material for conduits will prove exceedingly useful; and think the experiment I have made has been eminently successful. The manufacturers have put into my hands a certificate of six gentlemen, who state that they tested the strength of three inch pipe, and found it would bear a perpendicular column of water *nine hundred and forty-four feet high without breaking.* A second piece

of the same kind was subjected to a pressure equal to a column of water *one thousand thirty-four* feet high, before it broke. If this test was correctly made, and I am informed some of the gentlemen who superintended it were engineers, of science, it seems to leave no room for doubt, that this material is abundantly strong for all practical purposes. The manufacturers have furnished me a list of prices for which they will deliver pipe at their works, which is as follows: 1 inch pipe, 7 cents per foot; 1 1-2 inch pipe, 9 cents per foot; 2 inch pipe, 12 cents per foot; 2 1-2 inch pipe, 16 cents per foot; 3 inch pipe, 20 cents per foot; 4 inch pipe, 28 cents per foot; 5 inch pipe, 36 cents per foot; 6 inch pipe, 44 cents per foot; 7 inch pipe, 52 cents per foot; 8 inch pipe, 60 cents per foot.

It is scarcely necessary to advert to the *durability* of this pipe, as it is known to every reader that it was used in many countries centuries ago, where it is yet sound. I trust that in calling the attention of your readers to this pipe and the use I have made of it, with the success attending it, the lovers of pure water will give the matter due consideration; and where it is practicable, supply themselves with this indispensable article.

Respectfully yours, &c., Dwight Jarvis.

Massillon, Ohio, April 8th, 1851.

—*Ohio Cultivator.*

TO MAKE GOOD MORTAR.

Sour together a quantity of lime and clean sharp sand, for two or three weeks before being used; work this well and turn it aside, and as the proportion of lime to the sand will always depend on the quality of the former, all that is necessary, is to take care (in souring), if the lime is of a rich quality, to put one-third less lime into the heap than it is intended to be built with; and if the lime is of pure quality, say only one-fourth less. It may here be observed that in general, lime of the proper quality is best for cementing buildings. When the lime which has been previously soured, as before directed, is to be used in the building, or otherwise, it is to be again worked carefully over, and one-fourth of quick-lime added in proportions, taking care never to have more in preparation than can be used in a short time; and this quick-lime should be most completely beaten and incorporated with the soured lime, and it will be found to have the effect of causing the old lime to set and bind in the most complete manner. It will become perfectly solid without the least evaporation to occasion cracks, which can only ensue in consequence of evaporation; and this can only happen from the want of proper union between the two bodies. But by mixing and beating the quick-lime with the soured mortar, immediately before it is applied to use, the component parts are brought so near to each other, that it is impossible either crack or flaw can take place. In short, beating has the effect of closing the interstices of the sand, and a small quantity of lime paste is effectual in fitting and holding the grains together, so as to form a plastic mass, by uniting the grains of sand which otherwise would not fit each other. This system will apply to the lime mortar for all descriptions of work, whether for building, plastering in the inside or outside of houses, water cisterns, ground vaults, rough castings, &c.—*Scientific American.*

DRAINING AND IRRIGATING MACHINE.

This machine is very favorably noticed by the Charleston Courier, the editor of which says: In compliance with the invitation extended by Mr. Lebby, quite a number of visitors assembled yesterday, to witness this curious and successful application of machinery to a purpose in which our rice planters especially are deeply interested. It is adapted both to draining and irrigating lands, and when set in motion by a steam engine of five horse power, is capable of raising from five to six thousand gallons per minute, which might be greatly increased by additional motive power. It has been inspected by several experienced planters, and been pronounced to be a most valuable agricultural appendage, sufficiently simple to be worked by the negroes on plantations, and not liable to get out of repair. The credit of this clever adaptation of well known philosophical principles to the improvement of the culture of one of our great staples belongs to a young Charlestonian, who, to a natural genius for mechanism, adds the fruits of years of laborious study and practice, in his high and honorable vocation.—*Farmer and Mechanic.*

Ladies' Department.

BODILY EXERCISE IN EARLY LIFE.

To fetter the active motions of children, as soon as they have acquired the use of their limbs, is a barbarous opposition to nature; and to do so, under a pretence of improving their minds and manners, is an insult to common sense. It may, indeed, be the way to train up enervated puppets, or short-lived prodigies of learning; but never to form healthy, well-informed and accomplished men and women. Every feeling individual must behold, with much heart-felt concern, poor little puny creatures, of eight, ten or twelve years of age, exhibited by the silly parents as proficients in learning, or as distinguished for their proficiency in languages, elocution, music, drawing, or even some frivolous acquirement. The strength of the mind as well as of the body is exhausted, and the natural growth of both is checked by such untimely exertions. We are far from discouraging the early introduction of youth into the sweet and even moralizing society of the muses and the graces; but we would have them pay their court also to the goddess of health, and spend a considerable portion of their time, during the above period at least, in innocent and enlivening sports and gambols.—*Journal of Health.*

A HINT TO YOUNG LADIES.

An intelligent gentleman of fortune visited a country village in Maine, not very far from Bangor, and was hospitably entertained and lodged by a gentleman having three daughters—two of whom in rich dresses entertained the distinguished stranger in the parlor, while one kept herself in the kitchen, assisting her mother in preparing the food and setting the table for tea; and after the supper, in doing the work till it was fully completed; when she also joined her sisters in the parlor for the remainder of the evening. The next morning the same daughter was again early in the kitchen, while the

other two were in the parlor. The gentleman, like Franklin, possessed a discriminating mind—was a close observer of the habits of the young ladies—watched an opportunity and whispered something in the ear of the industrious one, and then left for a time, but revisited the same family, and in about one year the young lady of the kitchen was conveyed to Boston, the wife of the same gentleman visitor, where she now presides at an elegant mansion. The gentleman whose fortune she shares she won by a judicious deportment and well-directed industry. So much for an industrious young lady.

TO PRESERVE HAMS THROUGH SUMMER.

Make a number of common cotton bags a little larger than your hams; after the hams are well smoked, place them in the bags; then get the very best sweet made hay, cut it with a cutting-box or knife, with your hands press it well around the ham in the bags, tie your bags with good strings, put on a card of the year to show their age, and hang them up in your garret, or some dry place; and my word for it, you let them hang for five years, they will be better than on the day you put them up. I have kept them for seven years. This method costs but little, as the bag will last for years. The only loss is the hay, and that the cattle will eat, if given to them in the winter. The sweating of the hams will be taken up by the hay, and it will also impart a very fine flavor to the meat.—*Genesee Farmer.*

COLORING GREEN TEA.

Large portions of the tea imported under the name of *green*, are made so by throwing into the pans at the last heating of the leaves a mixture of finely powdered *indigo and gypsum*, in proportion of three of the former to four of the latter. For every 100 lbs. of green tea used the consumer will swallow from 8 to 12 oz. of the latter. But the same persons who will exclaim against the *celestials* for munching rats, cats, and bow-wows, will swallow indigo and gypsum, or what is much worse, prussic acid or verdigris, both deadly poisons, and which are furnished us outside barbarians, simply because our market demands it, as it did annattoed cheese a few years since.

Cookery.—Never buy potatoes that have been washed many days and exposed to the air. Never peel them before boiling, as a large portion of the substance is thus lost; but before boiling make an incision all round through the peel, and another cross ways; this allows the steam to escape and makes the potatoes mealy; if it is not done and the skin does not crack, they will be waxy.

To Remove Grease Spots from Furniture, Wood or Marble.—Make a paste with fuller's earth, soft-soap, and pearlash, and spread over the spot, and let it dry for twenty-four hours, and then wash off the paste.

Purple Dye.—Put on logwood chips in a copper kettle and let it boil about fifteen minutes.—Take it off and strain off the chips, and put in some alum while hot to set the color; when dissolved, put in your wool or cotton, and set it on the fire to boil a few minutes to take the dye.

NOTICES OF PUBLICATIONS.

Farmer's Guide to Scientific and Practical Agriculture, by Henry Stephens, assisted by J. P. Norton, Professor of Agriculture in Yale College, New Haven. Stephens is allowed to be the best writer in England on practical farming, and his work, from which this is a reprint, is the most approved standard. Prof. Norton's plain and familiar articles on scientific agriculture are well known throughout this country. His remarks are intended to adapt the work to American farming. The 17th and 18th numbers are just received; the former contains Prof. Norton's appendix on summer, which is very interesting. The last number contains 32 pages more than usual, 96 instead of 64, and the remaining five numbers will contain 96 pages each; a liberality not usually met with in publishers, as they too often fall short of their promises. We would recommend this as a very valuable and cheap work, embracing over 1600 pages, 200 more than was promised, at only $5. Published by Leonard Scott & Co., New York. Sold also by Redding & Co., State Street, Boston.

Report on the second annual exhibition of the New England Society for the Improvement of Domestic Poultry. Boston: H. L. Devereux & Co., printers. This is a very neat pamphlet, embellished with fine engravings of fowls and scenery. It contains the names of exhibitors, and the fowls shown by them, with remarks on several varieties of fowls, a list of officers and members of the association, &c. &c.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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Terms, $2,00 per annum in advance. At the close of the year, the publishers will bind the semi-monthly Farmer gratis for any person who subscribes for both publications, paying one year in advance for each.

☞ All papers will be forwarded, until an explicit order for discontinuance is received; and whether taken by the subscriber or not from the place where they are ordered to be sent, he will be held accountable until he orders a discontinuance, and pays up all arrearages.

☞ When subscribers wish to change the direction of their papers, or when they return a copy to this office, they will please be *particular* to name the Post Office, and State, to which it has been sent, as well as the one to which they wish it directed; as it often happens that two or more of our subscribers are of the same name, and annoying mistakes have occurred in consequence.

☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, South Market Street, Boston.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor*

WORK FOR THE SEASON.

June is the first warm month in the year. It is a time of peculiar beauty. All nature is adorned with living green. The beautiful trees are in full foliage and vigorous growth, and the earth is clothed with luxuriant herbage. This is a very hurrying season with the farmer; frequently before he has done planting, the weeds start up among his crops and contend for the mastery.

Planting.—Those who have not finished planting corn and potatoes, should attend to the business as soon as possible, as it is growing late. An early frost may destroy late planted corn; and late planted potatoes are most liable to rot. In planting late, early kinds should be used, unless you have a hardy variety, like the Black potato, for instance.

Squashes, &c.—In planting squashes, melons and cucumbers, the better way is to plant many seeds, and then if insects come to destroy them, by daily attention to killing the insects, they will eat only a part of the plants, and there will be enough left. We have followed this method for years, and have never failed to have plants enough to cover the ground. It requires but little expense as the insects abound only a few days.

Beans.—The small pea bean is late, and should be planted as early as the first of this month; but the Bremen, (called also Kidney,) and the Merimachee (called Pierce bean in the Boston market) are early varieties and bear planting as late as the 20th of June. They are both white beans, and good varieties.

Weeding.—The weeds are growing while the cultivator is asleep, and in stormy weather when he cannot destroy them. A little neglect requires much extra labor. If a piece of land be neglected a week or ten days, after the proper season for weeding, which is at an early period, four or five times the labor will be required to destroy the weeds; and this loss of labor is not the only disadvantage, the weeds choke and shade the cultivated plants, and rob them of their food—of that very food which is then prepared to nourish them in their tender state.

Hilling.—The practice of hilling plants is fast going out of fashion. Nearly all of our best farmers till their corn on a level; and many have discontinued the practice of hilling potatoes. Let any one who hills his potatoes, examine them after a powerful rain has succeeded a drought, and he will find that while land on a level is well saturated with water, his potato hills are dry. If there is any advantage in hilling any plants, it is on wet land, as the hills throw off the water, which settles down in the hollows made by digging up the earth to make hills. This leaves the hill comparatively dry; of course hilling on dry land, or land of medial texture, is injurious.

Cabbages require less labor, and they succeed as well, when sowed where they are to grow. It saves much time in transplanting. The Red Dutch is very late, and should be sowed early. Better when sowed in May. The Savoy is rather late, and ought to be sowed the first of June. The Drumhead is earlier and may be sowed from the first to the middle of June. The Low Dutch Drumhead is earlier than the larger kind, and will generally succeed well if sowed by the 15th or 20th.

Ruta-Baga and Cabbage Turnips may be sowed any time in this month. The first of the month is rather early for the former, as they are liable to grow corky when sowed early. From the 10th to the 25th of this month is a good period for sowing these turnips.

Pruning Fruit Trees.—It will answer to prune the latter part of this month, as the tree is not so full of sap as in the spring; but we prefer delaying this operation till July and August, for in June the bark peels readily, and will often start in sawing off a limb; and by going on to trees with hard boots or shoes, the bark will start and greatly injure the trees, unless great care be taken to avoid it.

Grape Vines.—Those who have neglected their vines till this late period, should consider that bet-

ter late than never. If the vines are forming a thick mass, cut back a part of last year's growth, leaving bearing buds that bid fair to produce good bunches of fruit. Cut out all feeble branches, and if very thick, cut out some of the least thrifty main branches. Do this soon. Vines will not generally bleed at this season. But there are exceptions; we have seedlings that will bleed after sending out shoots three feet long.

Sheep and Lambs.—Sheep that are shorn should be protected from cold storms, else they will suffer severely and be liable to perish or be seriously injured. If smeared with sulphur and lard, or any kind of grease and oil, melted together, it will be a great protection against damp weather, destroy insects, and tend to cure cutaneous disorders. When the sheep are shorn the ticks take shelter in the warm fleece of the lambs, and should be thoroughly destroyed. The most effectual and safest mode is to fumigate the fleece with tobacco smoke. A decoction of tobacco and other poisonous substances as a wash is injurious and dangerous, and mercurial ointment and other powerful mineral substances should be avoided.

TO CORRESPONDENTS.

We have had a good supply of communications for the paper, but recently there has been a falling off. We hope that our friends not will forget us in the busy season for practical operations.

If it is agreeable to our correspondents, we prefer having their names and dates to their articles. There are many advantages in this. Sometimes we wish to communicate with them; and occasionally a reader wishes to correspond with a writer, for the purpose of further information, or to procure some article from him; or he may wish, when convenient, to visit him and see the result of his experiments. Again a writer's name and date often gives importance to an article, more than is attached to one without "a local habitation and a name."

Yet on this subject we only recommend; we would not dictate; we request all who communicate for the paper, and do not add their names and locality to their articles, to give them separately.

All correspondents out of the State are requested to add the State to their communications, for we often receive articles with nothing to indicate the State. It may have been marked on the envelope, but that is often illegible, and frequently the envelope is thrown one side and not filed with the letter.

In all cases we will attend to the correction of errors in grammar, whether in words, spelling or punctuation, but we wish for correspondents to express in a plain hand, and plain style, their thoughts. Sometimes a writer throws off an article in great haste for the paper, and evidently does not revise it, and asks us to correct errors. Now this is asking too much for us to correct errors of thought or expression. Let the writer revise and see that he expresses clearly what he means, and we will attend to the rest.

But few writers are well acquainted with punctuation, but all can put a period at the end of a sentence, and begin the next sentence with a capital letter. This would in some cases be of great advantage; for we have received articles without the least mark from one end to the other; and articles will often admit of different constructions from the modes of punctuation. Again, we would say to correspondents that we depend greatly on them to make a valuable journal, and we are all mutually interested in this, and we solicit a continuance of their aid through the summer season.

NOTICES OF PUBLICATIONS.

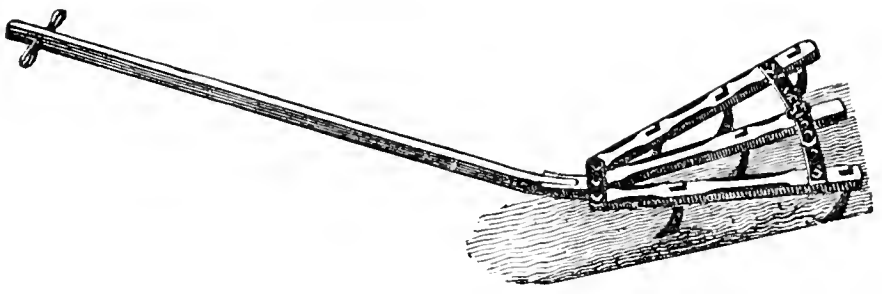
Agriculture for Schools.—This is a new work by Rev. Dr. John L. Blake. A large portion of the work consists of choice specimens of Rural Literature, designed for reading in schools and academies, tending to elevate and improve the mind by a correct estimate of the importance of rural life and American industry. Other parts of the work consists of articles on practical and scientific agriculture, adapted to study, and more thorough instruction. Dr. Blake has long been known to the literary and scientific public, by his various standard works; and more recently to the agricultaral community, by his very interesting work, "The Farmer's Every-Day Book." He is an accomplished scholar, and accurate observer, and gives a polish and a charm to whatever he touches with his pen. 432 pages, 12 mo. New York: Mark H. Newman & Co.

Farm Journal is the name of the new agricultural paper just started at Lancaster, Pa., by A. M Spangler; edited by S. S. Halderman. Monthly, at $1 per year. It is well filled with instructive matter, and embellished with engravings.

QUASSIA A SUBSTITUTE FOR TOBACCO IN GARDENS.

Do you know that a decoction of Quassia is as effectual a remedy for green fly as tobacco liquor: and at the same time much less expensive, and a more cleanly thing to deal with? I have tried it here, and found it to answer well; it was, I believe, recommended originally in Mr. Loudon's book, but I saw it first in the *Midland Florist*. Now (when tobacco is much dearer than it used to be) is a good time to recommend a substitute; a quarter of a pound of Quassia (valued 3d,) will make a decoction sufficiently strong, if mixed with from three to four quarts of water: to make the decoction, pour about three pints of boiling water on the Quassia, and let it simmer before the fire for two or three hours. When about to use it, add the remaining quantity of water, and either dip the shoots or put on the liquid with a feather or brush. It is advisable to syringe the plants a day or two afterwards; not that I ever knew the application do harm without such precaution.

☞ Live up to all your engagements.



HAND CULTIVATOR.

This is a very neat, light and durable implement, made wholly of iron, excepting the handle. It is a very convenient implement in garden culture or in the field, among beets, carrots, onions, &c., where there is not sufficient width to use a horse.

The operator walks forward leisurely, with his hands behind him, clenched to the cross handle, and tears up the weeds and pulverizes the soil. As this is done with expedition, it may be repeated often, destroying the weeds thoroughly, by beginning in season when they are tender; and the frequent stirring of the soil will greatly promote the growth of the crop. The price of this implement is low.

MANAGEMENT OF BEES.

The season for swarming has arrived, and bees require constant attention. A person well acquainted with bees can generally judge from the condition of his hives, and from the weather, when they will swarm. Yet they should be watched, as sometimes a swarm comes out unexpectedly, even in weather and at a time of day which is unusual.

Generally, bees swarm in the forenoon, when the weather is warm and the sun bright; but we once had a swarm come out at six o'clock in the afternoon, when the weather was cool and cloudy. It was the only case we ever knew of bees swarming under circumstances so unfavorable. When they swarm so late, they would probably remain all night, if not hived.

When bees swarm, they usually pitch on green trees, if they are convenient. But they sometimes light on dry trees, fences, buildings, walls, small bushes, &c. We once had a swarm pitch on a current bush, though a plenty of high trees were around them.

Some apiarians set their bees where there are no trees near, and stick up poles, or dead spruces or pines, in front of them, on which they often pitch; and then the poles are taken up and laid down to hive them. If old mullen heads are tied on to the poles, giving the appearance of a bunch of bees, they will be more likely to light on them.

The following method often succeeds well. Place a board about 20 feet long, with one end just under the centre of the bee-house, and let it extend in front. About 5 or 6 feet from the outer end of the board, drive down a stake on each side, and tie another stake across these about 2 1-2 feet high. Lay the outer part of the board on the cross stake, the other end resting on the ground. When the bees swarm, if there are no trees or other inviting objects near, they will generally pitch on the under side of the board, which may be taken down, inverted, laid on the ground, and the hive set over them.

When bees pitch on the limbs of trees, the most convenient way to hive them, generally, is to cut off the limb, select a shady place among the grass or weeds, and lay down the limb, or with a sudden jerk, shake the bees on to the ground, and place the hive over them. Then throw a sheet over the hive, and sprinkle water plentifully over it.

By laying the limb down carefully, the bees are less disturbed, and of course less likely to sting. But they will not go into the hive so readily as when shaken off, as they often stick to the limb, and need disturbing by spreading them with a wing before they will go into the hive. We had a swarm that would not leave the limb, so we lay down on the ground close to them, and with a wing we spread them, and examined for the queen. We soon found her, and took her on the wing and put her into the top of the hive. Then the bees all started, and in a few minutes were with their sovereign.

When bees pitch on the body of trees, or valuable branches, or other things difficult to move, they may be brushed into a hive, or the hive may be fastened over them, and then if they do not go up soon, disturb them, as before named, and dash cold water around them. The sooner bees are set on the stand the better, after they have all gone into the hive; yet it will answer to let them remain until evening.

Sometimes, though probably very seldom, bees dislike their hive after they have gone into it, and go back into the old hive or go off. Some swarms cannot be suited with any hive. We once had a swarm that went into the hive, and soon returned to the parent hive. They swarmed again, and went into another hive offered them, and they appeared contented during the day; but towards night they went back again. They had made a piece of comb six inches long, and filled it with honey. They swarmed again and again, and new hives were offered them, and sometimes they went into the

After swarming a number of times they grew very cross. The eighth time they came out, they were extremely cross, and as soon as they were laid on the ground and a hive set over them, they all rose instantly and started for the woods. We kept up with them in an up-hill race, some one hundred rods, when they passed over a steep ascent, densely covered with trees and bushes, and we relinquished the pursuit, and never learned what shelter they had selected, to which they were so very partial. This was a singular case.

Bees leave the old hive with a full meal, and are generally in a good humor; and may be attended to without any danger; but they are sometimes cross, and it is well for the manager to be protected in difficult places, as on high trees. A friend of ours who had long experience in bees, laughed at our idea of having any protection in managing bees, but one sad case altered his mind. He was attending to a swarm in the top of a high tree, and hundreds attacked him simultaneously, so that he was glad to make a precipitate retreat, and he narrowly escaped with his life from the furious assault of so many formidable warriors.

If the operator is well protected, he can act deliberately in difficult cases. Take a piece of millinet about two feet long and some eighteen or twenty-five inches wide, and a piece of other thin cloth sufficient to make about three feet in width, when the two edges of each are sewed to each other, in the manner of a bag without top or bottom; make a wide hem at one end, and run in a string. Place this end over your hat, with the millinet in front, and draw and tie the string above the rim. Put on your hat, and place the lower part of the protection under your coat or jacket, and button closely over it. Leave it loose over the nose. We saw an operator who was protected by a thin, white handkerchief over his face, with a close fit to the nose. He treated the bees roughly, and that prominent member being the only part exposed, it became the centre of hostile operations by the enraged enemy.

The best thing to protect the hands is a pair of thick fringed mittens, as the bees cannot reach their stings through them, and they are not sufficiently firm to retain the stings. Thick leather gloves or mittens will serve as a protection, but all the bees that attempt to sting through them lose their lives, as they will leave their sting behind.

For the New England Farmer.

FOOD FOR COWS.

Cows, when giving milk, are more in need of the care of men of understanding than are any other kinds of stock. Chemistry shows us that milk is composed of a variety of properties. These properties vary in different kinds of milk, and in the milk of different animals of the same kind. It should be the study of the farmer to know what feed will supply the wants of the cow, that she may afford a good quantity of milk which shall be rich in its properties of composition, and at the same time afford the animal what is needed in forming bone and muscle.

A cow which gives milk that is rich in the properties which form bone and muscle, if kept upon such feed as supplies but a scanty amount of those properties, will give too much away in her milk and become weak in her own frame, and early become feeble as though old. If scantily supplied with the properties which form muscle, while affording a good supply of the muscle-forming properties in her milk, she will become weak and timid.

Calves, for their strength of frame or strength of muscle, depend very much upon the properties of the milk with which they are nourished. The milk depends on the properties which the cow receives in her food; for it must be evident that a cow cannot give away in her milk what she receives not in her food. If we would have any property, say phosphate of lime, in the frame of a calf, it must be in the milk which nourishes him. To have it in the milk, the cow that gives the milk must possess it sufficiently; it must be in her food. To produce food which contains it, the farmer must know what to produce. When he knows what crop to produce for this purpose, he needs then to know what manures to feed the soil with that he may produce the desired crop.

Most of the pasture lands in New England are unfit for the support of cows which give milk. Cows may live in them and give milk; but they are dwarfish in size, and their calves suffer also in the same respect; while their milk is much less in quantity, and much poorer in quality. We may supply ourselves with other breeds, and expect to remedy the evil. But time will show that our stock does not hold its own. The remedy is not there. We must know more about our profession. We must pay our humble tribute to science, and sit down willingly at the feet of instruction.

Thousands of farmers are desiring to improve their stock of cattle. The great portion of them are waiting to see the market supplied from the stock which has been imported. By the time that such an event shall take place, the charm will be gone; for the imported stock will, in too many hands, have suffered from the evils which have been referred to above. New importations will be made, and monstrous prices paid. But all must come under the same blighting circumstances, until the farmers of New England go to work in the right quarter. When we do, we shall be surprised at the worth of our "native breeds."

It is not the object of this article to disparage imported breeds of cattle. A higher and better object is before us. We ought to learn how to make the best of what we now have.

The new lands of the West are now in a better state to produce the necessary food for cows than the old lands of New England. The time is fast coming, however, when science must aid the West, as her aid is now needed in the East.

The blessings which God has placed within our reach are abundant, and we ought to learn how to improve upon them. C.

Mason, May 16, 1851.

☞ A pound of beef loses one-quarter by boiling; an ounce more by roasting.

For the New England Farmer.

ADVICE TO FOWL KEEPERS.

Have your hen house cleaned out, the nest emptied and scraped clean; or new ones put in lemon boxes are about as good an article as you can have. I am of opinion that tobacco boxes in some places would do well for nests. If the birds are troubled with insects, as they often are where they are housed up, a little anguentum, reduced with lard, is a sure cure. Rub a small quantity where the trouble arises, which is generally on the top of the head. Knits appear at the side of the nose and the chickens refuse to eat. For grown fowls, tobacco water rubbed on, in small quantity, will destroy them. If your henery contains insects, wash all parts of it with tobacco water with a brush. It may need to be repeated.

A box with ashes in it is a great luxury for them to shake in. Keep your fowl-house dry.—After your chickens have been hatched 1-2 day, I think it better to take them from the hen, into the house, till she gets through hatching, as she will keep moving to please those that are out, and tread on those that are about coming from the shell. I have tried it with success. You can put them under her at night. If other hens trouble her, cover a basket, or a like article, over the nest. Wet Indian meal for general food is the best. Boiled egg and the shell is a luxury to them. After a week give them a small quantity of wheat or oats, and sometimes a little fresh meat and potato. I have a brood of China chickens, 2 months old, and have not lost one of them. They have not had water but once; they are fat and smart. Too much drink, in my opinion, brings on dysentery.

I have kept my chickens under cover, in a good sized box, slatted over with lathes to keep the hen in, as jumping in would injure the chickens. I clean the box often. I have spoken particularly of chickens, as so many are lost by inexperience. I have now one hundred fowls of various kinds, and I am of opinion that as many eggs would be obtained of half the number, unless they are kept entirely separate, say 30 in a house together.

A variety of food is best, and by all means keep clam or oyster shells pounded fine for them to eat: as I think they make decidedly the best egg shells. If you wish to feed all your sitting fowls at one time, take them off the nest in the morning carefully, and you will be sure they are fed. I have done it several years; it saves much time in feeding.

You can see that each goes on her own nest again: for they sometimes change, or another hen may occupy a nest in the absence of the owner, and cause a fight on her return. B.

Remarks.—Tobacco and mercurial preparations are powerful and destructive to insects, but tobacco has a sickening effect on the animal, and has, in some cases, destroyed him, as well as the insects. Unguentum, in cases of exposure to wet or cold, is injurious, and sometimes fatal to the animal. New rum, in which camphor is dissolved, is excellent for the destruction of lice on hens, or for the same insects on the horse; and it is harmless in its effects, excepting it produces slight intoxication, when applied to the head of a young chicken.

The lice usually found on the heads of chickens soon after they are hatched, are large, rapid in their motions, and similar in their general appearance to those that infest some human heads.

The greatest evil of this kind that afflicts hens, is a minute insect, which under the magnifying glass resembles a wood-tick in appearance. They become numerous, and will suck the blood from hens on their nests, and often destroy them while sitting. They will suck the blood from hens on the roost, at night, and retire to cracks in the hen-house before morning, so that if the hens are examined, they cannot be found on them by day.—Close houses produce this evil, and a terrible evil it is.

If hens infested with these lice roost near horses, the lice will get on them; and though so small as to be hardly perceptible to the naked eye, without nice inspection, they are so formidable as to destroy this noble animal, unless a remedy be applied.

For the New England Farmer.

WHAT AILED MY HOG?

Mr. Editor:—In 6th month, last year, I bought a pig, and shut him up. He grew well, and I flattered myself with the prospect of having a fine hog next fall. About the commencement of cold weather, he began to be lame in one hind leg; soon both hind legs were diseased. The lameness increased until about the beginning of this year, when he refused to eat; his legs became useless, one of them swelled badly about the ankle joint, and, supposing he would soon die, I concluded to kill him. But my neighbors advised me to wait a little to see if he did not recover. After this he ate well for a time, but did not regain the use of his limbs. Finding it a hopeless case, I killed him the 7th of this month, when it appeared the disease was in the bones. Upon examination it was found that *both hind legs were broken;* one just above the gambrel joint, and the other where the first swelling appeared, and a callous had grown over the fractured parts, nearly an inch in thickness. The marrow in the broken thigh bone was a semi-liquid, and of a purple color. But this is not all. *Ten ribs on each side were broken off!* some of them had grown together, and others were apparently just fractured. All the ribs were so brittle that I could easily break them with my thumb and fore finger. Now the animal must have broken these bone by turning in his litter, for he had not been out of it in several weeks.

These are facts well known to my neighbors, who, with myself, wish to know the *cause* and the *remedy*, so that, should a similar case occur, we may be able to administer the proper remedy.

Perhaps some may say, "The hog needed earth;" but I think it was not so, for I frequently threw earth into the pen, and during his sickness I gave him sulphur, salts and charcoal.

I also kept another pig in the same enclosure, until the latter part of the 12th month, when I killed him in a perfect state of health. Their food was composed of ears of corn ground and mixed with potatoes. L. Varney.

Sandwich, N. H., 3d Mo. 31st, 1851.

☞ Earn your money before you spend it.

For the New England Farmer.

PEACH TREES.

Mr. Editor:—The statements in the last No. of the Farmer, of your correspondent of Middletown, Ct., in reference to his management of peach trees, has induced me to give you my experience, which in some respects I prefer to his. I have heard the idea repeatedly expressed that we can make no dependence on peach trees on account of the destructive ravages of the borer. So far as I have learned the habits of this insect, the borer leaves the tree in the fore part of June. It is then transformed into a miller, lays several hundred eggs, usually on the tree it has just left, which hatch the latter part of the season, and feed on the bark of the tree until one year from the next June, when they come forth to follow the example of their predecessors.

The last of May, I place three or four quarts of wood ashes, if the tree be large, and one or two if it be small, directly around the trunk of the tree, so that the ashes shall touch the tree on all sides, and are careful not to disturb them until the next Oct., when I hoe them from the tree both to enrich the soil and prevent their injuring the trunk of the tree.

I have about 500 peach trees from two to six years old, and I do not think I have ever found one dozen borers on them, although I have often looked for them with care.

When I have found them, it is a foot or more above the ground, and I think it more probable than not the eggs in such cases are transferred there by some insect or other means than the miller, as they are almost always found at the root of the tree at or a little below the surface of the ground. If the borers are once in the tree, the ashes will not destroy them, in which case he must dig them out with a wire or knife. But I am confident if ashes are applied as above they are an entire protection against the peach borer, so great is its aversion to them.

I either cultivate or thoroughly mulch my peach trees, and head them in early in spring, which I think pays the labor well.

Very respectfully yours, D. Alden.

Southboro', May 13, 1851.

Remarks.—Two great evils attend the cultivation of the peach; the Yellows and the Borer. So great are these evils that the cultivation of this most delicious fruit has been abandoned in some places. But this course in our opinion, shows a want of intelligence on the subject, for we think that these evils, formidable as they are, may be subjected to the complete control of the cultivator, and without much expense or inconvenience.

We have frequently published articles on the peach tree borer, and the one here presented shows good success; and if these remedies are not complete, they will generally succeed, and a little trouble in the use of the knife will give a finish to this pest. We intend to offer some remarks soon on the nature of the yellows, and a remedy.

Right of Occupants to Ground in front of their Houses.—At Philadelphia, on Saturday, action was brought by a hackman to recover damages from a police officer for assault and battery. The circumstances of the case were—Kee, the hackman, was standing in front of the United States Hotel, and was ordered to leave by the proprietor, On his refusal an officer was called and Kee was arrested. This constituted the assault. Judge Parson said in his decision, that every man owns the ground in front of his house. He has given to the public a right to pass and repass over it, but in all other respects it is as much his property as any other part of the premises. No one has a right to stand or carry on any business in front of any man's house, and if he is thus annoyed and notifies the party to leave, on a refusal, sufficient force may be used to compel the offender to go. The case was dismissed.—*N. Y. Com. Adv.*

THUNDER AND LIGHTNING.

The ancients had two opinions respecting the cause of thunder; some of them assigned it to inflamed exhalations rending the clouds wherein they were confined; others ascribed it to the higher and condensed clouds falling suddenly on a lower stratum with such force as expelled the intermediate air, which vigorously expanding itself, in order to occupy its former space, put all the exterior air in commotion, and produced the reiterated claps we call thunder. The latter of these opinions was held by Aristotle and Anaxagoras, the former by Leucippus, and partly by Democritus and Seneca. Chrysippus taught that lightning was the result of clouds being set on fire by violent winds, which dashed them one against another.

Among the moderns it is supposed that the air or atmosphere is not of one uniform electrical state, from the bottom to the top of it, but rather composed of a succession of positive and negative strata; the mixing suddenly of one stratum of these with the other is thought to occasion thunder and lightning; or rather the rush together of clouds of a positive and negative character. Others affirm that the sudden combination of oxygen and hydrogen gas in the higher regions of the air occasioned by an electrical discharge into them, when mixed, but not combined, occasion thunder and lightning; and the combination of the gases, water, or the heavy showers that accompany the phenomenon. The ratling noise we hear is owing to the sound being excited among clouds hanging over one another, between the arches of which agitated air irregularly passes; it also partly depends upon the reverberations from neighboring objects.

When thunder explodes high in the air it is harmless, but when it bursts on or near the earth, it often destroys trees, cattle and human beings. The proximity or distance may be estimated by the time that elapses between seeing the flash of lightning and hearing the thunder, for every second that intervenes 1,12t feet are counted—3 1-2 seconds show it is about one mile distant from us, 7 seconds two miles, and so on. Dr. Wallis observes that 7 seconds usually elapse between seeing the flash and hearing the clap, but often one second does not pass, which shows it is very near, or perhaps among us. To avoid the effects of this awful phenomenon Dr. Franklin advises us to apply metal conductors to the roofs of houses, masts of ships, &c., so that the conductor's sharp point at the upper end may reach two or three feet above the summit of the object, and continue from thence down

till the lower part be buried below the surface of the earth or water. Copper wire, about one-fourth of an inch thick, is generally used in these conductors. The safest place, during thunder, according to the doctor's advice, is the middle of a room, if in a house, on a chair placed on two or three beds or mattresses placed over each other; or in a hammock suspended from the middle of the ceiling by silken cords.

Dr. Priestly says the middle of a cellar is a secure place. We never should have about us any metallic substance, nor stand near metallic bodies—workmen ought to lay down their scythes, sickles, and spades, &c., and go a distance from them during thunder and lightning; ploughs, iron ones especially, should be unyoked. Men ought not to run up close to trees, hedges, walls, &c., but rather to stand a few yards from them, for these objects attract lightning, and it is better to be wet than struck by the fluid. When lightning levels spires, trees, &c., or scatters them greatly, it is called a thunderbolt, which the common people suppose to be a hard mass, like iron or stone; but this is a very wrong conception; gunpowder, fulminating-powders, electricity, &c., perform often as awful consequences as thunderbolts, so there is no need of hard, solid bodies to perform the effects we often see after thunder. We know that stones or bricks when struck with lightning often present a vitrified appearance, and the common people finding such here or there in the earth, after a thunder-storm, supposed that they were thunderbolts which fell during the phenomenon. This is, I believe, a remark of Beccaria on this oubject. Thunder and lightning sometimes occurs in a clear and serene firmament; Horace says he was convinced of the existence of a deity from witnessing such a phenomenon, and pretends that he therefore renounced Epicurism:—

> For angry Jove, with mighty force,
> Whilst all the skies were bright and clear,
> Shot through the heaven with pointed flame,
> And shook the universal frame:
> He lately drove his thund'ring horse
> And flaming chariot through the air.
> *Creech's Hor., Book I., Ode* xxxiv.

Thunder storms are great purifiers of the atmosphere, and often banish plagues and epidemics, as they destroy what we call "dry fogs." In Dr. Prouty's Bridgewater Treatise we find an account of one of these "dry fogs," which, in 1782-3, extended over all Europe. It was of a blue color; and the sun, at noon, appeared through it of a reddish dye. This haze had a peculiar odor, and deposited in several places a viscid liquid of an acid taste and unpleasant smell. At the time there were earthquakes in Calabria and Iceland, and volcanic eruptions. An epidemic catarrh, or influenza, prevailed through Europe during ihe continuance of the haze, till thunder annihilated the foggy vapor, and cleansed the air in the summer of 1783.—*J. T. Dunne.*

HAIL.

Hail usually precedes rain, often accompanies it, but seldom follows it. The hail-shower continues generally only for a few minutes, seldom longer than a quarter of an hour. The quantity of ice that falls in so short a time is prodigious, the ground being often covered several inches in depth. The clouds that produce hail are of a peculiar gray, or reddish color, often of a deep, black blue; their lower surfaces present enormous protuberances, while the edges exhibit deep and enormous indentations. How the cold is produced which causes the congelation of the watery particles, and how a hailstone, after acquiring a sufficient size to fall through the atmosphere by its own weight, remains suspended a sufficient time to acquire a volume of twelve or fifteen inches in circumference, are questions which have not as yet been satisfactorily explained; in fact, the theory of hail is still involved in great obscurity." Some countries are more subject to hail than others—France, for instance. In England, also, from Dunmow, in Essex, to the hills of Hertfordshire, hail-storms are very prevalent in the spring and summer seasons. "The devastation and ruin caused to the farmers by these storms have caused the establishment, by the Farmer's Insurance Society, of a branch for the insurance against hail-storms."—*See Brande's Dict. of Science, and Pouillet's Elements de Physique, t. ii, &c.*

THE CURCULIO.

In answer to repeated inquiries, now that the curculio is about to visit us, we shall briefly give the mode of destroying this insect, by jarring down on white sheets, according to the best improvements which have been made.

First, with regard to the mode of beating the tree,—if the bark of the trunk or branches is struck, it soon separates from the wood and makes a bad wound; and if the mallet is wrapped in cloth, or cushioned, the blows become much less effective, and only a part of the insects are felled. Besides, even a cushioned mallet will after a while injure the bark. This difficulty may be avoided in two ways,—either by sawing off a small branch, leaving a short stump to thump against; or by forming a conclave block so as to fit the trunk, and striking against this block,—the force of the blow on the bark becoming so softened as not to bruise the bark, in the same way that a hammer does not injure the knees when a lap-stone is interposed.

Secondly, with regard to the easiest way to catch and kill the falling insects. If white sheets simply are spread under the tree, either several persons are needed to carry and spread them, or much time is consumed by a single individual. The work is made expeditious by stretching each sheet on light wooden frames, two separate frames being attached to each sheet, so that it may be folded or doubled together like the leaves of a newspaper, or the covers of a book. The great advantages of this arrangement are,—one operator may walk singly through the orchard, with two such folding sheets in his hand, and extend these in a moment without assistance, under each tree; and after jarring down the curculios, instead of being compelled to search over the white surface for them, and to crush them singly between thumb and finger, the sheets are folded so to throw insects, punctured fruit and all, into a pail of hot water. A few minutes are thus sufficient to go over a large fruit garden.

As to the efficacy of this mode, it is scarcely necessary to repeat here that it depends almost wholly on being unremittingly applied at least once a day, from the moment the young fruit begins to set, when not so large as a pea, till no more curculios can be found, or for several weeks. In one experiment, 18 of these insects were caught from a small

plum tree at the first trial, yet by regular daily attention, a good crop was secured on this as well as on many other trees, which for previous years had never ripened one. Combined with the real practice of confining pigs or poultry, this remedy can scarcely fail in the most unfavorable localities in the most destructive years.—*Albany Cultivator.*

CURCULIO.

Take an old oil cask, and make in it, from time to time, as he wants to use, a strong suds of whale oil soap, (which can be procured of any of the druggists,) and to sprinkle the entire tree, from top to bottom, and the ground under the tree, thoroughly with the suds, twice or three times a week—commencing as soon as the blossoms begin to make their appearance, and continuing it until the plums are as large as a pea. It might be better to follow it until the fruit is about half grown, at about which time the curculio disappears altogether. The suds does not destroy the insect, but the whale oil soap is so offensive to them that they will not approach a tree which is protected by its odor.

He has tried this experiment every year, with a single exception, for many years past, and that every season he has tried it, his trees have been loaded down with nice full grown fruit, and that the season he omitted it, the curculio made such ravages that he did not have forty plums on all of his trees.—*Suffolk Democrat.*

POSTS INVERTED.

It is now generally believed that posts will endure much longer if inverted, than if set in their natural position. The fact, it is said, "has not been satisfactorily explained."

Now it appears to me that the difficulty in explaining this, is the same with that of explaining the circulation of the sap. The mechanism, if any there be, in the green tree, remains the same in the dry. In the green tree the sap ascends through the pores, or tubes, in the wood, and descends between the wood and bark. Hence, if a post be set in its natural position, the moisture from the ground will ascend in the same way, if not on the same principle that the sap ascends in the living tree. Hence such a post will be found wet, or moist, internally at some distance *above* the surface of the ground. If set in an inverted position, this will not often be the case (as the circulation would be downward instead of upward.) Hence such a post will generally be dry within, even *below* the surface of the ground. As moisture hastens decay, the former must perish sooner than the latter.—*Rural New Yorker.*

Water may be forced through the capillary tubes of a tree only toward its top. On this principle the finer woods are sometimes changed in color for the use of the cabinet maker. A hole is bored in the side of a tree, and a bent hollow tube has one of its ends driven into the hole, while the other end of the tube is carried up nearly the whole height of the tree. Any solution may then be poured into this tube from the top, and from the pressure arising from the height of column, it will be forced into the tree in an upward direction only. In this way woods have been colored in France while growing, and by the introduction of solution or metallic salts, they may be rendered nearly imperishable by rot.

Posts should be placed in the ground with the butts up; then bore a hole in the butt, throw in a small quantity of corrosive sublimate or common copperas, (sulphate of iron) and drive in a plug of wood. If the former be used, the centre tubes of the wood will become *kyanized*, and be thus rendered indestructible by rot and less liable to crack or wind—if the latter, the posts will last much longer than when left without such addition.

If posts be first placed with the ends in a tube containing a solution of common copperas for a few days, and then in clear lime water, the lime will be changed into sulphate of lime as received into the wood, thus leaving the capillary tubes of the wood filled with plaster of paris, (sulphate of lime) and their surface coated with oxide of iron, precipitated from the copperas. Wood so prepared will last many years longer than if used in an unprepared state.—*The Working Farmer.*

BRICK-DUST FOR CUTTINGS.

A New York correspondent of the Horticulturist writes as follows:

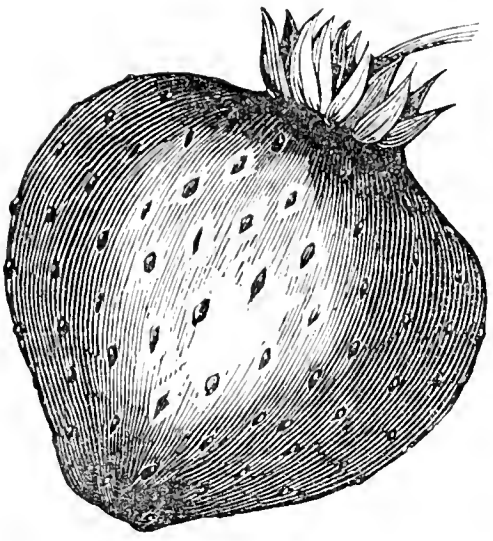
I have had great success in propagating plants lately—especially the more tender kinds of greenhouse plants. As I think my good luck depends not so much on the treatment as the *material* I use, I beg you to "make a note of it," for the benefit of your readers. This material is brick-dust—the refuse of the kiln after burning—or what may be made by taking soft bricks and pounding them up. Enough may be had at any brick-yard for a mere trifle, to last a great while—but I think the fresher it is the better. For those plants more difficult to root, such as Daphnes, Heaths, Cape Jasmines, &c., I fill shallow cutting pots entirely with brick-dust, excepting about an inch at the bottom, which is filled with coarse lumps of brick, to secure a good drainage. For plants that root more easily, I use half brick-dust and half sandy loam.

It is quite surprising how much more certainly and quickly cuttings of all sorts root in brick-dust than in sand, or in loamy soil, in the common way. "Damping off," which is so fatal to cuttings made in the ordinary way, rarely happens when brick-dust is used, and from the mass of fibre quickly thrown out from the bottom of the cuttings, I am convinced that there is something more than the texture of brick-dust which causes the much greater vigor and success of cuttings planted in the ordinary way.

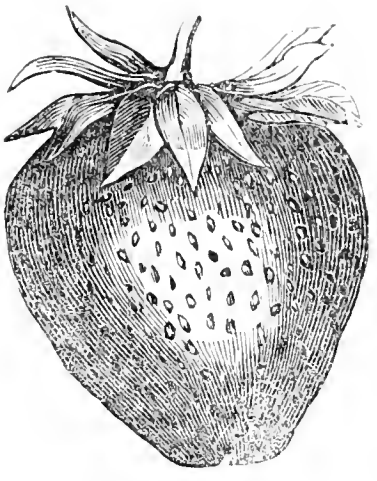
We have heard, remarks the editor, of burnt clay having been used for striking cuttings with great success, and the brick-dust probably acts in a similar manner, *i. e.*, absorbing a large supply of ammonia from the air, and giving it as food for the cutting, while its dry and gritty texture facilitates the granulation of organizable matter, and the emission of new roots.

Vegetable Poison.—Almost every farmer is more or less troubled with poison ivy, sumach, parsnip, and the like. After trying a great variety of remedies, I have found that a poultice made of buckwheat flour and butter milk, with a piece of blue vitrol the size of a pea, pulverised and dissolved, added to the mixture, has had the happy effect of removing the trouble and effecting a cure in a short time.—*E. S. Fox.*

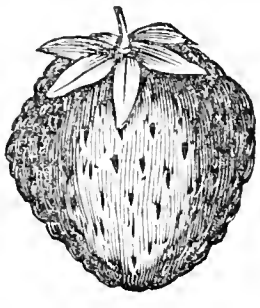
STRAWBERRIES.



Hovey's Seedling.

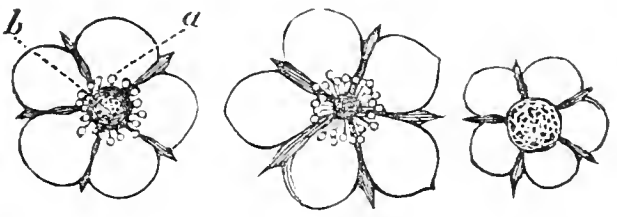


Swainstone's Seedling.

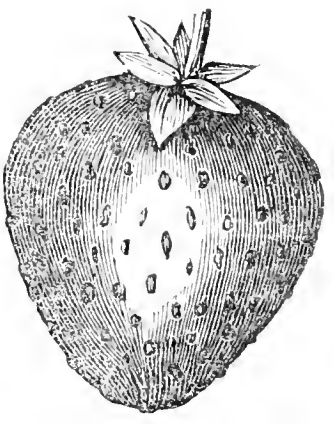


Early Virginia.

FLORAL CONDITION OF THE STRAWBERRY.



Perfect. *Staminate* *Pistillate.*



Burr's New Pine.

The strawberry is one of the most wholesome and delicious of all fruits; and as it is the earliest, and very cooling and refreshing at the hot season in which it comes in, it is worthy of more extensive cultivation. Every person who has a spot of land sufficient, should cultivate this fruit that he may have it fresh from the vines. Two square rods, under good management, will generally yield 30 to 40 quarts, which may be had in succession for three weeks, by cultivating two or three kinds. Farmers, by cultivating this fruit for their families, will save more than all the expense in meat, butter &c., and make their meals more wholesome and acceptable.

The strawberry is becoming a very important fruit for the market. Several years ago, when all the strawberries raised, for this market, were less in quantity than the single crop of some individuals now, it was apprehended that the increase of this fruit would injure the sale, and reduce the price; but the demand has increased faster than the production, and strawberries now sell more readily and at higher prices than they did when there was not one-twentieth part as many brought to market.

Under good management, this is a profitable crop. The produce of an acre varying from $200 to $800 to the acre. General average, under good culture, about $400. Some crops have exceeded $1,000 to the acre. Again, from winter-killing of plants, drought and other causes, the crop may be small.

Notwithstanding this is a small fruit, and grows on a little plant, yielding a good crop the first year after it is set, it has produced 1,000 quarts, or 125 bushels, to the acre. More than any of our grains yield, and equal to the average crop of potatoes, and selling at 20 to 30 cents a quart.

Cincinnati is the greatest strawberry market in the world. In one year the amount sold there was 6,000 bushels. One cultivator carried to the market 128 bushels daily during the height of the season.

With the great facilities for bringing in this fruit on railroads, from places where lands are cheaper and more fertile than in this region, and from the introduction of new varieties, and improvements in cultivation, we have no doubt that in a few years strawberries can be raised at a profit, and sold at 20 to 30 per cent. less than the usual prices at present. If this should be the case, there will be a demand for three or four times as many as at present. A family that buys only two or three boxes of straw-

berries when the price is 25 to 30 cents, would use ten or a dozen boxes when the price was only 17 or 20 cents per box.

Our cuts represent the largest size of the varieties, except the Early Virginia, which is small, and does not show to advantage among the others, as it does in the garden.

Early Virginia is the earliest of all our productive strawberries; very vigorous in plant, hardy, very productive, and of excellent quality. We have found by experiment that it is identical with Downing's Large Early Scarlet. It is cultivated as much or more than any other kind in New England.

Hovey's Seedling is the largest of all strawberries, and of good quality, selling high in market. It yields very largely under favorable circumstances, but the plants are much less vigorous and hardy than the Early Virginia, and much pains is necessary to have a good set of plants; and if a large crop be obtained the first year after planting, there is usually a deficiency the next year, from exhaustion, or failure of plants. These two kinds are cultivated far more than all others in New England. But other new and promising varieties are claiming a trial.

Burr's New Pine is but little known in this region yet, but we see by reports of horticultural exhibitions in other sections that it has taken the premium for fruit of the best quality.

Swainstone's Seedling is an English variety, and, though famous there, it does not succeed well here.

Jenning's Seedling is very vigorous, hardy and productive; and the fruit of a high character. It is rather acid, and is excellent with sugar. We prefer it to more mild and sweet varieties.

Boston Pine is hardy, vigorous, and very productive, if the plants are kept properly thinned. They are apt to grow too thick, and fail from this cause. The fruit is mild and sweet, and good when taken from the vines, but when it stands in the market a short time, it loses its flavor and becomes insipid. It is too transient for the market, if purchasers are nice judges.

Willey is much the same, if not identical with the Hudson, cultivated so extensively about Cincinnati. It is remarkably hardy and vigorous, a great bearer, and the fruit of good quality. But little known in this region. We have about a dozen varieties, and this outgrows them all.

Fay's Seedling, not a good bearer. We have discarded it.

Black Prince, not of the best quality, nor very vigorous. We shall exclude this also.

Richardson's Seedlings. We have these on trial.

Condition of the Flowers.—For the instruction of those who are not acquainted with botany, or are not nice observers of nature, we would remark that among trees and plants generally, their are three conditions of flowers:

First—Perfect flowers, or those which have pistillate and staminate organs in the same flower, as the apple, pear, cherry, &c.

Second—Monecious plants, which have the pistillate and staminate organs in different flowers, on the same plant. As Indian corn, cucumber, melon, &c. The silk of corn is the pistils; and the stamens are on the spindle. The pollen or dust falls from the stamens on to the silk, and this fertilizing powder is conveyed to each kernel of grain, as there is a thread of silk, or pistil, to each. Pull out the silk and there will be no grain; cut off the spindle before blossoming, and the effect will be the same. In cucumbers, and other vines, the fertilizing dust is carried from the staminate flowers to the pistillate flowers, or those that yield the fruit, by insects.

Third—Diecious plants are such as not only have the staminate and pistillate organs in different flowers, but on different trees or plants, as the shepherdia, asparagus, &c. Two shepherdia trees are set some 6 or 15 feet apart. They both blossom, but in the fall the pistillate kind, only, is adorned with beautiful red fruit. But without the staminate kind there would be no fruit.

These remarks will illustrate the floral condition of the strawberry, as represented above by the cut. In its natural state, the strawberry is perfect in its flowers, but by cultivation, and the production of seedlings, some varieties have become pistillate, and others staminate. And several varieties vary from pistillate to perfect, and from staminate to perfect. Pefect plants bear good crops, or large crops, as the Early Virginia, when standing alone. Pistillate plants bear small crops of imperfect fruit, when standing alone, as Hovey's Seedling; but with a perfect or staminate kind set near, to fertilize them, they yield large crops; some cultivators say larger than any other kind; but this we doubt, for we believe that no kind has ever exceeded the Early Virginia in yield. Staminate plants yield but light crops.

The Willey has a few stamens, and some perfect plants, which are sufficient for fertilization.

Jenning's Seedling is almost pistillate, but it has a few stamens which may be sufficient. Of this we are not certain, as we cultivate it near other varieties. We have seen accounts of very large crops of this strawberry, and we think it was without any other as a fertilizer.

Remedy for Poison.—A reader inquires for a remedy for bog water poison on the face. We are not acquainted with the nature of this poison, but most poisons are acid and may be destroyed by alkalies. A weak ley of wood ashes or potash is good for poison; so is the water of ammonia. Common salt is also good. Perhaps some of our readers can give a remedy well adapted to this particular poison.

For the New England Farmer.

EFFECTS OF SKILL AND INDUSTRY.

Messrs. Editors:—As actual cultivation is more instructive than theoretic speculation, I will briefly state my observation of the cultivated grounds of Messrs. E. & I. S. Needham, in West Danvers, at the present time. Within the last half dozen years, these gentlemen have converted about *ten acres* of their farm into a highly productive garden. Their success in the cultivation of the strawberry has surpassed all others in the vicinity of Salem. The present appearance of their vines is highly promising. Some of them, in favored localities, were in bloom as early as the 22d of April. They have been careful in their selection of the best varieties. To some extent their plants suffered from the effects of the winter, but they have enough remaining for all reasonable uses.

For four years past, their attention has been turned to the cultivation of the cranberry. They have more than half an acre covered with this plant. During the winter this ground was protected by a coating of meadow hay, and now the plants are putting forward with vigor. Between the rows they distribute a coating of pulverized peat, so as to check the growth of weeds and grasses; and by judicious ditching have removed the superabundance of water of the last and present season, which has been the greatest embarrassment of their culture. They have entire confidence in the cultivation of the cranberry, on field land; and whoever is curious to be informed on this subject, will find much instruction by a view of their grounds.

We saw in luxuriant growth the bush that yields what has been denominated the *white blackberry*. We have not before seen this, and learned that it is a very rare plant. The original, from which these were grown, was found in its native position, in the woods north of Massachusetts; and from Messrs. N.'s representation of the abundance and superior quality of the fruit, it must be well worthy of the attention of those who would encourage the products of our own hills. It ripens about the time of the common high blackberry of our woods, and resembles the fruit of the mulberry.

Among other objects worthy of notice on Messrs. N.'s grounds, is about one thousand peach trees now in the fourth year of their growth. The contrast between the vigorous appearance of these trees and many others that we have seen, led to the inquiry how it was brought about. Messrs. N. attributed their flourishing condition mainly to the fact, that in the autumn they have been headed down, by cutting off about half the growth of the preceding season. If in this way the life and form of the tree can be improved, is not the practice worthy of imitation? Would it not save the necessity of pulling up by roots many trees, as we have seen done the present spring? Messrs. N. have been highly successful in the cultivation of apple, pear and quince trees. But as we saw nothing to distinguish their culture particularly on this subject, we forbear to enlarge. We have ventured to notice the culture of the Messrs. Needhams that common farmers may understand how readily their lands may be converted into productive gardens, by the application of skill and industry; and at the same time afford an ample remuneration for all labor applied. Such we understand to have been the case, in regard to Messrs. Needham's culture. We know it is easy for the capitalist to have a beautiful garden, where the cost is not counted; but what we want is beautiful gardens that shall sustain themselves. If these hasty notes are deemed worthy of your notice, and shall have the effect to induce others "to go and do likewise," we shall feel amply rewarded. J. W. P.

Danvers, May 25, 1851.

APPLE TREES.

Old trees should be thoroughly scraped and then washed with lye or whitewash; the grass should be kept from growing around every tree. Compost is good to be put around the trunk of the tree to prevent the grass from growing and to nourish the tree. Meadow muck may be used to prevent the grass from growing and keep the ground light around the tree. If trees are managed in this way the borer may easily be detected in his work of destruction. Perhaps some of your readers will say that their orchard is not troubled with borers, for they never saw one in their life. Perhaps some think there is no such thing as an apple tree borer—they imagine it is a sort of an editor's whim; but I would say to each and every farmer to examine his trees and see if he cannot find such a thing as a borer. They are about sure to destroy a young tree if left to grow uncultivated in the grass land. They deposit their eggs in August, the grub is hatched in May or June. The young borer soon beds himself into the tender bark near the ground, and in the following fall he beds himself into the wood and then takes his course up the tree from six to twelve inches. The second summer he bores out of the tree and becomes a fly.—The borer may be easily detected by the chips that he throws out resembling saw dust; he may be killed by cutting the bark off around where he has worked, or if he has gone into the wood, by inserting a wire into the hole. If the grass is kept away from the trees the farmer can look to his trees as he passes by them during the summer, and if there are any borers he will see their works. Trees managed in this way become hard near the ground, therefore it is very difficult for the young borer to get into the bark.

Trees that do not bear good fruit should be grafted. I usually set about two-thirds of the grafts that I intend to have set in the trees the first spring, and the remainder the next spring. About the third or fourth year I take all of the old top off; care should be taken to keep the sprouts off, for if suffered to grow they will injure the grafts very much. This rule will not apply to young and thrifty trees; they should not be trimmed so much. The farmer must use judgment about trimming his trees and see that the grafts get a proper growth. If the graft grows after the leaves begin to fall from other apple trees, nip the end of the graft and then it will become hard for winter and not die, as it will if left to grow late in the fall.—In most cases one graft grows faster than the other that is set in the same stalk; if so, when the grafts are from two to four years old, insert a saw between the grafts and saw the smallest one out, and then the stump will heal over and form a much better limb than if both were suffered to remain.

Young trees that spring spontaneously on the farm should be taken up and set in some choice place near the house, and budded in August. It

is much the best way to take up little trees and cut the tap root off and set them in light land, for in this way when the tree is old enough to set it will have a good set of roots; the tree may be taken up the second time without much injury. If left to grow in its natural place until it is large enough to set, if the borers do not destroy it, it will be very difficult to take it up without injuring the roots. Every farmer should have a nursery of young trees to be cultivating when he has leisure time. Let every farmer do his own grafting and budding. If you do not know how, employ some experienced hand to learn you. What if it does cost you one or two dollars; you will get your pay ten fold Some say they have no time, they cannot do it because they have so much to do on the farm; but every farmer has time enough to take care of his apple trees. How many farmers go to the store or tavern and spend their leisure time talking about their neighbors and cursing the book farming. How much better it would be for them if they would stay at home and cultivate their apple trees.

Let every farmer commence this year and resolve in his mind that he will do something for his apple trees this year. Don't wait until next year, for next year will never do it.—Noah W. Hardy.—*Granite Farmer.*

MANAGEMENT OF SOILS.

A soil would never get exhausted, if managed with skill, but would continue to improve in depth and fertility in proportion to the industry bestowed upon it. The food of plants, it is true, may be exhausted from the soil by a repetition of cropping with any one family of plants, if we neglect the application of such fertilizers as may have been taken from the soil by that family; but no part of the growing season is required for the soil to rest, or be fallow, if judiciously managed by a successive varying of the crops, or by supplying to them such food as may be a compensation for what has been taken off by the previous crop. The first object to be attained for securing a certain and profitable return of produce from the soil must be *the rough drainage;* the next object is, *breaking into the subsoil* to the desired depth—not without first considering whether it is proper and profitable to shift or turn up the subsoil at once to the influence of the atmosphere, or whether it be best to break into it well first, by shifting the surface soil and allowing the subsoil to remain and receive—first the beneficial influence of the atmosphere, and then—at the trenching, a portion of the subsoil may be safely stirred up and mixed with the surface soil; this practice continued for every succeeding crop, will establish a healthy fertilizing surface soil to any desired depth.

If repeated stirrings of the surface are adopted, according to the nature of the soil and weather, every growing crop will continue in healthy luxuriance, without ever suffering by receiving injury from too much moisture, drought or frost. In addition, by constantly scarifying, hoeing and forking the surface soil, not only obnoxious insects and their larvæ are expelled, but weeds would never make their appearance, much less have a chance of committing their accustomed robbery of the soil and crops. Besides, by such repeated stirring, the soil is always prepared, sweet and healthy, for succeeding crops—no mean consideration, either, when we observe the loss of time and produce occurring to such a ruinous extent in some localities, by allowing weeds to rob and choke the growing crops, and to shed their seeds, productive of a progeny similarly injurious to the crops next in rotation.

The application of manure is most essential, and may be applied most beneficially when the soil is established in a healthy condition, and maintained thus by a constant attention to surface stirring. Yet the application of manure is a secondary consideration; for though it may be very liberally applied, and with considerable expense, yet, without first insuring the healthiness of the soil, much property and labor will be sacrificed.—*Cottage Gardener*

PREPARATION OF BONES FOR MANURE.

A great obstacle to the use of bones as manure, in this country, has heretofore been the expense of preparing them. The modes usually adopted, have been to crush them in mills designed for the purpose, or to mix them with sulphuric acid. Latterly the process of pulverizing by steam has been resorted to in Britain, and where large quantities are to be prepared, this plan may be more economical than either of the others named. But we cannot see why bones may not be more cheaply pulverized by *fermentation.* In a fresh state, they contain a large per centage of nitrogen, which under favorable circumstances causes them to undergo a strong fermentation. We have known a few instances of their being mixed with unleached wood-ashes, in a heap, with a covering of muck to absorb the gases which might be evolved; the mass soon began to heat, and by being turned over a few times, the bones became sufficiently reduced for use as manure. A writer in the *North British Agriculturist* gives an account of a mode adopted by him for reducing bones, which is worthy of notice. He says:—

"A quantity of bones, in a crushed state, was mixed with an equal bulk of common sand, and well watered; the whole was then covered over with a coating of coal ashes, about 6 inches thick; this was done to prevent as much as possible the escapes of ammonia. In a few days after I found, however, that the moistened bones began to generate intense heat, which soon brought on putrification. The size of the heap next showed to have lessened considerably, and on being examined into, the bones were found to have disappeared, save a small portion of the outside; even these were corroded from the effects produced by internal decomposition. In fine, the appearance of the heap was changed to a blue mouldy, gelatinous substance, which if touched with the back of a spade, or even rubbed between the hands, could be reduced to a fine powdery texture.—*Albany Cultivator.*

WALNUT LEAVES IN THE TREATMENT OF DISEASE.

Dr. Negrier, physician at Angiers, France, has published a statement of his success in the treatment of scrofulous diseases, in different forms, by preparations of walnut leaves. He has tried the walnut leaves for ten years, and out of fifty-six patients, afflicted in different forms, thirty-one were completely cured, and there were only four who appeared to have obtained no advantage.

The infusions of the walnut tree leaves are made by cutting them and infusing about a good pinch

between the thumb and fore-finger, in half a pint of boiling water, and then sweetening it with sugar. To a grown person M. Negrier prescribed from two to three teacupsfull of this daily. This medicine is a slightly aromatic bitter, its efficiency is nearly uniform in scrofulous disorders, and it is stated never to have caused any unpleasant effects. It augments the activity of circulation and digestion, and to the functions imparts much energy It is supposed to act upon the lymphatic system, as under its influence the muscles become firm, and the skin acquires a ruddier hue. Dry leaves may be used throughout the winter, but a syrup made of the green leaves is more aromatic. A salve made of a strong extract of the leaves mixed along with clean lard, and a few drops of the oil of bergomont, is most excellent for sores. A strong decoction of the leaves is excellent for washing them. The salutary effects of this medicine do not appear on a sudden—no visible effect may be noticed for twenty days, but perseverance in it, says M. Negrier, will certainly effect a cure.

As walnut-tree leaves are plenty and cheap enough in America, and as the extract of them is in no way dangerous nor unpleasant to use, and as scrofula cases are not uncommon, a trial of this simple medicine should be made. In directing attention to it, good results may be expected. It is our opinion that every country has within its own borders those medicines best suited to the wants of its inhabitants; to discover where and what those medicines are should engage the attention of our physicians.—*Scientific American.*

HOW CATTLE KILL TREES.

It is a noticeable fact that a tree ever so thrifty and of whatever kind, to which cattle can gain access, and under which they become habituated to stand, will very soon die. In the case of a solitary shade tree in a pasture, or by the road-side, this is of common occurrence. The query may have been suggested, to what this is owing. In the first place the rubbing of a tree by the necks of cattle is highly pernicious, and if persisted in it will commonly destroy them sooner or later; but if the body of the tree be cased so that their necks cannot touch it, death will ensue just as certainly if they are allowed to tramp the earth about it. But why should tramping the earth destroy the tree? The reason is one of wide and important application to the laws of vegetable growth. *The roots of plants need air*, if not as much, yet just as truly as the leaves and branches. Their case is analogous to that of fishes, which though they must have water must have air also: viz., just about as much as permeates the water. If it be all shut off, so that none which is fresh can get to them, they will exhaust the supply on hand, and then die; precisely as a man in a close room will use up the air he has and then die for want of more.

So the roots of trees and vegetables want air.—When the earth is in a normal or natural condition, it is full of interstices and channels by which air gets to them. But if cattle are allowed to tramp down the earth, and the sun aids their work by baking it at the same time, a crust like a brick is formed, wholly impervious to the atmosphere, and the tree yields to its fate. So a tree cannot live if its roots are covered with a close pavement. They will struggle for life by creeping to the surface and hoisting out a brick here and a stone there, or find a crack where their noses can snuff a little breath; but if fought down and covered over, will finally give it up. So if a tree be thrust into close clay, or its roots are kept under water, it refuses either to be an aquatic or to put up with its abominous prison. It will grow as little as possible and die the first opportunity.—*Prairie Farmer.*

SOWING CORN FOR FODDER.

Mr. Editor :—I observe, in a late number of the Michigan Farmer an inquiry for the best mode of raising corn for fodder, and having tried several different ways, the results may be of benefit to others.

A common, and a very objectionable practice, is to sow broadcast. This requires at least four bushels to the acre, and even with this amount of seed, the growth is not dense enough to keep down the weeds, and as a consequence, the ground is left in a foul condition.

The best way is to sow in drills. First plough and harrow the ground, as if for corn or potatoes; run furrows in one direction, with one horse, about three feet apart; with a hand-basket of corn on the left arm, walk rapidly along side of the furrow, strewing the seed with the right hand, at the rate of about fifty grains to the foot, which will be about two bushels and a half to three bushels per acre. A little practice will enable any one to do this evenly and expeditiously. The seed may be covered in the best manner, by means of a one-horse harrow, a one-horse cultivator, or a two-horse harrow, passed lengthwise with the furrows. Two men will thus put in five or six acres in a day.

The only subsequent culture needed, is to pass a one-horse cultivator between the rows, when the corn is about a foot high. No hoeing is required. Its growth will soon cover the whole ground, and all weeds, no matter how thick they may be, will be completely smothered and destroyed; and when, at the close of summer, the crop is removed, the ground will be left as smooth and clean as a floor. No crop have I ever seen equal to this, for reducing grassy, weedy soil, into mellow condition, in a single summer.

If the crop stands erect, it is most conveniently cut with a stiff scythe. A little practice will enable the workman to throw it all in an even swath, with the heads in one direction, so as to admit of easy binding in bundles. If much thrown down by storms, it may be cut with a corn-cutter. When bound, it is to be put up in large, substantial shocks, to stand several weeks, or till winter, unless the ground is to be sown with wheat, in which case the crop must be drawn off and deposited to dry, elsewhere.

Every beginner spoils his first crop, by its *heating in the stack.* Even after drying several weeks, there is moisture enough in the stalks to cause violent fermentation. The only mode of preventing this disease, is either to leave the shocks on the ground till winter, or to build very small sacks, with three rails placed upright together at the centre, for ventilation, and applying plenty of salt.

Fodder thus grown, and well cured and salted, is greatly preferred, by cattle, to hay. A neighbor thinks three tons are as good as four tons of good hay. It should be grown so thick, that the stalks will be quite small; then they will be wholly eaten by cattle, and none lost.

I have tried different quantities of seed per acre, and find that a much less rate than about three bushels is attended with a diminished crop, although the stalks may be taller. One bushel per acre will yield but little more than half as much.

I usually obtain, on land that will yield thirty or thirty-five bushels of corn per acre, from four to six tons per acre of dried fodder. Counting all expenses, including interest on fifty dollars per acre for the land, the dried fodder, as an average for five or six years past, has cost me about one dollar and a half per ton. Hay is usually sold here for six or seven dollars a ton, and sometimes for ten. Yet it is astonishing how reluctant our farmers are in adopting the corn fodder cultivation. I hope the farmers of Michigan may set a better example of economy.

The best variety of corn appears to be that which will afford the greatest number of stalks to the quantity of seed sown. Coarse fodder is not as good as fine. A rather moist soil is best, as immense quantities of moisture are thrown off by such a mass of leaves.

Besides the cheapness of this crop, and the great ease of its cultivation, it possesses the following advantages: 1. It may be sown after the hurrying work of spring is accomplished, or at the end of spring, or early in summer. 2. It may be harvested after the wheat and hay crop are secured, or during the comparatively leisure season at the close of summer. 3. Not yielding any grain, it does not exhaust the soil, and is, perhaps, the best crop to precede wheat. 4. It is an admirable crop for smothering and destroying weeds and grass.

A brief glance at the advantages of the general cultivation of this crop may not be out of place. The value of the annual hay crop in the United States is about one hundred millions of dollars. Those who have already adopted the corn fodder crop, winter their cattle at less than 1-2 their former expense. Would it, therefore, be extravagant to believe that 1-4 of the present expense in the use of hay throughout the country would be saved by its general use? Yet one quarter is about twenty-five millions of dollars yearly—enough to endow agricultural schools, and build railroads, by the score—and is well worthy of some exertion for its introduction at large. T.

Macedon, N. Y., 3d mo. 21, 1851.

Michigan Farmer.

VALUABLE AND EASY.

A cure that costs neither money nor trouble is valuable. Chambers's Journal says of "Corns:"—

"There is, no doubt, some quackery in the corn-doctor's trade, but there is more ignorance. For the benefit of both him and his patients, we will now disclose a secret which will relieve humanity from a load of misery, not the less difficult to bear, that it is unpitied or ridiculous. The cause of corns, and likewise of the torture they occasion, is simple friction; and to lessen friction, you have only to use your toe as you do in like circumstances a coach-wheel—lubricate it with some oily substance. The best and cleanliest thing to use is a little sweet oil, rubbed upon the affected part (after the corn is carefully pared) with the finger, which should be done on getting up in the morning, and just before stepping into bed at night. In a few days the pain will diminish, and in a few days more it will cease, when the nightly application may be discontinued.

Mechanics' Department, Arts, &c.

GLAZING EARTHERN WARE.

Messrs. Editors:—I see in a late number of the Prairie Farmer an erroneous statement concerning earthern ware which I wish to correct. I have been engaged in manufacturing black and brown earthern ware for about 40 years, and have succeeded in making some improvements in the business; and I must say I am surprised to find any one so ignorant at this time and in this day of improvement in science as to reiterate the old and exploded notion that brown or glazed ware is poisonous when made of the proper material and properly burnt. As for cobalt being used in glazing I have never heard of such a thing before, but if the materials of which glazing is composed were in some degree poisonous before being combined and burnt, the action of heat reduces the whole to solid glass, and in that state I positively assert that no more poisonous substance can be extracted from an earthenware pot or dish properly made than from a glass tumbler; but those who have tin have all the benefit of whatever poison there may be in our glazing before it is manufactured—now as there is no substance or acid known in chemistry, except one, that will decompose or reduce glass to its original shape, much less liquids used in culinary purposes, there need be no alarm about poison in glazed ware provided that glazing is run smooth, which shews it has undergone a proper state of fusion; but there is danger of using jars for preserves if they are not made of good clay that burns hard and makes a solid body, in which case the glazing will come off in scales, and of course it will kill a dog to eat broken glass. The way to tell good ware from poor is by the sound; if it rings clear it is good. As to so many having been poisoned with a pie, I don't believe the poison was from the dish, but in the chicken or something else. It puts me in mind of a man who fell from his horse and broke his neck, and a quack found out he had taken a dose of calomel some years before, so he declared he came to his death by the use of calomel. S. McAfee.

Prairie Farmer.

LITHOGRAPHY.

THE ART OF PRINTING FROM STONE.

The process of lithographing 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 surface of a dry slab of 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 passes through the press;

the result being a beautiful and exact copy of whatever is drawn.

The stone employed for lithography is of a peculiar kind of lime and clay nature, resembling in appearance a smooth yellow bone, yet possessing the quality of absorbing water. It is found chiefly in Bavaria, 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. They are worth, in New York, from 5 to 10 cts. per pound. —*N. Y. Sun.*

NEW BARREL MACHINE.

The Glasgow Daily Mail says:—An invention has been patented for constructing casks, barrels, puncheons, and everything in the cooperage line, in a space of time which literally baffles belief. One of the machines is at present in operation at the St. Rollox works. We have inspected it, and were certainly astonished to find the staves of an ordinary sized cask prepared, put together, and headed in little more than ten minutes. The thing was perfect—the cutting and joining were done with mathematical precision, and all the hands had really to do, was to arrange the staves and fix the heads; all the rest was accomplished by machinery, and with so little trouble, that the article was finished before one could fancy that a hoop was on, The mechanism, like that of almost all important inventions, is exceedingly simple; the only wonder is, when it is examined, how so clear and easy a mode of doing a great deal of work with a very small amount of labor has not been hit upon before now. The patentee of this great invention is Mr. James Roberston, of Liverpool.

We should not be surprised to find it a modification of an American invention, judging from the brief description in the Mail.—*Far. and Mech.*

Ladies' Department.

FOOD AND DRINKS FOR THE SICK.

As this is a season of the year when more or less sickness prevails, we have thought that we could not perhaps render better service to our female friends than by giving a few recipes for cooking or preparing food and drinks for sick persons. Many benevolent families, which are blessed with health themselves, may have sick and poor neighbors, for whom it would be a merey and also a privilege to procure and send occasionally a nice dish, if they only possessed the requisite knowledge for preparing it. To such we recommend the following chapter, with the hope that when occasion offers they will not be slow to put in requisition the knowledge it affords. We copy them from that true friend of American housewives, Mrs. Beecher.—*Rural New-Yorker.*

General Remarks on the Preparation of Articles for the Sick.—Always have everything you use very sweet and clean, as the senses of taste and smell are very sensitive in sickness. Never cook articles for the sick over a smoke or blaze, as you will thus impart a smoky taste. When the mixture is thick, stir intently to prevent burning. Be very careful, in putting in seasoning, not to put in too much, as it is easy to add but not to abstract.

The nicest way to flavor without lemon or orange peel is to rub loaf sugar on the peel till oil is absorbed into it, and then use the sugar to flavor and sweeten. Herbs and spice, when boiled to flavor, should be tied in a rag, and they will not then burn on the vessel at the edge.

Chicken Tea is made by boiling any part of the chicken, and using the broth weak, with only a little salt.

Chicken Broth is made by boiling chicken a good deal, and skimming very thoroughly and seasoning with salt. A little rice or pearl barley improves it, or a little parsley may be used to flavor it.

Chicken Panade is made by pounding some of the meat of boiled chicken in a mortar, with a little broth, and also a little salt and nutmeg. Then pour in a little broth and boil it five minutes. It should be a thick broth.

Milk Porridge.—Make thin batter with Indian meal and wheat flour, a spoonful of each, and pour into it a quart of boiling milk and water, equal portions of each. Salt it to the taste. Boil ten minutes.

Rice Gruel and Corn Meal Gruel.—Make a thin paste of ground rice or Indian meal, and pour into boiling water, or boiling milk and water. Let the rice boil up once, but the corn meal must boil half an hour. Season with salt, sugar and nutmeg. A little cream is a great improvement.

Arrowroot and Tapioca Gruels.—Jamaica arrowroot is the best. Make a thin paste, and pour into boiling water, and flavor with sugar, salt and nutmeg. A little lemon juice improves it.

Tapioca must be soaked in twice the quantity of water over night, then add milk and water, and boil till it is soft. Flavor as above.

Dropped Egg.—Salt some boiling water, and drop in a raw egg out of the shell, taking care not to break the yolk; take it up as soon as the white is hardened. Dip some toast in hot water and put salt or butter upon it, and lay the egg on to it.

Herb Drink.—Balm tea is often much relished by the sick. Sage tea is also good. Balm, Sage and sorrel, mixed with sliced lemon, and boiling water poured on, and then sweetened, is a fine drink. Pennyroyal makes a good drink to promote perspiration.

Herb drinks must be often renewed, as they grow insipid by standing.

Other Simple Drinks.—Pour boiling water on to tamarinds, or mashed cranberries, or mashed whortleberries, then pour off the water and sweeten it. Add a little wine if allowed.

Toast bread very brown and put in cold water, and it is often relished. Pour boiling water on to bread toasted very brown, and boil it one minute, then strain it and add a little sugar and cream.

Simple Wine Whey.—Mix equal quantities of water, milk and white wine. Warm the milk and water, and then add the wine. Sweeten to the taste.

A Great Favorite with Invalids.—Take one third brisk cider, and two-thirds water, sweeten it, and crumb in toasted crackers, and grate on nutmeg. Acid jellies will answer for this, when cider cannot be obtained.

Water Gruel.—To two quarts of boiling water, add one gill of Indian meal and a heaped table spoonful of flour, made into a paste and stirred in

the water. Let it boil slowly twenty minutes. Salt, sugar and nutmeg to the taste.

Sago for Invalids.—Wash one large spoonful of sago, boil it in a little water, with a pinch of salt and one or two sticks of cinnamon, until it looks clear; then add a pint of milk, boil all well together and sweeten with loaf sugar.

STUDY THE CHILD'S CAPACITIES.

If some are naturally dull, and yet strive to do well, notice the effort and do not censure the dulness. A teacher might as well scold a child for being near-sighted, as for being naturally dull.—Some children have a great verbal memory, others are quite the reverse. Some minds develop early, others late. Some have appeared stupid, because the true spring of character has never been touched. The dunce of a school may turn out in the end the living, progressive, wonder-working genius of the age. In order to exert the best spiritual influence, we must understand the spirit upon which we wish to exert that influence. For with the human mind we must work with nature, and not against it.—Like the leaf of the nettle, if touched one way, it stings like a wasp; if the other, it is softer than satin. If we then would do justice to the human mind, we must find its peculiar characteristics, and adapt ourselves to individual wants. In conversation on this point with a friend who is the principal in one of our best grammar schools, and to whose instruction I look back with delight, "Your remarks," said he, "are quite true; let me tell you a little incident which bears upon this point. Last summer, I had a little girl who was exceedingly behind in all her studies. She was at the foot of the division, and seemed to care but little about her books. It so happened that as a relaxation, I let them at times during school hours unite in singing. I noticed that this girl had a remarkably clear, sweet voice; and I said to her, 'Jane, you have a good voice and you may lead in the singing.' She brightened up, and from that time her mind seemed more active. Her lessons were attended to, and she soon gained a high rank. One day as I was going home, I overtook her with a school companion. 'Well, Jane,' said I, 'you are getting along very well; how happens it you do much better now than at the beginning of the quarter?'

"'I do not know why it is,' she replied.

"'I know what she told me the other day,' said her companion.

"'And what was that?' I asked.

"'Why, she told me she was encouraged.'"

Yes, here we have it—she was encouraged! She felt she was not dull in everything. She had earned self-respect, and thus she was encouraged.

Some twelve or thirteen years ago, there was in the Franklin School an excessively dull boy. One day the teacher wishing to look out a word, took up the lad's dictionary, and on opening it found the blank leaves covered with drawings. He called the boy to him.

"Did you draw these?" said the teacher.

"Yes sir," said the boy, with a downcast look.

"I do not think it is well for boys to draw in their books," said the teacher, "and I would rub these out if I were you; but they are well done. Did you ever take lessons?"

The boy felt he was understood. He began to love his teacher. He became animated and fond of his books. He took delight in gratifying his teacher by his faithfulness to his studies; while the teacher took every opportunity to encourage him in his natural desires. The boy became one of the first scholars, and gained the medal before he left school. After this he became an engraver, laid up money enough to go to Europe, studied the works of masters, sent home productions from his own pencil, which found a place in some of the best collections of paintings, and he is now one of the most promising artists of his years in the country. After the boy gained the medal, he sent the teacher a beautiful picture as a token of respect; and I doubt not, this day he feels that teacher, by the judicious encouragement he gave to the natural turn of his mind, has had a great moral and spiritual effect on his character.

A HAPPY HOME.

Almost any one can be courteous in a neighbor's house. If anything goes wrong, or is out of time, or is disagreeable, there it is made the best of, not the worst; even efforts are made to excuse it, and to show it is not felt; or if felt, it is attributable to accident, not to design; and this is not only easy but natural in the house of a friend. I will not, therefore, believe that what is so natural in the house of another, is impossible at home, but maintain, without fear, that all the courtesies of social life may be upheld in domestic society. A husband, as willing to be pleased at home, and as anxious to please as in a neighbor's house, and a wife as intent on making things comfortable every day to her family, as on set days to her guests, could not fail to make home happy.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

☞ Also published at the same office *every* Saturday, on a large handsome folio sheet, the New England Farmer and Boston Rambler, an independent Journal, devoted to Agriculture, Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and the usual variety of Literary and Miscellaneous matter, adapted to family reading. Letters from Home and Foreign Correspondents will appear from week to week, together with a variety of contributed and selected articles of a Literary, Scientific, Historical, Biographical, Humorous and Juvenile character, short Moral Tales, &c.; containing more reading matter than any other Agricultural Family Newspaper published in New England. Every thing of a hurtful or even doubtful tendency will be carefully excluded from our columns.

Terms, $2,00 per annum in advance. At the close of the year, the publishers will bind the semi-monthly Farmer gratis for any person who subscribes for both publications, paying one year in advance for each.

☞ The Semi-Monthly Farmer contains nearly the same matter as the Agricultural department of the weekly.

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☞ When subscribers wish to change the direction of their papers, or when they return a copy to this office, they will please be *particular* to name the Post Office, and State, to which it has been sent, as well as the one to which they wish it directed; as it often happens that two or more of our subscribers are of the same name, and annoying mistakes have occurred in consequence.

☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston.

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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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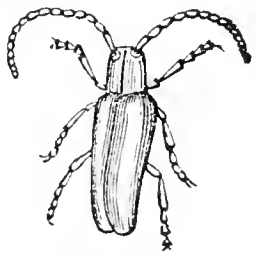
RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

THE APPLE TREE BORER.

One of the greatest of all evils that the fruit grower has to contend against is the apple tree borer, which also attacks the quince, mountain ash, white ash, locust, hawthorn and the aronias.

This borer is the larva of the two-striped saperda, (*Saperda bivittati*,) which is truly represented by the following cut. This is the beetle or insect in its perfect state.



This figure shows the size of the insect. The upper part of the body is marked by two longitudinal white stripes, among others of a light brown. The face antenuæ, the under side of the body and legs are white.

This beetle comes forth from the tree in June, in the night, flying from tree to tree for food or companions, resting in the day time among the leaves on which it feeds. In June, July and sometimes in August, it deposits eggs on the bark of the tree, at or near the ground.

The larva or young borers from these eggs are fleshy, round, whitish grubs, without legs. This grub eats through the bark, and remains there the first winter. The next season it penetrates the wood, throwing out dust or cuttings, like saw dust, by which it may be traced, generally ascending, as it proceeds, and boring deeper into the tree. Its whole passage is usually about 12 to 15 inches. It becomes a full grown borer as here represented.

The third season, nearly two years from its entrance, it approaches the surface, where it undergoes its final transformation, becomes a beetle and leaves the tree.

Rarely the borer *gets off the track*, and descends; sometimes it enters the tree several feet above the ground, and seldom it enters the limbs of the tree.

Keep the trees well washed and the bark smooth, and keep the grass, weeds, and rubbish away from the trees that they may be examined conveniently. During the time of depositing the eggs, wash the trees occasionally with a rather strong lye of wood ashes, or a solution of one pound of potash to two gallons of water. A strong lye is liable to injure the trees. These and other corrosive substances may destroy the eggs, or annoy the insects; but they are not always sure. The borers may enter between the roots that branch high, where washes do not affect, or the eggs may not be destroyed; therefore keep the trees smooth and clear of every thing around them, and examine them often; and when the young borers have just penetrated the bark, they are easily destroyed. So attend to them the first season.

Make a wash of two quarts of soft soap, or whale oil soap, half a pound of sulphur and two gallons of water. Add also camphorated spirit, asafœtida, tobacco and other offensive substances, and wash the tree with it. A little clay or lime added will make a coating holding these substances, which may be offensive to the beetle or young borers, and prevent their operations.

After the borers have penetrated the trees they may be cut out with a chisel or gouge: or they may be destroyed by running a wire or other flexible substance into the hole. They have also been destroyed by putting a match of burning brimstone into the hole, or a piece of camphor and plugging the hole.

Whale Oil Soap. — In answer to the inquiries of a subscriber on this subject, we remark that this article can be had at the agricultural stores in this

city. It is put up in cases at a dollar each. Sometimes in tin cans at 50 cents each. It is a cheap wash, as it is very strong, and is diluted with a large quantity of water.

To wash the bodies of trees, add only a small quantity of water, that it may be very strong. But to kill insects on the foliage of trees, use 36 parts of water to 1 of soap; and then it must not be applied in a hot sun, but when the sun is nearly down, or when it is cloudy.

STEWART'S PATENT STUMP MACHINE.

In our paper bearing date of February 1st, we gave our readers a representation of this machine. We would again call attention to it, for the purpose of describing its operation, which we had the pleasure of witnessing on the 4th inst.

The machine consists of a *beam* or *lever*, thirty feet long, a *chain* of twelve rods, and *shears* about sixteen feet in perpendicular height; *scissors* about six feet in height may sometimes be substituted for these. At five feet from the end of the lever a chain is attached, which, being passed round a stump or rock, forms the fulcrum on which the lever turns. The chain is attached to the other side of the lever at distances from one to five feet from the fulcrum. The weight of the chain is about two thousand pounds; but as it is divided into sections of eight or ten feet, it is not difficult of transportation, and the weight is of much advantage in the operation of the machine. By applying a power of one ton at the long arm of the lever, it may be made to exert a force upon the stump equal to four hundred tons.

The exhibition which we witnessed was in Fitchburg, upon a field owned by Rev. Mr. Trask, of that place. This field had been covered with a growth of pines, which were cut off three years ago, and the stumps had begun to show but slight signs of decay. At 9 o'clock, A. M., two or three hundred people were present, and many hundreds more must have witnessed the operation during the day. Among these were many practical farmers and mechanics, who manifested much interest in the exhibition, and perfect satisfaction as to the result.

During the two hours we were present, we saw about thirty stumps pulled, varying from one to two and a half feet in diameter, and having roots extending in some instances over a circle of twenty-five or thirty feet. By using the shears the largest stumps were drawn out in four or five minutes, and simply by means of the lever, five smaller ones were removed in less than ten minutes. It was not necessary to move the machine to effect this, since nearly three acres can be cleared with it in the same position. Three or four stumps can be pulled at once when near each other, with nearly as much ease as one; and to remove one hundred from a field would be no more than a day's work for three men and a pair of horses or oxen.

These machines are manufactured by Messrs. Willis & Kilburn, of Orange, Mass., at a cost of about three hundred dollars, including the right of use in two or three towns.

The ease, regularity and quickness with which this machine performs its work, must recommend it to the consideration of all who have such work to be done; and as the cost is not great, there should be at least one in every neighborhood. It needs only to be seen to have its utility duly estimated, and it will at once supercede the old method of digging out the stumps, at a greater expense, and a useless sacrifice of time.

We hope other agricultural papers, particularly those at a distance, will notice this machine, and the manner of its operation, and thus aid in giving it that extensive popularity which it deserves.

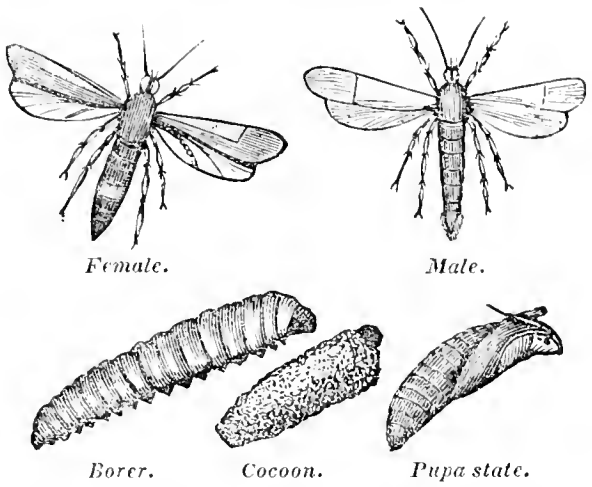
CORN FOR FODDER.

There is no plant cultivated in this country that yields so large a crop of excellent green and dry food for stock as Indian corn. It also affords the advantages of rapid growth and easy culture. As a substitute for pasturing, it is one of the very best, being almost equal to luxuriant grass, and far superior to scanty herbage, which is frequently all that cattle can obtain, in time of drought, which often occurs late in summer and early fall. When corn is grown of a suitable size, and well cured, it is equal to good hay for winter food.

In the older parts of the country, particularly among milkmen around cities and large towns, corn for fodder has been considerably cultivated for several years; and they know the value of it well. But in the interior, farmers have paid less attention to the subject, and in consequence, in time of drought, late in the season, they often have to feed their cattle from the barn to supply the deficiency of pasturage; and in this way they reduce their winter supply for fodder, which is already sufficiently small.

It is yet in season to plant corn for late green crops, or of dry fodder. If the land be rather coarse and rough, harrow frequently, until the soil becomes a fine tilth, manure well and mix the manure intimately with the soil. Wood ashes is an excellent manure in part. Sow pretty thick in rather broad drills about three feet apart, and when the plants are sufficiently large, run the cultivator between the drills, and give a light dressing with a hoe. No more cultivation will be needed, as the plants will soon shade the land and keep down the weeds. Will farmers who have never tried the value of fodder corn, make an experiment on a small scale?

When the heart is pure, there is hardly anything which can mislead the understanding in matters of [illegible] concernment.



Female. *Male.*

Borer. *Cocoon.* *Pupa state.*

THE PEACH TREE BORER.

Ægeria exitiosa.

We have recently published some articles on the peach tree borer and the mode of destroying it. We now give our readers a representation of it in its different stages, with a description; and we hope that all who have peach trees will examine them thoroughly, and not allow an insect to which they have easy access, and which may be prevented from its operations by timely care, or arrested with facility in its course of destruction, to destroy beautiful flourishing trees that yield one of our most luscious fruits.

The perfect insect resembles a wasp. The sexes differ widely. The body of both is mostly steel blue; the wings of the male are transparent, bordered and mixed with the same blue color. The fore wings of the female are blue and opaque; the hind wings like those of the male. A broad orange belt in the middle of the abdomen. During the summer, the eggs, of a dirty white hue, and scarcely perceptible to the naked eye, are laid on the tree, at or very near the surface of the ground, in little punctures, and covered with greenish slime. In a few days they hatch, and the young, whitish worms eat through the bark, and girdle the tree, passing between the bark and sap wood, eating both.

Some observers of this insect say that when nearly a year old, they make their cocoons, usually below the surface, and soon change to the pupa state, and shortly come forth in the winged state as represented in the cut. This insect prevails to a great extent, especially in the old States, and is very destructive when great care is not taken to prevent their increase or destroy them.

In a late number of our paper, a correspondent remarks that the borer stays in the tree the second year. Perhaps this is the case with those that hatch late, while those that hatch early may come to the perfect state the second year. They are found of various sizes, through the season.

☞ A young man who has recently taken a wife, says he did not find it half as hard to get married as [illegible] by the [illegible].

TO DESTROY INSECTS.

One of the most convenient and effectual modes of destroying numerous insects of various kinds, among fruits, is to hang among the trees and bushes transparent bottles, filled two-thirds or three-quarters full of water sweetened with molasses. Insects of almost evey description will enter these bottles and be drowned. When they become full, empty them, and renew the sweetened water.

Pitchers, mugs, and other similar vessels, filled one-half or two-thirds full of sweetened water, and hung in the trees obliquely, or as they will naturally hang by the handle, will answer the same purpose. When many of these vessels are hung in a fruit garden near the house, flies and other insects become scarce in the house, in consequence of the vast numbers destroyed in this way.

NOTICES OF PUBLICATIONS.

Patent Office Report.—We have received the second part of this report, which is on the subject of agriculture. It contains an account of the progress of agriculture in different sections of the Union, tables of statistics, and a large amount of valuable practical matter. As it has been prepared by Dr. Lee, who is well known for his zeal and intelligence in this cause, it may well be supposed that this is much superior to any previous reports on this subject, which have too often been made up of a large promiscuous mass of matter, without the exercise of a sound judgment as to its value.

The Complete Fruit and Kitchen Garden contains a large amount of valuable matter in a small space, and at a low price. Hotchkiss & Co., Boston.

ACKNOWLEDGMENTS.

We have received of Capt. Amos Perry, South Natick, some sweet apples, of a moderate size, yellowish russett color. The quality is very good, and they keep well. We do not know the name.

Of Mr. Bowen Harrington, Lexington, Baldwin and other apples, very fresh and excellent for the season, that were kept on a board, in a barn cellar, exposed to the air ever since they were taken from the trees.

Rye Flour, when made into good light bread and allowed a day or two to ripen, is very nutritious and wholesome. 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. All grains and roots which have much starch in them undergo a great change in their chemical composition by baking—flour becomes more nutritious, and more easily digestible, because more soluble. This is also the case with flour; that is, the starch, gluten and sugar of potatoes, when baked, or what is still better, when roasted in the hot embers of an old-fashioned farm-house fi[illegible]

For the New England Farmer.

WHITE WEED---STRAWBERRIES.

Mr. Editor:—Dear Sir,—What is to be done with what is commonly called *White Weed*, to eradicate it from our pastures? Upon the authority of some of our agricultural publications, I have, for the last three or four years, mowed it just before flowering. But it seems this year as if there were a hundred flowers where there was but one last season. Sheep, it is said, by being turned upon the lot, will soon destroy it. But the sheep I pasture are cows, and they don't touch it in any stage of its growth. It would seem as if I had tried the scythe long enough, provided it springs from *seed* and not from *roots*.

I notice in your number just received, that in speaking of strawberries, you say, "*Willey is much the same, if not identical with the Hudson, cultivated so extensively about Cincinnati.*" Now it would be presumptuous in me to enter the lists against you. So, presuming that the author of the "American Fruit Book" writes from knowledge, I am bound to conclude that I have not the *genuine* plants of one or both of these varieties of the strawberry.—True, the Willey was obtained from the late President of the Massachusetts Horticultural Society, and the Hudson from Mr. Ernst, lately and perhaps at present President of the Cincinnati Horticultural Society; affording a presumption that each variety was genuine. But one or the other is false, if your remark is true. For I should as soon say of the pine-apple and peach that they were very much the same, if not identical, as of the fruit of these different vines. If great difference in form, color, flavor of fruit, as well as foliage of plants, gives presumptive evidence of difference in variety, then are the Willey and Hudson, as grown by me from plants procured as stated above, as unlike each other as possible. May you not be mistaken in the genuineness of your plants?

Yours respectfully,

Worcester, June 7. William Lincoln.

Remarks.—We know of no remedy for the White Weed, excepting thorough and good cultivation. This will subdue it in tillage; and when the land is laid down to grass in good condition, the luxuriance of this crop will check it; but if the land be not kept in good condition by top-dressing, or frequent tillage and manuring, the grass will fail, and white weed come in as a rotation to occupy the poorer soil. When this plant first makes its appearance in a lot, it should be thoroughly eradicated just as it begins to blossom, so that there will be neither root nor seed for it to start from. Will some of our readers give us more light on this subject?

As to the Willey strawberry, ours came from Mr. F. R. Elliott, of Cleveland, Ohio, through the nursery of C. Downing, Esq. We were informed that Mr. Elliott considered it very similar to, if not identical with, the Hudson cultivated about Cincinnati, and we considered our authority good, and have made our statements accordingly. Yet we may mistake, and our correspondent is liable to mistake also. Let who will mistake, we are pleased that he has called in question our statement, that we may have the subject investigated.

We should be pleased to exchange plants with him for more thorough examination. But who shall decide what the true Willey is? Mr. Elliott raised from this strawberry one of the largest and most profitable crops ever raised in this country. Will Mr. Lincoln have the goodness to inform us and our readers which of his two varieties that he has mentioned are the best, and how they compare with our most valuable kinds generally cultivated. This information will be useful to many cultivators, as the Willey, and the Hudson of Cincinnati, are but little known in this section. In the vicinity of Cincinnati, the Hudson is preferred decidedly to any other variety.—Editor.

For the New England Farmer.

AGRICULTURAL PAPERS---FARMING---CHICKENS.

Mr. Cole: — I was a subscriber to your New England Farmer the first two years of its existence, and then I thought I would rest awhile; but I felt its loss, and early in the spring I again subscribed, receiving the back numbers. I find it an interesting and useful paper for the farmer, containing many valuable suggestions and the experience of men who have devoted their energies to this department of labor.

Some men pursue this occupation as secondary to some other business, supposing that it cannot be rendered a source of profit. Perhaps they may have inherited some land, and cultivated it as their fathers and grandfathers did before them, themselves depending upon professional, mercantile or mechanical business for their gains. I grant that oftentimes much more money may be made in a given time by one of these occupations than by cultivating the land; but then the cultivation of the soil affords sources of pleasure and real profit to the reflective mind which these do not.

I think you stated that one of your objects in the publication of this paper was to elicit facts. I have one to communicate respecting some fowls which I am raising. I have four chickens which were hatched the second day of last April. Three of them are a cross of the Black Italian, and one of them I think is the Lawrence breed. I went to my barn early in the morning the day they were thirty-eight days old, and found them upon the hen-roost, sitting there at a distance of five or six feet from the floor, having been obliged to fly up there the night before. I weighed them at 59 days old, and the four weighed 5 lbs. 14 ozs. They have received no extra care, having been hatched in a cold, rainy season. This I think is an uncommonly rapid growth.

M. W. Putnam.

North Danvers, June, 1851.

Remarks.—We are pleased that Mr. Putnam found an inconvenience or loss in doing without an agricultural paper; and it would be well if many others were aware of the loss they sustain in this way.

It is no wonder that there should be so many different opinions about the profits of farming, as good

farming requires skill and experience, also industry and economy, to make it profitable; and how can a person succeed who does not possess these requisites to success, and does not exert himself to acquire them, for such there are; but we are happy to say that such farmers are growing less and less in number. The general spirit of improvement that now pervades the land is arousing almost every one to action.—Editor.

ANALYSES OF THE PEACH TREE.

Having observed in a late number of the Ohio Cultivator an analysis of a seedling peach tree by Prof. Emmons, as well as my analysis of some cultivated kinds, and there appearing to be considerable difference in comparing the two together, which might induce with some persons not thoroughly conversant with such subjects an opinion that there was some quackery in the case, I have thought it necessary to present a comparison of the two analyses in a different form, more intelligible.

Prof. Emmons, it will be seen, has separately analyzed the wood of limbs, bark of limbs, wood of root, wood of trunk, and bark of trunk. But my analysis was of the smaller limbs only. At the same time, I chose the smaller limbs as most likely to contain the largest proportion of the most rare and valuable constituents, as the alkalies and phosphates. The plan of analyzing the different parts of the tree throughout is no doubt preferable to that of some part only, but an analysis of the whole tree would answer every purpose. I have brought the statements of both analyses into nearly the same form, by rejecting the carbonic acid, as an unimportant constituent of plants, as Prof. Emmons has done from his, adding into one sum the materials of one kind in every part of the plant:

Analysis of Professor Emmons.

Potash	10.69
Soda	6.72
Chloride of Sodium	1.25
Sulphuric Acid	6.43
Lime	31.27
Magnesia	6.28
Phos. of Perox. Iron	1.15
Phosphate of Lime and Magnesia	23.72
Organic matter	5.16
Insoluble Silica and Charcoal	7.30
	99.96

Analysis of B. Kirtland.

Potash	16.11
Soda	2.57
Chloride of Sodium	.89
Sulphuric Acid	1.70
Lime	31.97
Magnesia	9.06
Phos. of Perox. Iron	2.80
Phosphate of Lime	27.90
Silica, Sand and Charcoal	5.98
Per. of Manganese	1.02
	100.00

I think it is quite probable that the articles in the above tables that are nearly related in their qualities, as the potash and soda, lime and magnesia, iron and manganese, sulphuric acid and phosphoric acid, may fill the place of each other in the composition of plants in cases where one or the other may be deficient in the soil that supplies them nutriment. Now the potash and soda added differ but little in the two tables—the chloride of sodium rather more—the sulphuric acid is more than three times the amount in the statement of Prof. Emmons of that of mine. Lime about the same. Magnesia one-half more in my account than in Prof. E.'s. Phosphates of lime and magnesia not much different, so of the silica and charcoal. Prof. E. found five per cent. of organic matter, which I did not look for, as there is no such an article mentioned in the rules of analysis I have studied. I found one per cent of manganese, which he did not. We took the most distant extremes in our choice of subjects for analysis. He selected a natural seedling tree of the slowest growth, poorest fruit, and wildest nature. I chose the most highly cultivated kinds, of the finest quality, vigorous growth, in new land, a chesnut ridge, limestone soil, well manured, young trees of the highest vigor, good bearers of fruit; such trees, with their large glossy leaves and bright colored twigs, stocky growth, differ as much from the slender growth, pale color, and lusterless leaves and twigs of the natural, as the wild savage of the wood from the most refined and cultivated person in civilized life. So we may infer that, as the natural and cultivated peach differ so much in their external appearance and the excellence of their fruit, so we will find as much difference in their chemical constitution as our respective analyses would indicate. Nature employs more of the alkalies and phosphates in perfecting the seeds of fruits and grains than in their stalks. So likely in the fine fruits more of these constituents are employed than in the hardy wilding tree.

Billius Kirtland.

Poland, Ohio, March 3. *Ohio Cultivator.*

BREAKING COLTS.

Mr. Editor:—I have concluded to furnish a few thoughts for your excellent paper, upon the subject of rearing and breaking young horses. I consider raising horses as profitable to farmers, in many portions of this State, as any branch connected with our agricultural interests.

But the profit, in rearing horses, depends very materially upon the manner of their training. Indeed, many a noble animal has been spoiled, or nearly so, by bad management in breaking. Often the constitution is so broken, that the naturally nettlesome creature is despoiled of all spirit or ambition.

I would, in the first place, state that there is a great fault among farmers generally, with regard to keeping colts. They should never be suffered to get poor, at least not until four years old. The shape and form, as well as size, of many colts, are materially impaired by poor keeping the first two winters. If a colt is suffered to get down thin in the winter, it will not only require the greater part of summer to get him back where he was the fall before, but his head and limbs will grow large and ill-shaped.

The colt, at weaning, should be put into a field where there is water, with a trough to feed grain; and from that time until one year old, should have grain every day. Many colts are spoiled during the first three months after weaning. Taken from the mare, fat, round and handsome, they are turned where they have but little feed, less water, and no grain, and left to run until almost starved to death—then kept the rest of the winter upon straw, without shelter. In the spring they are lousy, and but just alive, and never so good care afterward cannot make such colts what they would otherwise have been.

Colts should have grain every winter until four years old. I would commence breaking the winter before three years old. See that the colt is in a good, healthy, thriving condition. Never break a poor, weak colt, unless you want to break his constitution. I would get a new rope 7-8 inch in diameter, of which make a slip-halter; a larger rope would be burdensome—one much smaller would be apt to indent the grisly part of the nose, and thus injure the shape of the face. When haltered the colt should not be tied fast, as they will be liable to pull and strain the cords of the neck; but hold the rope with sufficient strength to keep them, slackening up occasionally, to relieve the muscles of the head and neck.

When sufficiently subdued to be managed by one hand, which will generally take but a few moments, the person holding the rope should walk to and fro before him, giving at each side a slight jerk upon the rope, which, in a little time, will learn the animal to follow the string before it is pulled. This should be done daily, until he can be led, or handled, anywhere. Next apply the bit. Never use a curb, but take a bridle with a common snapple bit, with gag reins to hold up the head, and martingals to hold in the nose—the reins attached to a crupper and fastened firmly on the back with a circingle. The reins should not be drawn too tight at first, but may be buckled up occasionally, until drawn close, and kept in this condition the greater part of the day, for at least one week, taking off the bit at night. While bitting, handle, curry, and drive around.

Next put on the harness. Secure, if possible, a harness with gag reins, crupper, martingals, &c.; buckle all up close. After a little, attach to some light vehicle, and drive on a walk—learn a colt to walk first, a quicker pace can be acquired afterwards. A colt should never be put to a load requiring his utmost strength to move, until four years old. Colts may be driven in a harness, with a light load, without injury, much younger than they can be used under the saddle. They should be trained in the stable, to understand and obey all that is said to them. Learn a colt to go, and back, and hold back, by the word of mouth. Never whip, except in the stable. If a young horse is inclined to stop, or balk, as it is called, (when they manifest this disposition) stop them, and never let them know that they stop of their own accord.

Never hurry a fickle horse, young or old. Slack up or lay down your reins, and wait patiently fifteen minutes; then start quickly, and so manage until entirely cured, which will seldom fail.

Colts, after driving, should be cleansed and rubbed thoroughly before entirely cool; this will prevent soreness, wind-galls, &c.

When thoroughly trained to the harness, then break to ride. This should be done by one hand —good bridle, martingals, girth drawn tight—get on, and stick. If well trained to the bit and harness, there will be no difficulty in breaking to ride.

As this is my first essay on horse-breaking, I think I will stop here for the present.

Yours truly, E. C.

—*Michigan Farmer.*

☞Weigh every step that you are about to take, whenever passions become involved. How often do things assume a different aspect, when they are fairly considered.

THE AIR IN AGRICULTURE AND FOR ANIMAL LIFE.

Now, I must not forget that I ought to be referring more especially to the fact that all people and all living animals are loading the air with the poisonous gas which comes up through the windpipe chimney, from the furnaces burning inside them.—But let us still further digress for one minute, just to point out the fact which thus appears, that a large portion of the food an animal eats is in reality wasted—spent as fuel—burned up within it, just to maintain its bodily heat. And the farmer might take a hint from that; of course, if his feeding cattle or sheep are exposed to cold and rain, they will need burn more fuel to keep the heat of life within them. Keep them warm artificially, and less of the turnip and hay which they eat will be burned up within them; keep them quiet in stalls or boxes, instead of in yards or fields, where they can run about, and the bellows will not work so actively, and the fire will not burn so fiercely in their lungs, and less of the food will be spent in the mere act of burning as fuel—more will be available for the purpose for which food is given; that is, for the formation of fat and the promotion of growth. It is not unfrequently the case that a lot of sheep, folded out in cold weather on the turnip field, gain no flesh at all. The fact is, every bit of food that is eaten by them is burned up within them just to preserve animal heat, and the farmer might just as well have thrown it all into the fire at once; but house those sheep, or feed them in sheltered yards, where they lose heat less rapidly, they will not need so much fuel to keep themselves comfortable, and some of their food will form flesh.

Now let us return to the fact that the air is being poisoned by all this breathing and fire-burning. You will find that a very little breathing through some lime water will make it muddy enough, proving how much more carbonic acid, and how much less oxygen, there is in the air that is breathed in. The fact is, the air we breathe out contains 100 times more carbonic acid than the air we breathe in. A man, by the union of the air he breathes in with the carbon of his food in his lungs, throws out in his breath in this way, in the course of a year, about 1-2 cwt. of charcoal; as much, perhaps, as there is in a sack of coals. Indeed, the quantity of carbon or charcoal thus added to the air every year by the breath of all the animals, human or otherwise, in Great Britain, is estimated at 2,000,-tons' weight.

Well, then, the air would very soon become unfit for man and other animals to live in, were it not for the beautiful arrangement of carbonic acid gas, being sent into the air, that plants remove it. As fast as charcoal in fires and candles and in food is uniting with the health-giving oxygen of the air, and forming the deadly gas, the plants are decomposing its carbonic acid, and taking the charcoal forming their own selves out of it, and giving back the health-giving oxygen pure to the air again; so that thus the air is maintained fit for use. It is only in the daylight, or sunshine, that plants have this power, however, and you know that if you want to blanch a plant, a rhubarb plant for instance; that is, hinder it from becoming woody, or hinder it from decomposing the carbonic acid of the air, and so obtaining charcoal to form wood, all that you have to do is to keep it from the light. And again, if wheat is too thick and luxuriant in spring

time, so as to hinder the light from getting in upon its stems, those stems will be unable to decompose the carbonic acid of the air; they will be unable to procure charcoal to make them hard and woody; they will be white and succulent, without strength, and liable to be laid by the rain; but mow those top leaves off, or let a lot of sheep bite them off, and you let the light in upon those stems, and they will regain the power they have lost, and they will strengthen and harden in consequence of again being able to procure their woody substance from the air. But that they can decompose the carbonic acid of the air, and, retaining its charcoal, give off the pure healthy oxygen, can be proved. I have taken a number of cabbages, one after another, on successive days, cutting them about mid-day, when they might be supposed to be full of the gas, if ever they took any at all, and exposed them under water to the sun. Very soon, bubbles of gas collected in the top of the glass, and on examination it was proved, by their ability to burn things brilliantly, that they were pure oxygen. Those cabbages had been collecting the deadly gas as I and you were breathing it out, and as every chimney over a fire was sending it into the air, and they were decomposing it and sending the healthful part of it back to the air and keeping the charcoal to themselves. See, then, how important the air is to plants, as well as to us; it provides them with all the woody part of their substance: it provides us with the breath we live upon, and the fires that warm us. See how important the process of combustion, whether slow as in the case of ordinary decomposition, or more rapid as in the case of respiration and ordinary burning, is to plants. Unless, in this manner, the air was continually supplied with this poisonous gas, plants might exhaust it of all the materials on which they feed and live. See how important plants are to us; they keep the air healthy for us, deprive it of those noxious gases which would otherwise soon collect and destroy us, forming their own substance at the expense of our enemy; so that every thing which would destroy us is made to provide us with food and with fuel through their means. See, too, how admirably the growth of evil, in the natural as well as in the moral world, is checked and made productive of good in the end, by the overruling hand of God's Providence.

Thus much, then, we have learned regarding the air in connection with agriculture; it provides the plant with its woody substance; it keeps up the warmth of the living animal by burning a portion of its food in its lungs.—*Ag. Gaz.*

CHLOROFORM WITH HORSES.

The Veterinary Record contains an article on the use of chloroform in the castration of colts. The action of it, as an anæsthetic agent, is pronounced so uncertain as to render it of little value. The writer says:

From what we have seen of the employment of this agent, we may remark that our experience corroborates the accounts before given as to the uncertainty or irregularity of its operation. Even provided that its mode of being administered is always the same, there is a great difference in the manner and time of various horses becoming effected with it, and we cannot beforehand tell upon which animals it will produce a favorable or unfavorable influence. And, again, in some cases it will operate so fully and efficaciously as an anæsthetic, that a horse under its action, though subjected to painful operations, may not for a while need the usual securing by ropes and hobbles in order to restrain his struggles; yet, almost in a moment, and without warning, the animal will sometimes begin to writhe and dash about with the greatest violence. If chloroform uniformly produced complete stillness and insensibility, and if it acted with a like certainty in every case when given to the horse, it would be an agent worthy of every dependence; but so long as it remains unequal in its operations, we cannot rely on it as calculated to supplant the hobble and ropes usually employed during the performance of operations to ensure safety of the horse, operator, and attendants.

RESULTS OF APPLICATION.

Many curious illustrations are found in literary biography of what resolution and application may accomplish, in the way of intellectual progress.—One of the most remarkable cases of the kind is that of Anthony Purver, an Englishman, who had been brought up as a shoe-maker, with no education, except a very slender knowledge of his native tongue. Purver was a Quaker, of a serious turn of mind, and after much reflection he resolved to examine the religious principles which he had imbibed in his youth, and in the course of his inquiries found himself much embarrassed by the different translations and explanations of the scripture. This determined him, though late in life, to study the original languages. He began with Hebrew, and in a very moderate compass of time made himself a competent master of that and other oriental languages, which are most useful to a critical knowledge of the scriptures. He afterwards learned Greek, and at last Latin, and finally undertook the Herculean task of making a new and literal translation of all the books of the old and new testament, with notes critical and explanatory, which was published in two volumes, folio, in 1765—the fruit of thirty years' laborious application. He was aided by an excellent memory, but the resolute and persevering manner in which he applied himself to his literary labors is none the less commendable.

PRESERVING CORN FROM WORMS.

In the spring of 1847 we ploughed up one acre in a corner of a six acre meadow, which had been several years in grass, and the whole of which was much infested with cut-worms and the yellow wire worm. The acre was planted with corn, and totally destroyed by the worms. Late the ensuing fall, the whole field was manured and turned over smoothly; the spring of 1848 the whole was sown with barley, which was very much injured by the worms—in many places entirely destroyed. In September, it was sown with wheat with the same result as with barley. In the spring of 1850, we manured it well with fresh barnyard manure, turned under; harrowed and marked three feet and a half apart by two and a half, and planted corn, four grains in a hill, the first of June. It came up in five to seven days, and is now a very promising piece, as forward as any planted in the middle of May.

The seed was soaked in a decoction of a pound of

tobacco in four gallons of water. There were plenty of worms in the ground, as I found in planting and hoeing; but they would not touch the tobacco-scented corn, while there was not a single weed to be found; and indeed they did no small benefit in destroying the grass and weeds. The field was kept as clean of everything but corn as it well could be. At the first hoeing I observed a large mullen plant, the leaves of which were eaten through like a riddle, and upon digging around it I found over 20 cut-worms.

Prof. Mapes, in the May number of the Working Farmer, has a paragraph on this subject. He speaks of this and other steeps for seed—says that a solution of carbonate ammonia adds to the productiveness of the crop, remarking in conclusion:

"But for the removal of cut-worms, and indeed all other worms from the soil, we would recommend the application of six bushels of common salt to the acre, one week or more before planting, leaving the dews of two or three evenings to dissolve and carry the salt into the soil. Unless the soil is surcharged with chlorine and soda, which is seldom or never the case, common salt can be applied with profit not only for the purpose of destroying insects and a large class of weeds, but to supply chlorine and soda for the use of plants."—*Albany Cultivator.*

OAT MEAL.

Most of our readers are probably aware that in Scotland, and some parts of England and Ireland, oat meal is extensively used as food, and is considered peculiarly nourishing; but they are *not* aware how this meal is prepared. Oats grown on light, loamy soil, are the best for the purpose, and they should be as nearly of equal size as possible. Before grinding, they must be kiln dried, and for this purpose, when done on a large scale, a cast iron floor, pierced with numerous small holes, and placed many feet above the fire, is used. On this the oats are placed, and they must be turned several times before the moisture they contain is evaporated. There is a fraudulent trick of scattering sulphur among them at this time, to give them a peculiar bright color. When they are cold, the next process is to shell them, which is done between stones, usually five feet in diameter, free inside the eye, perfectly straight on the face, and capable of making 700 revolutions in a minute. *Freestone*, or sandstone, is considered best for the purpose. The oats then pass along a dust sieve, into the fans, which separate the seeds and small grains from the good quality, which is removed, either by elevators, or by hand, into the hopper of the grind-stones. These stones should be five feet in diameter, peon inside the eye, straight on the face, but never grooved like those for grinding wheat. They should make 300 revolutions a minute. A sieve is suspended under the eye, which completely separates the meal from the seeds. To preserve it, it should be tread very hard into a large chest, to exclude the air, and thus packed is said to increase in weight. It is chiefly cooked by boiling, not being adhesive like wheat flour; and thus prepared, is known as "*hasty pudding*," "*stir-a-bout*," and "*crawdy*" when the skimming of boiled beef is added; but it is also made into thin sheets or cakes, dried on a line. C. F.

Michigan Farmer.

COOKING FOOD FOR STOCK.

We learn by the Bangor Courier, that Captain Martin Mower, one of the scientific farmers of that city, has set up a steaming apparatus in his stables, and has commenced cooking roots, hay, and all the other vegetable matter which he uses as food for his neat stock. His experiments are said to be highly satisfactory and advantageous. The cost of the apparatus is not great, and we should think it could be constructed in so simple a manner as to be used with profit by almost every person who winters stocks. Capt. M. causes all the food of his animals to be thoroughly cooked, and he is satisfied that the additional nutriment which they receive more than repays him for the extra trouble and expense of cooking. We think the idea of cooking food for stock is a good one, and that farmers generally would be benefitted by practicing it much more extensively than they now do. —*Maine Farmer.*

IMPROVEMENT IN COTTON SPINNING MACHINERY.

Mr. W. Rouse, of Taunton, Mass., for whom we recently had the pleasure of securing a patent in spinning machinery, has made two other valuable improvements, for which he has taken measures to secure a patent. The improvements consist in regulating the draught of the thread between the ring guide and the traveller of the bobbin; and an improved method of letting the ring rail descend suddenly to lay the binding thread on the cope. This last is an improvement in the mechanism for which he previously secured a patent. The regulation of the draught on the thread is done by a movable guide ring which maintain an equal distance from the ring rail as it moves up and down, and thus keeps the thread at the same angle always with the traveller, laying the threads in a most equal and beautiful manner, forming a cope of the first quality, and preventing much breakage of yarn.—*Scientific American.*

A HINT TO BORROWERS.

A correspondent of the Boston Post relates the following anecdote of Robert G. Shaw, one of our merchant princes:—

We have an anecdote to tell about Mr. Shaw, which was never before in print, and which, we think, will amuse our mercantile readers, and not give offence to our venerable friend. We happened to be present when the occurrence took place. A gentleman met him in the street, and, upon a brief conversation, asked him to lend him ten dollars, as he was short—not an uncommon thing for him, at the time. It was many months ago. Mr. S , raising his spectacles, replied—"Yes, sir, with pleasure, on one condition." "What is that, sir!" "Why, that when we next meet, you will turn your face toward me, look pleasant, and not turn it away! I lent Mr. —— a small sum of money about a month ago, and ever since that time he has cut me, most decidedly. Meet him where I will, on State Street, Commercial Street, or in the Exchange, and he always turns his head away.—When I lend a man money, and he is owing me, I want him to look me full in the face, as though nothing had happened. And then I shall be willing to lend him again." This is a veritable story.

GROUP OF JEWETT'S MERINO SHEEP.

JEWETT'S MERINO SHEEP.

This group of sheep represents a lot bred by Solomon W. Jewett, Esq., of Weybridge, Vt., sired by his premium buck Fortune. They were exhibited at the fair of the American Institute, in October, 1849, by Messrs. Cullen and George W. Capeheart, of Merry Hill, North Carolina, to whom was awarded a silver cup for the best fine-wooled ewes, and a diploma for the second best fine-wooled buck.

These sheep are distinguished for yielding very heavy fleeces of fine wool. They are very hardy, possessing strong constitutions. The ewes are good nurses and the lambs are easily reared, as they come strong and are protected by a thick covering of hair and fur, which in a few months gives place to a soft, compact covering of fine wool.

For the New England Farmer.

THE POTATO DISEASE.

Mr. Editor.—One of the first things I do when your valuable paper comes to hand, is to look for remarks on the potato disease. Having tried various experiments with potatoes a year or two since, in England, I felt anxious to know if any person on this side of the Atlantic had tried similar experiments; and though I have met with many valuable articles on the subject, my anxiety was not lessened, as none of the modes of treatment recommended bore any similarity to the method adopted by me. But through your paper of May 10th, I am gratified to learn that Mr. Leonard Loomis, of Tolland, Conn., has tried the same means with success. I feel persuaded that if the method recommended by that gentleman can be adopted, it will prove effectual.

The following is the course persued by me with its results: In the year 1847 I planted a small patch of early potatoes, which, when dug up, were three-fourths rotten. But the man who dug them, considering they were of little value, left a great many in the ground which I was not aware of, till they came up in the spring; and as they looked strong and healthy, I resolved to let them stand. I dug between them in the month of March, and filled the ground out with the same kind of potatoes. But what was my surprise when I dug them to find those I planted considerably more than half rotten, while those which were left in the ground were quite sound. I immediately determined to try autumn planting. I prepared a small piece of ground in November, and planted a certain number of rows, being particular to mark the rows with sticks. In January, I planted the same number of rows, of the same kind, adjoining them. In March the same, and also the first week in May.

I was very particular at each planting to mark them so as to be able to see the effect. They were planted on about three-quarters of an acre of land, and were all dug in one week, and the following was the result:

Those planted in November were dug first, and I do not think there was a diseased potato among them.

Of those planted in January, but very few indeed were rotten.

Of those planted in March, more than half were rotten, and a great many of those which appeared sound when dug, rotted afterwards.

Of those planted in May, scarce a sound potato could be found.

I do not know whether such a method can be universally adopted in this country, as I fear the frost would destroy them; but if it could I am satisfied it would be crowned with success.

Yours, truly, John E. Stewart.

Lynn, Mass., May 28th, 1851.

Remarks.—In this country, our winters are too severe and changeable, to admit of autumnal planting of potatoes. The frost would usually destroy them, unless planted very deep, or protected by covering. In some seasons in the interior of the country, where changes in weather are less frequent than near the sea, a deep snow comes early in the season, before the ground is deeply frozen, and it remains on all winter. In such cases potatoes keep well in the ground where raised. But these cases are rare, and none can foresee them.—*Editor.*

For the New England Farmer.

STUDY AND LABOR.

Mr. Editor:—There are many who have a disposition to study, in order to be informed in relation to science and literature, but who, because they have not the necessary funds to enable them to prosecute their studies systematically at an academy or other institutions of learning, and because they are compelled to work at least a part of the time in order to "support nature"—console themselves in their non-intellectual career by the very plausible excuse that they belong to that "*unfortunate*" class who must labor for a living, and, of course, cannot study.

Now let us for a moment look at the case of those who would study as they say, if they were only able to do so, and ascertain whether, if their desire for education was in reality as great as for money, they could not gain a sufficient time from their labor to obtain the amount of knowledge necessary for most practical purposes.

It is said by those upon whose judgment we can rely in these matters, that a man can perform as much by working on an average only ten hours a day, as he can by working longer than that, and physicians say that seven or eight hours in twenty-four are sufficient for sleep. Such being the case, and allowing one hour for meals and taking the larger number for sleep, we find that there would be only nineteen hours employed out of the twenty-four, leaving five hours each day which might be devoted to study. And furthermore teachers say that six hours of the hardest and deepest study are better for a student—that he can acquire a greater amount of knowledge in that time than a whole day of superficial study, and *dozing* over books, as is too often the case. And, moreover, there are few who can endure that kind of study in which all the faculties of the mind are concentrated, (and this is the kind of study in which a person should engage, if he would be improved the most in the shortest time,) for a longer time than six hours out of twenty-four.

Thus it may be seen that the laboring man, as regards the acquisition of knowledge, has almost

as good advantages as the man whose whole employment is study—if he was but aware of the fact, and would improve his opportunities.

Let any one who reads this, if he doubts the truth of my proposition, that a man can do as much work as another who does nothing except work, and at the same time acquire nearly as great an amount of knowledge as one whose whole business is study,—enter on this plan for a few days, let him in the morning study two hours, not superficially, but "*toto corpore*," as if life or death depended upon his exertions, and when the two hours have passed, he will *feel* that his mental powers are somewhat weakened, and that his interest in his theme of study has in a measure subsided, and hence he will not be in a proper state of mind to acquire and retain knowledge; but he will enter his field of labor with renewed vigor; so when the muscles brought into exercise by labor, are exhausted, his mind will be free to commence anew his intellectual toil.

Thus while his body is resting, and renewing its strength, he can improve his mind, and conversely while the mind is resting he can be useful by means of manual labor.

Thus also even a liberal education might be acquired by many, while they not only would not be spending money, but they would actually be gaining in the same, thus laying up property for a "*rainy day*," and gaining mental property such as will prepare one not only for a greater amount of pleasure than he would otherwise be able to enjoy, but also for usefulness. Who will avail themselves of this golden opportunity? D.

Remarks.—In considering the subject introduced by our correspondent, a very important fact presents itself, which is that the student or literary man needs at least five hours per day for exercise, which should be brisk and as severe as would be produced by half a day of common labor. This is essential to the preservation of health and a sound constitution. This being the case, he may as well attend to labor as amusement for exercise; and generally better, for when one is pursuing labor with interest, he takes exercise without thinking of it; but when he exerts himself purposely for exercise, he often does it reluctantly, and frequently grows indolent and neglects it.

Again, the man whose principal business is labor can perform a good day's work in ten hours, and his body must have rest, and while that is resting, his mind may be at work, and without any disadvantage to his physical frame. Ten hours for manual labor, five for study, two for meals and recreation, and seven for sleep and rest, which is enough in all conscience for any one to sleep, excepting children. In this case, with all reasonable time for every other purpose, the laborer has five hours for close study, and besides this he may while laboring con over his studies, and thus greatly aid his progress.

We have known laborers who attended to their work the usual number of hours, and with as much diligence and success as their associates; and yet they attended to studies, or wrote books or articles for periodicals with as much progress and good success as those who gave their whole attention to these pursuits.—Editor.

MEMOIR OF COL. TIMOTHY PICKERING.

John W. Proctor, Esq., President of Essex Agricultural Society, has communicated to the Albany Cultivator a very interesting memoir of this distinguished patron of agriculture, including his political career. As Col. Pickering was among the most zealous and efficient promoters of agricultural improvements in his day, we select that part of the memoir relating to agriculture, believing that it will be perused with interest, and afford a worthy example to those who are able and disposed to do likewise. Col. Pickering was born in Salem, July 17th, 1745. He died at Salem, January 29, 1829, in his 84th year. We copy from the memoir.

It is of Col. Pickering *as a farmer* that we feel it to be our privilege to speak. This we should not have done, had not our solicitations to others, better qualified to say what ought to be said, been ineffectual.

In 1818, an association of the farmers of Essex was formed, under the name of the "Essex County Agricultural Society," over which he was invited to preside. It was done in accordance with the offer of the State for the encouragement of such societies. There is good reason to believe that Col. P. was not ignorant of the movement that prompted these offers. Whatever may have been the origin, it met his entire approbation and active co-operation. He continued thus to preside for a period of *ten years*, until the autumn of 1828, when he said he felt it to be his duty to withdraw, lest he should be thought to be *in his dotage*—an idea that never occurred to any one but himself. We know not how to express our opinion of the efforts of Col. Pickering, in connection with this society, better than in the language of the address, in 1814. Says the speaker—"I have ever esteemed the hints and observations that fell from Col. Pickering at our meetings, as among the most valuable lessons ever taught to the farmers of Essex. At an age when most men think their labors should be ended, he was in his prime, in handling the plough and instituting new experiments. He was not ashamed to soil his hands or his clothes, in the labors of the field. In whatever he engaged, he took the part of the working man. When he spoke, it was not to display his own acquirements, but to instruct his hearers. While others were admiring his superior wisdom, he, himself, appeared to be the only one not conscious of it. Like Franklin, he always had some illustrations that would not fail to make a lasting impression."

During his presidency, (as it was our privilege to be his secretary,) we can bear testimony that he was scrupulously attentive to all the meetings and interests of the trustees, and of the society; always ready to illustrate by precept and example his accumulated experience. He loved farming for its own sake, and for the good of his fellow-men. He was never happier than when he commanded the listening attention of a group of practical far-

mers, catching the words of wisdom from his lips, spoken, as it were, from the inspiration of the genius of sound philosophy. We recollect many instances, when, upon questions incidentally arising, he would go and talk "like a book," for fifteen or twenty minutes, to the admiration of all around. He had read most that was then valuable of English, Scotch and Flemish husbandry; his memory was uncommonly retentive; and what was of most value, he thought closely and carefully upon what he saw and read. He was never satisfied to take any man's *say so*, unless he could be made to understand the reason for saying it.

It may be interesting to notice some of the topics on which he was accustomed to dwell with special emphasis, connected with the advancement of husbandry in New England. Among these, the improvement of our native breed of neat cattle is entitled to the first place. "I have long entertained," said he, "and repeatedly expressed the opinion, that a fine breed of cattle, peculiarly adapted to the combined objects of the farmers of New England, might be most readily and extensively obtained, by the spirited exertions of substantial farmers to improve our native breed." In support of this opinion, he quoted the late Mr. Lowell, of Roxbury, one of the most intelligent farmers in Massachusetts, who said, "Possessing as we unquestionably do, the materials among our own stock of improving our breeds, by careful selection, we should follow the example of Bakewell and other British farmers, who in fifty years have raised the stock of Great Britain to a state of perfection little short of what it is supposed they can ever reach." And again, "more is to be expected from the excited attention to the improvement of our own stock, than from importation." Col. Pickering further remarks, with a liberality of opinion characteristic of himself, "Such improvements of our native cattle, so important to our farmers in general, will also be interesting to those who are possessed of fine imported cattle; for if the latter on full trial shall be found to be really of greatly superior excellence, improved individuals of our native breed will furnish better subjects for coupling with them; and enable the owners of the imported animals more expeditiously to improve and increase a superior stock,—whether for their own use, or for sale."

A highly interesting discussion on this subject was carried on between Col. Powell, of Philadelphia, and Col. Pickering, (see N. E. Farmer for year 1825) in which Col. Powell admits, that the short-horns, so called, are too large for the ordinary purposes of our farms. To whom Col. Pickering replies, "We now have, in what are denominated our native cattle, a breed exactly adapted to our service, and means of keeping them; and may we not, with spirit and resolution, engage at once in the laudable and profitable enterprise of improving this breed, by a careful selection of the best males and females, and thus, in a few generations, raise them, not to gigantic size, but to a high pitch of perfection, for the primary objects of our farmers,—*labor, beef, and rich milk for butter and cheese.*"

The constituents of soils, and the manures applicable to their improvement, were also, with him, favorite themes for discussion. His remarks were practical, not theoretical. He would go on, with great minuteness, stating all the facts and circumstances connected with any experiment, explaining as he went, but never was in haste to draw general conclusions—fully impressed with the truth of the proverb—"one swallow does not make it summer."

The implements of husbandry, too, shared a portion of his attention. From the noble plough, that is at the foundation of all culture, to the simple brush for the destruction of the meanest insect—none were too large to be above his comprehension; none too small to be beneath his notice. Scarcely a subject can be mentioned, connected with the culture of the soil, that has not been noticed by him. Without presuming to be a writer and maker of books, he was always thinking—always communicating his thoughts in such a manner as to be useful. In so doing he seemed to forget himself, and to be moved by a desire to do good. His life was a practical illustration of disinterested benevolence. We remember to have heard from him addresses to the Essex Society in 1818, 1820 and 1828, and to the Massachusetts Society in 1823, all of which were published among the transactions of those years.

There is scarcely a page of the publications of the Essex Society, during his presidency, that is not illuminated by his reflections. If this society has gained any reputation, or been instrumental of any good, it is mainly to be attributed to the impulse he gave it, and to the spirit of inquiry awakened by his advice and exertions. To attempt to condense his remarks, would be but to mar their symmetry, and impair their force. His discriminating observation and comprehensive reflection, left nothing to be added; his classic discipline and fine taste, admit of no retrenchment. We cannot so well express what is proper to be said of his productions, as in the following condensed paragraph of Mr. Fessenden, the learned editor of the N. E. Farmer, when speaking of the address to the Mass. Soc., vol. 1, p. 222. "Although the subjects of the address are not only important, but many of them abstruse, forming what may be styled the metaphysics of chemistry and physiology, still there appears to be nothing in Mr. Pickering's observations which is hard to be understood. Volumes after volumes have been written on the food of plants; the elements, or chemical constituents of vegetables; the mode of operation, the manner of applying, and the benefits resulting from the application of lime; the different kinds of earth necessary to constitute fertile soils; the burning of clay for manure; the obstacles which prejudice, and a pertinacious adherence to old usages, oppose to improvements in agriculture; and the best means of overcoming such obstacles; the best methods of accumulating and applying manure, &c., &c.—but we do not remember ever to have seen so many and so important topics comprehended in even more than double the pages containing Mr. Pickering's remarks on those subjects. We never read a paper, which, in our opinion, exhibits so much *useful matter* in so *short a compass.*" "We think it should be a subject of congratulation with every friend to his country, that an eminent statesman, and revolutionary patriot, should be induced to exert his influence, and devote his talents to promote the interests of agriculture, the most noble of the sciences, as well as the most useful of the arts." If further testimony is demanded, let the pages themselves be consulted; and whoso shall fail to be convinced, will thereby demonstrate his inability to comprehend.

If we rightly remember, as early as 1790–5, was the attention of Jefferson and Pickering directed to the formation of the mould-board of the plough, on scientific principles. They thought much and compared their views. Which originated most improvement we will not presume to say. Their object was not so much to secure patents, as to secure improvements. The result was the publication of a new form of structure, with an explanation of the principle of operation. In 1803, Mr. Smith, of Pennsylvania, substituted the *cast iron* for the *wooden mould-board*. Since then a very great variety of modifications and combinations, (too numerous to mention,) some founded on *principles tangible*, and others on *principles imaginary*, have been brought forward. But if we do not mistake, nearly all that is valuable in these improvements was embraced in the contemplations of these original minds. By so doing, they literally converted the weapons they had so successfully wielded into ploughshares—benefiting the world more than any victories at arms.

Col. Pickering's mind was so disciplined to accuracy of thought and logical conclusions, that he could not endure with patience the ill-founded notions and whims that frequently have a pervading influence on many minds in the community. Illustrative of this, we remember an incident that occurred at one of the meetings of the board of trustees, over which he presided. One of the members of the board, a practical farmer possessed of more *acres* than *ideas*, had been discoursing, with more ardor than discrimination, *upon the proper age of the moon, in which bushes should be mown, that they might not spread again;* and had specified a certain day of the *first* or *last* quarter, (we do not remember which,) in the month of August, *provided* the moon should be in the right sign, with her horns in right position, &c., &c. The speaker having triumphantly put forth his theory, confirmed by observations for a time the memory of man runneth not to the contrary, calmly waited for others to say amen! "My friends," says the Colonel, "I hope never again to hear from you, or any other member of this board, anything whatever of the influence of the moon, upon any of the operations in agriculture. I should as soon think of calling in the aid of '*the Man in the Moon*,' to assist in the labors of the field—be they chopping, ploughing, sowing, mowing, hoeing, harvesting, or whatever they may be, as to expect any favorable or unfavorable influences, from the *age or position of the moon*. Let me tell you, *that old man*, pictured in the Farmer's Almanac, surrounded with the twelve signs, and as many jaw cracking names, and pierced by as many arrows, has done more harm than all the meteorological prognostications of the most weather-wise calculators have ever done good. I want such rules only, for labor, in the operations on the farm, as are supported by reason, and are in harmony with common sense." It is unnecessary to say that the gentleman's argument was never again urged in the presence of the president.

Potatoes.—Experiments as to proper depth to plant—Mr. John Thompson, made an experiment to ascertain the best depth at which potatoes should be planted. The seed was planted in trenched ground at depth of 3, 6, 9, and 12 inches. Those produced at 12 inches were few and small; those at 9 and 3 inches were of equal quantity and those at 6 inches, much the most numerous and largest. The *deeper* the potatoes were planted, the *more mealy* and finer was the quality.—*N. Y. Transactions.*

WILD FLOWERS.

How beautiful is the exquisite native grace of the flowers, seen in all their habits and positions! They know nothing of vanity, its trivial toils and triumphs! In unconscious, spontaneous beauty, they live their joy-giving lives, and yet how all but impossible to man to add to their perfection in a single point! In their habits of growth, the innate grace may be particularly observed; there is a unity, a fitness, in the individual character of each plant to be traced most closely, not only in form, or leaf, and stem, but also in the position it chooses, and all the various accessaries of its brief existence. It is this that gives to the field and wood flowers a charm beyond those of the garden. Pass through the richest and most brilliant paterre in the country, with every advantage which labor, expense, science and thought can bestow, and you will find there no one plant that is not shorn of some portion of its native grace, a penalty which it pays for the honors of culture. They are richer perhaps, more gorgeous, the effect of the whole is more striking, but singly, they are not so wholly beautiful. Go out in the months of May and June into the nearest fields and groves, and you shall see there a thousand sweet plants, sowed by the gracious hand of Providence, blooming amid the common grass, in crevices of rude rocks, beside the trickling springs, upon rough and shaggy banks, with a freedom and simple modest grace which must be the despair of gardeners, since quite inimitable by art, with all its cunning.

THE WHEAT CROP OF OHIO.

The Cincinnati Nonpariel says: "It is estimated upon a careful examination of the matter, that the wheat crop of Ohio, for the year 1850, will amount to about thirty millions of bushels. The population of Ohio is 1,981,040. Each inhabitant will consume one barrel of flour, or four and a half bushels of wheat. It will require 8,918,730 bushels to feed its own population, and leave for sale 21,081,270. When wheat commands 75 cents in the Lake ports, it netts the farmer 65 cents; the other 10 cents is paid for transportation and commission. The surplus wheat will put into the pockets of its farmers $13,702,825, and to the State $15,810,952. There had been sold, previous to the first of January 1851, 4,442,571 bushels, which with the full amount required to feed its population, 8,929,736 bushels, left on hand at that time for sale 16,638,997 bushels. The surplus wheat and corn crops of Ohio of the last year are sufficient to redeem every dollar of her State indebtedness."

Ashes to Prevent Bad Odors.—Wood coal, or half burnt peat, or ashes thrown occasionally into privies, destroys the bad smell, and renders them susceptible of being cleaned out and used as a manure (and none more valuable can be obtained) without being attended with any disagreeable smell—and producing a benefit to health, and comfort and wealth of community.

THE UTILITY OF LEAVES.

Every person conversant with vegetable philosophy is aware that the all important requisite in the growth of fine fruit is a good supply of big, vigorous, healthy leaves. A tree which is kept defoliated for a single season must die; and fruit growing upon branches which are deprived of their leaves cannot ripen—examples of which are furnished by the instant cessation of growth and ripening of fruit on trees which become stripped by leaf blight. In one instant, a dense mass of plums remained half grown and flavorless for several weeks in consequence of the permature dropping of the foliage—a second crop of leaves, three weeks afterwards, effected the completion of their growth and their ripening to honied sweetness. The editor of the Michigan Farmer mentions the following interesting case, illustrating the same principle: Mr. More, of Detroit, has a magnificent grape vine, spreading itself over one side of his house, which was in September richly laden with fruit. After the clusters were formed, a cow entered the enclosure, ate the leaves entirely, but left the fruit untouched. The consequence was that upon that portion of the vine which was beyond the reach of the animal, there never were finer clusters, while upon the portion from which the leaves were removed, the clusters dwindled away, and have come to nothing; and that, too, up to the very line of separation between the mutilated and unmutilated portions.

Mechanics' Department, Arts, &c.

HORSE SHOEING.

The following exceedingly sensible remarks are from the pen of Mr. Miles, veterinary surgeon to the Queen of England's Life Guards, and author of several valuable veterinary works. We commend them most particularly to the notice of every person who has that valuable, and almost indispensable animal, the horse, in his charge.

"The shoes of the horse 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, which 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 the 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 first 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." —*American Agriculturist.*

TO DYE IVORY.

In many branches of business it is very desirable to know how to color ivory. The red balls of the billiard table, and the red colored chessmen, are evidences that the art of coloring ivory is known to many, but the number is not numerous, and we have not been able to find anything said, satisfactorily, on the subject, in any printed work. The Chinese appear to be the most eminent in making fancy ivory articles, and they color them with great taste, but red appears to be the only color for which they are distinguished, and it is the predominant one—the red and white forming the varieties. We have had our attention called to the subject lately, and we present the following as the result of experiments:—

Red Color.—The hands should be washed in soap and water to free them from any grease that may be on them; the ivory should be washed in some cold strong soap suds, and then well rinsed in cold water. A clean copper or brass dipper, or any small copper vessel, filled with soft water, should be placed on a fire and kept boiling, with some ground cochineal, for about ten minutes, (about two tea-spoonsful of the cochineal will dye three billard balls.) After it has been boiled for this length of time, add a pinch of cream of tartar, between the fingers, and six drops of the muriate of tin, (if the tin cannot be obtained a little alum will answer;) this is all stirred about and the ivory put in. After the ivory has boiled about one minute, it is taken out and dipped in a vessel of clean cold water, and then put into the boiling cochineal for the same length of time and taken out again. It is thus dipped in and taken out of the boiling cochineal, until it attains a beautiful red color, when it is well washed in warm water, and rubbed over with a white cloth which has been lightly greased. Care must be taken not to use too much cream of tartar or the chloride of tin, for these substances injure the surface of the ivory.—Those who do not care about the price of the cochineal, may use four tea-spoonsful, and the ivory will be colored quicker. The greater the amount of dye stuff used the deeper will be the color.

Black.—For this color the ivory should be cleansed the same as for red. An iron or tin vessel may be used to dye this color. Take about four ounces of ground logwood, and boil it for fifteen minutes, then add one-fourth of an ounce of copperas, and put in the ivory and boil it gently for about ten minutes, when it may be taken out and washed. If the color appears slaty (light,) more logwood should be added, and the ivory boiled some time longer. The ivory can also be dyed black by boiling it for about ten minutes in the same quantity of copperas as that mentioned, and a little of the bichromate of potash, then airing the ivory and boiling it in the logwood afterwards. When the color is deep enough it must be washed and rubbed with a greasy cloth, when it will appear jet black.

These two colors are the most common in ivory articles, especially the red. Ivory is bleached white by exposing it to the sun, after being washed

in soap suds and moistened from time to time, with clean soft water. A little whiting and soap, used together, is a good composition for cleaning the ivory handles of knives. We may refer, at some other time, to the mode of dyeing other colors on ivory.—*Scientific American.*

FIRE-PLACES.

In the construction of these there is, especially in cities, a great want of judgment. There are several points to be considered: neatness, or beauty, economy and comfort. In building a house, undoubtedly the first consideration should be comfort, the second economy, whether we build for ourselves or rent to others. We regret to say that there seems to be an utter disregard of these in nearly all the houses in the city, and too many in the country pattern after our city fashionables.—Small fire-places are all the rage; a little square, deep, low, narrow hole in the wall, hemmed in on all sides with iron casements, is all that is left to be called a fire-place: the result is, 1st,—the heat is thrown into the room in a straight line agreeing to the width of the opening, and those only who sit immediately in front of the 8 by 10 opening get the benefit of the fire on one side, while those who sit right and left might as well be in some other place. 2nd—an insufficient quantity of heat to warm the room is thrown out. One-half or two-thirds passing up the chimney, to the disadvantage of comfort and economy.

The next question is, how should they be built? Answer:—high, wide, and deep, so as to admit of filling in with a circular back wall, presenting a large opening and surface from which to reflect the heat to all parts of the room, and at the same time secure the draft.—*Scientific American.*

MANUFACTURE OF CUTLERY.

The improvements which have been made during the few past years in the manufacture of cutlery in this country are peculiarly manifest, and can not but be highly gratifying to every friend of improvement in the arts and manufactures in the Union. The facilities for manufacturing the finest and most beautiful cutlery have been increased, and the manufacturers exhibit a skill and ingenuity in many of the most delicate specimens of their arts that would be highly creditable to the older and more experienced establishments in Europe. The manufacture of razors, knives, &c., is quite a curiosity to one who has never witnessed the operation. The rapidity with which the various articles are produced from the raw materials as they pass through the hands of the various workmen, is truly astonishing. In the manufacture of the common table knife, in the workshops of Sheffield, (Eng.,) the whole process of drawing the steel from the bar, hammering it into form, welding the blade to the tang, hardening, tempering, hafting, finishing and polishing is altogether but the labor of a few minutes, although the various processes through which the knife passes is multitudinous. The steel bar forming the material for the blade is heated in the forge, and with a few strokes of the hammer reduced into the desired shape. A bar of iron is next heated, from which the tang is formed to fit into the handle, and welded on to the steel blade. All this is performed in five or six minutes by the most simple tools imaginable, and the blade in its rough state is completely formed. This next passes into the hands of the *filer*, who by means of a pattern made of hard steel, files it to its perfect shape, and it is passed into the hands of the hafter to be hafted or handled in ivory, horn, bone or some of the harder kinds of wood. This being accomplished, the knife is taken by the finisher, who gives the necessary polish, completing the process. In this manner every article, whether table-knife, pocket-knife, or pen-knife, passes by all these various steps and processes to its completion, through no less than sixteen hands, or altogether, *one hundred and forty-four separate stages of workmanship.*

In the manufacture of razors, the best and finest qualities of steel are selected, and like the knife, it passes through nearly the same number of hands, being completed by a process of grinding, by which the concavity of the sides is perfected and a fine edge produced. The best scissors are also made by a similar process, every pair passing through sixteen or seventeen hands, including about sixty operations, before they are ready for use. In Europe, and we believe also in this country, common scissors, pocket knives, &c., are cast, and riveted, including blades, handles, &c., and sold at exceedly low prices. In England many are manufactured and sold as low as six shillings sterling, or $1,50 per gross, and exported in vast quantities to all parts of the world.—*Farmer and Mechanic.*

Ladies' Department.

TO PRESERVE FRUIT.

Twenty-nine years ago, Betty Winal, then residing at Tarlton, bottled a quantity of white currants in their green state, being then in the 33d year of her age. Having kept them some time in a state of preservation, William, (her husband,) and she agreed that they should be kept while they both lived, and that they should be made into pies at the funeral of the one who should die first. The wife departed this life on the 2d of this month, and was interred at St. Peter's Church, Preston, on the 5th—the family having removed to Dawson Street, Preston. Their mutual pledge was fulfilled, and the pies made of these currants were served out, after returning from church, every attendant taking a slice. Though the currants had kept twenty-nine years, they were as fresh as if just taken from the trees. Any other fruit may be preserved in the same way by expelling the air and sealing over the cork air-tight.

Remarks.—We preserved gooseberries last season, as follows. The berries were picked while rather green, put into bottles, filling them full, then the bottles were filled to the top with water, and set in a kettle of cold water, over a fire, and allowed to remain till the water in the kettle boiled; then the bottles were taken out, corked tightly and set in the cellar. We used these gooseberries recently, and they could not be distinguished from fresh ones. One person who partook of them supposed that they were fresh from the market. It is said that various kinds of fruit may be kept in this manner for years. It is a very cheap and convenient way.—Ed. N. E. Farmer.

HOW TO TOAST WELL.

The different operations of cooking are so common and so often performed by persons who make no pretension to a medium amount of science or learning, that a notion is abroad that scientific principles have no relation to them; but that the whole business of cooking is a mere art, of which it is only necessary to know the routine. That cooking may be done, and very good cooking too, in this way, is very true; but it is none the less a fact that the most important scientific principles are at the bottom of every well cooked dinner; and that the cook is a practical chemist, whether she knows it or not. For instance, in the small matter of toasting a piece of bread there is as much skill required as to manage a twenty horse steam engine, though failure in the business might not be quite as disastrous. But probably not one cook in ten thousand ever thought of the matter in that light, or as involving any science at all. We have just stumbled upon an article of some length on this subject written by we know not whom, but which will illustrate all we have said above.—*Prairie Farmer.*

In toasting bread we wish to get out the water that remains, and which makes the bread cold, waxy, and heavy of digestion. Perhaps we shall be best understood if we first explain what makes bad toast of a piece of bread, or rather no toast at all, but merely a piece of bread with two burned surfaces, more wet and waxy in the heart than ever, and which not a particle of butter will enter, and if put by for an hour or two and allowed to cool, will get as tough as possible. If the slice of bread is brought into close contact with a strong fire, the surface becomes covered with, or rather converted into charcoal, before the heat produces any effect on the interior of the slice. This being done, the other side is turned, and has its surface converted into charcoal in the same manner. The consequence of this will be that not a particle of butter will enter such a piece of toast, but only remain upon the surface, and if vexed with additional fire, turns to a most rancid oil of the most unwholesome description. Charcoal, as every one knows, is a very bad conductor of heat, and, as such, is used between the cylinders and casings of steam engines—it is of no consequence whether the said charcoal be formed of wood, of flour, or any other substance, for its qualities are in every case the same. Now, when the surfaces of the slice of bread are over-charred in this manner, there is an end to all toasting, as no heat can be communicated to the interior, and not one drop can be evaporated or drawn away. In this state the slice of bread may be wholly burned to charcoal; but until it is altogether so burned the unburned part will become more and more wet and unwholesome. Hence, if you would have a slice so toasted as to be pleasant to the palate, and wholesome and easily digested, never let one particle of the surface be charred. Chestnut brown is even too far deep for a good toast; and the color of a fox is rather too deep. The nearer it can be kept to a straw color, the more delicious to the taste, and the more wholesome it will be. The method of obtaining this is very obvious. It consists in keeping the bread at the proper distance from the fire, and exposing it to a proper heat for a due length of time.

Butter in masses (whatever may be its quality) is too heavy for the stomach; though butter divided with sufficient minuteness and not suffered to pass into oil, makes a most valuable addition to many kinds of food. The properly toasted bread absorbs the butter, but does not convert it to oil; and both butter and farina are in a very minute state of division, and one serving to expose the other to the free action of the gastric fluid in the stomach; and that this fluid shall be able to penetrate the whole mass of the food, and act upon it in small portions, is the grand secret of healthful digestion; so that when a slice of toast is rightly prepared, there is, perhaps, not a lighter article in the whole vocabulary of cookery. Unfermented brown bread, treated in this way, forms an excellent substitute for biscuits, and is in some respects superior, as it may be eaten with impunity by those persons with whom biscuits may disagree.

DRESS OF ENGLISH WOMEN.

The women of England understand better what is due to propriety in this respect. They may and do dress gorgeously in their assemblies, in their private parties of fashionable resort; but in the street, they are marked with great plainness of dress. Sober and delicate colors, absence of chains and diamonds, the close-fitting hat, neat mantle, and thick shoe, attest their thorough good sense in the matter. We wish American ladies would copy them in this thing, instead of aping the follies of the frivolous Parisians.

Will the time ever come when a cultivated intellect shall preponderate over dry goods? or a correct and delicate perception of real comfort and beauty, over the absurd and continually varying fashions of the day?

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The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

WORK FOR THE SEASON.

July is, usually, the hottest month of the year, and the most busy with the farmer, as he often has much to do to his tilled crops to promote their growth by proper culture and secure them against drought and weeds; and this is the principal season for securing his early harvest. In this month nature assumes her most gorgeous and beautiful appearance. Vegetation is in full luxuriance. The fields wave with grass and grain, and the crops on tillage begin to cover the land with green.

Weeds should be thoroughly destroyed before haying, else they will not only choke the plants and rob them of their food, but they will ripen seed for an abundant crop another season. Many weeds that are among grain crops, should be pulled out as soon as they begin to blossom.

Stirring the Soil not only greatly promotes the growth of plants, by rendering it fine and permeable to the tender roots, but this process is one of the best protections against drought, as the loose soil prevents the escape of moisture by evaporation, which is invited upward from the moist soil to the surface by the influence of the sun. Land not tilled will dry down 8 or 10 inches in depth, while that often stirred and kept finely pulverized at the top is moist within a few inches of the surface.—We have tried the experiment often on lands adjoining. Compact soil serves as a conductor of ascending moisture, which passes off by evaporation. But the fine loose soil at the surface holds moisture like a covering of boards, straw or other litter.

Work Early in the Morning.—In this hot month, retire to rest early, and begin labor quite early in the morning, while the air is cool and refreshing; and in the haying season, which allows of no rest at noon, work moderately in the latter part of the forenoon, to allow the system a little respite from severe toil.

Drinking Cold Water.—Several persons lose their lives every hot summer by drinking freely of cold water, when over heated; and become seriously injured, and sometimes do not recover for months. Great caution is necessary in the use of cold water at this hot season. When very hot and thirsty, wash the hands and wrists in cold water, rinse the mouth a few times slowly, then swallow a little water, and drink lightly at intervals till thirst is quenched. This mode will soon give relief, and with more comfort than in taking large draughts of cold water, to say nothing of the danger of such recklessness of life and health.

Grain.—When grain is fit for the sickle or cradle, it should be secured as soon as possible, as a great loss may attend even a short delay, from storms or other causes.

Haying.—This is the principal business with the New England farmer in July. Most all the grass on the farm generally needs cutting nearly at the same time, or in the course of two weeks, yet many farmers cannot do their haying in less than a month, especially, if the weather be unfavorable. Therefore it is of great importance to begin early, and cut some grass before perfection, rather than lose by allowing the last to stand a week or two, or perhaps three weeks too late. As far as convenient, mow early in the morning, and as soon as the dew is off, and the ground warm between the swaths, spread the grass, and shake it up soon after dinner. This will be dry enough to rake convieniently in the afternoon, while the warm sun is upon it. By opening and turning the next day, it will soon be ready for the barn; and not be injured by exposure to a scorching sun, after it is dry. It is best to make hay partly in the heap, as the sun destroys its sweetness after it is tolerably dry. When clover, partly cured, is put into heaps, the curing process still goes on, even by night; and the moisture becomes equalized by passing from the damp stalk to the dry leaves, and a little exposure to the air and sun will complete the process, and in this way the leaves and other fine parts are saved. Grass cut late in the forenoon or early in the afternoon, may be partially

made so as to be liable to injury from dew, and yet too heavy to rake. In such cases, let it lie in swath, and turn it over before the dew falls. In all cases rake hay while the warm sun is upon it, and not after the dew begins to fall. Cut clover when in full bloom, which is unually when about one-fourth of the heads have turned brown, as there are at that period many buds that have not blossomed. There are different opinions as to the best time to cut herds grass. Some prefer the season of its bloom, others that in which the seed is nearly grown, approaching the condition of corn when fit to boil. We incline to the latter opinion, from experience and observation. The greater part of farmers give their opinions in favor of the earlier period, but their practice is decidedly in favor of the latter; for they cut but very little grass till it is in full bloom, and they often continue till the seed is ripe. This is not always a case of necessity, for if all ready, they will not begin till within a few days of their favorite period, but continue their operations one, two or three weeks beyond it. As many farmers salt their hay too much, an annual caution on this point is necessary. There should be no more salt put on the hay than the animals need while consuming it. All beyond this is injurious, creating thirst and excessive drinking in cold weather, and producing various diseases among cattle and sheep, as has been abundantly proved. Twelve cows, consuming a tons of hay in a week, would get half a peck of salt, if only this quantity was put on each ton. Now would any farmer think of giving to twelve cows more than two quarts of salt twice in a week, and in the winter season, and compel them to eat it, by adding it to their food? Is not this too much?

AMERICAN POMOLOGICAL CONGRESS,

Held in Cincinnati, Oct. 2, 3 and 4, 1850.

We have received the report of the doings of this association published by the O. State board of Agriculture. But very little business was done by this Congress. The merits of only a very few fruits were considered; and as this convention was mostly made up of Western members, the opinions expressed are of very little interest to Eastern cultivators. Even our favorite apples, the Baldwin and Rhode Island Greening, did not receive favor with this Congress. There was no member or delegate present from New England.

Dr. W. D. Brinckle, of Philadelphia, was chosen President; F. R. Elliott, Ohio, P Barry, N. Y., and I. A. Warder, Ohio, were chosen Secretaries. A motion was made and carried, that a committee be appointed to report upon the expediency of establishing American Pomological and Botanical Gardens. After deliberation, the committee reported as follows:

That it is expedient to enter upon the enterprise suggested in the resolution, and to carry it out.—The spirit of the age favors the project, and this project needs only a Northern, and Southern, and Eastern, and a Western establishment of the kind, to become one of the most important and most useful bodies of promoters of the pleasure and profit of mankind. The committee beg leave to be allowed time till the next meeting of the Congress to report further.

Dr. J. A. Kennicot, of Illinois, desired to introduce the subject of the culture of the grape and the apple, as connected in the manufacture of wine and cider, with the cause of temperance. The remarks were to effect that he considered the cause of temperance advanced by the introduction of native wines at a cheap rate—that they may take the place of distilled liquors.

List of Pears Rejected.

Spanish Bon Crieton, True Gold of Summer, Hessel Summer Rose, Pettit Muscat, Roussellet of Rheims, Princess of Orange, Ah! Mon Dieu, Bleeker's Meadow, Huguenot, Michaux, Beurre Knox, Franc Real d' Hiver, Clinton.

The "Belle of Brussells" was proposed to be placed on the rejected list, but several gentlemen seeming inclined to give it further trial, it was not entered then.

List of Pears that promise well.

Paradise d'Antomne, Stevens Genesee, Onondago or Swan's Oranges, Doyenne Gabault, Nonveau Poiteau.

List of Apples Rejected.

Egg Top, Cheeseboro' Russett.

List of Apples that promise well.

Northern Spy, Melon, Mother, Hawley.

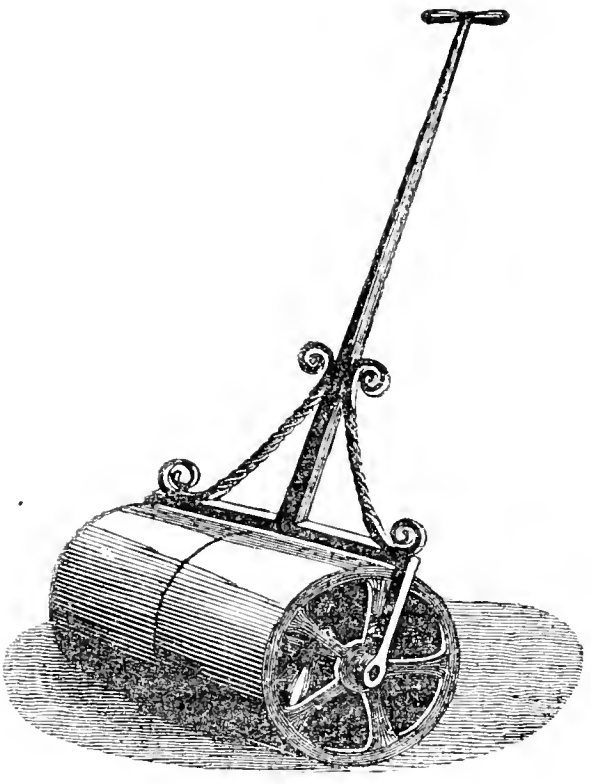
The Stevens Genesee Pear was regarded by many of the Congress as worthy general cultivation, but there being one or two objections made, it was put on the list as promising well.

Mr. Saul then introduced the Belmont or Gate Apple for remarks. Mr. Wood spoke in favor of it; so, also, Mr. McIntosh.

Mr. Saul spoke of following apples as promising well, and worthy of culture, viz: Eustis or Ben Apple, Monmouth Pippin, Peach Pond Sweet, and Sturner Pippin.

A resolution was passed, That when this Congress adjourn, we do so to meet in the city of Philadelphia, on such a day in the month of September, 1852, as shall be hereafter designated by the President of this Congress.

Acknowledgment.—From John W. Shaw, of Kensington, N. H., a liberal present of fine Russet apples, large, fair and sound. Mr. Shaw remarks that they are called Shaw Russet in that region. They are a true type of the old Roxbury Russet, and a very handsome specimen, for which we are much obliged to our kind friend.



GARDEN ROLLER.

The roller represented here is made entirely of iron. The cylinder is cast in two parts, each 1 foot long and 20 inches in diameter. This admits of easy turning without dragging. The handle is of wrought iron, and confined to the arbor. Inside the cylinder, and attached to the arbor, is a counterbalance to the handle, which adds to the weight, and causes the handle to stand upright when the roller is not in use. The garden roller is sometimes made of stone.

For the New England Farmer.

CORN FOR FODDER.

Mr. Editor:—Corn for fodder is now raised by nearly all the farmers in this vicinity; not however to cure for winter use, but to feed out to cattle, and particularly to milch cows, during the latter part of summer and the beginning of autumn, when the feed in the pastures has become short and dry, and before the grass in the fields has acquired that growth which it should have before the cattle are turned into the "fall feed." They all cut a sufficient quantity of hay to keep their stock well through the winter; and for this reason I do not think it is advisable to raise it for winter use. I think the practice of raising it, to be devoured in the green state, is a very good one, as it greatly increases the quantity of milk, and can be produced by very little labor or expense. In a very dry time it sometimes becomes almost a means of sustenance to the hungry cattle who can barely pick up a living in our pastures, which, in our wettest and most favorable seasons for grass, are *none too good*, to say the least. In a few instances our farmers have sown the corn broadcast, but I do not consider this a good way. The best way is to sow it in drills three feet apart. Some sow it quite thick, others quite thin; but I should recommend thick sowing, as the quantity of fodder is larger and the quality decidedly better; and therefore but little refuse is left by the cattle. When the corn is ten or twelve inches high, go through it with a cultivator, and the weeds can make but little headway afterwards, even if it is not hoed at all, so rapid is its growth. The ground is soon completely covered, and the weeds, locked in their prison-house, very soon "pine away and die" for want of the necessary nourishment from the sun and air, which alone can bring them to maturity. Still I should be in favor of the hoeing, as it is no doubt in some degree beneficial; nor is this all, it also gives evidence that the field is under the care of a *neat* farmer. That is a consideration worth not a little.

When I first commenced raising fodder corn, and saw what a very great quantity of it could be produced in comparison to any other fodder crop, on the same extent of ground, and with the same cost in regard to manure, I could not free myself of the impression that such a heavy crop must necessarily, as a matter of course, exhaust the soil to such a degree as to greatly lessen the real value of the crop, after taking into consideration the vast amount of nutriment it must require to drive it ahead at such a rate. But I believe it is now generally conceded that it is *not* a great exhauster of the soil. I had never heard any opinion expressed on the subject at the time; but now my views in regard to it have changed. This change has not been brought about by the sayings of others solely, but in part by my own experience. In the year 1847 I had a small piece of ground of about half an acre under moderate cultivation, which was considerably shaded by fruit trees; so much so as to render it an unsuitable place for the cultivation of corn or any of the different kind of vegetables. For this reason in part, I concluded to plant it with "cow corn," which I did in the latter part of the month of June. The manure which I made use of, was the scrapings of the barn-yard, and, I should judge,

composed of about three parts of loam and meadow mud to one of animal manure. This weak compost was applied in the furrow, with not a very lavish hand, considering what it was composed of. The result was, I had a stout crop of fodder for my cattle. The following year I gave about the same quantity of manure, of perhaps a little better quality, and again planted with "cow corn;" the crop was good—about the same as the year before. The next year I sowed it down to grass, sowing barley at the same time. No manure was applied. The barley grew finely, and a good crop was realized, where it was not too much shaded by the trees. Last year a good crop of clover was obtained; and now the grass looks exceedingly well and gives good promise of a large yield. No top-dressing has been given since the raising of the fodder crop.

These results settle the question satisfactorily to me. I am convinced that corn fodder exhausts the soil to but a small extent; therefore I believe it to be a very profitable and desirable crop, all things considered. What say you, Mr. Editor? and what say you, brother farmers? J. W.

Winchester, Mass., June 14, 1851.

Remarks.—Where hay is generally plenty, and the crop of grass looks promising, there may be no advantage in raising corn for winter food for cattle; but in all parts of the country we are liable to severe droughts, and when they occur early in summer they sometimes cut short the hay crop. In such cases, a deficiency in the hay crop will be known in season to raise a good crop of corn for dry fodder. This would be far better than to reduce one's stock at a time when it must be cheap.

A great many farmers have thought that fodder corn must be a very exhausting crop, from the large amount of nutricious food produced to the acre; but this was mere hypothesis. Practice gives a different opinion, as this crop bears a succession well, as our correspondent has shown; and other crops succeed well after it. So it is only a moderate exhauster; or considering the large crop it yields, it is only a small exhauster. The corn fodder crop collects nearly all its nutriment from air and water, and as it does not mature seeds, there is no draught upon the phosphates and other substances that are usually rather scarce in the soil, especially in old soils.

For the New England Farmer.

SAVING MANURE.

How shall I make the manure?

Do look at your barn-yard. Your ten cows are allowed to scatter their manure all around the yard at night, the fowls come in next day, and spread it quite evenly over the surface, while the sun dries up about the whole of its value.

What can I do?

You can do nothing worse. If you yard your cows, why don't you have a shovel, or a ten-tined fork, which is a great deal better, and clean up the yard every morning? Then you might throw some fresh loam on to the pile to cover it from the sun. In this way you might get quite a pile of good manure by September, which would come handy about the fall-seeding.

What do I think about tying up cows at night?

The best plan in the world to save labor and manure. The cows will go at once to their stanchions, and may be fastened in a very short time. The milker can sit down and do his work without being obliged to get up and travel the yard over, through the pond-hole, and over the dung-heap, a score of times. It makes a hired man good-natured, don't it, to chase a restless cow? Haven't you seen the stool fly many a time, only making a bad matter worse? Now, were the cows all tied, no such exercise would be necessary, when the milker oftentimes is weary. Cows may be milked in about one-half the time in the barn. Heifers are more easily managed. They come to their winter places; they see other cows milked, and seldom make any opposition. Now look at the first summer, with a heifer in the yard, and is not there work and vexation in milking her?

You save much labor in stabling your cows, but you save more in the manure. I hope you have a barn-cellar; if not, begin to dig to-morrow; get some screws, and raise up the barn a few feet—build what wall you can, and then dig out under your stables. You need not cart out half the earth at first, for no matter what it is, you can mix it with the strong manure. Having prepared an ample space for the solid exerements, see that your stable floors have cracks sufficiently open to let the liquid pass at once through, and not stand upon the planks to waste by evaporation. Now, neighbor, just throw in soil with this mass, and you will have, by September, a heap worth four times what you would have if you left your cows in the yard. I have seen this proved with my own eyes.

How shall I manage my horse stable?

Why, with greater care. The ammonia is freely generated. The manure should be mixed with soil under the stable every two or three days. It should never be allowed to burn nor to heat more than enough to decompose the straw.

You may keep your stable sweet by having a keg of plaster of Paris near, and after cleaning out, sprinkling a handful over the floor. The rankest smell may thus be at once abated. Where does this pungent gas go to, do you suppose? All absorbed by the plaster, and held there for hungry vegetation.

Save, save your manure. Swell the compost heap and your purse together. Enrich your land, and your land will enrich you. B.

Concord, Mass., June 10, 1851.

A Cure for Poison.—If a person should be stung by a bee or other insect, rub some spirits of turpentine on the place, and the pain will cease in a minute. It is said that pain arising from the bite of a copperheaded snake may be arrested in a few minutes, by the continued application of this article; and from my own knowledge of the effects, in other cases, I have not the least doubt of it. The effect of poison is to contract the blood vessels, and prevent a free circulation; the natural consequence is pain and inflammation immediately. Spirits of turpentine, by their penetrating and expanding qualities, soon overcome the difficulties.—*Far. Cabinet.*

☞ Science must be combined with practice to make a good farmer.

For the New England Farmer.

OLDEN TIMES.

Mr. Cole: — Sir—In reading one of your numbers of the Farmer, I noticed a communication from Dr. Silas Brown, of Wilmington, (which is my native town,) who is a highly respectable and scientific as well as a medical gentleman; he was not a native of the town he now lives in; his father lived in Tewksbury, in that part of the town adjoining Wilmington, a very respectable farmer, possessed of a very good property, for those days. My father lived in that part of the town adjoining the above town of Tewksbury. Their farms were about two miles apart, so that the families were acquainted with each other. I never had much personal acquaintance with the doctor, being some few years older than he is, and having been absent from my native town more than half a century. He has noted to you some of the reminiscences of our younger years. I fully agree with him in the mode of going to market, and having the advantage of a few more years than he has, can state some items a little further back. I went to market before the bridge at Charlestown was built; we went to Charlestown, put our horses up in the cheapest way we could, some times carrying our own hay; then taking our wallet or basket on our shoulder to the ferry way. The price of ferriage was two coppers, and no carriages were admitted into the boat except chaises.

After leaving the boat, we were very frequently asked what we had got for sale. One little anecdote I will mention. My father had relations in Boston, and my sister went to visit them for a week or two; she packed her wardrobe in a pair of saddle-bags; she went with a cousin of my father, who was of rather an eccentric turn of mind, although not uncomplaisant. After leaving the boat, he carrying the saddle-bags, they had not proceeded far before the question was asked, "What have you got to sell?" the reply was, not anything. A little further on, and the same question was asked. Being willing to have a little sport, she replied, "Nothing but a littie paper money;" meaning the old paper currency that the revolutionary soldiers were paid in. Still further on, "What have you got to sell?" "Nothing but a little ragged paper money." The questioner willing to participate in the joke, "Well, how do you sell it?" "Why, two pence a penny." So they marched on to the residence of our friends; bills of the above were in circulation as low as six pence. With respect to going to market on horseback, when we carried butter in warm weather, we used to go chiefly in the night, and to prevent the warmth of the horse from operating on the butter, we used to put some hay into a wide bag, and flat it down, and put it on the saddle, and the butter on the hay, and then mount the horse and pace off to market. If we were a little belated, we used to ride under the trees and break off small branches, and hold them in our hands on the sunny side of the horse, to keep our article cool, until we arrived at the place of sale.

The above was the general mode of going to market in my young days. I will now say something about the cranberry business that has transpired under my personal knowledge. Cranberries were the spontaneous production of the meadows in Wilmington; in patches, some large crops were grown, but in my young days they were worthless. They could not be sold. When a lad, I gathered some, and going to Boston, I took half a bushel with me; I lugged them on my shoulder after leaving my horse in Charlestown, and offered them for sale, but no one would buy. After some time I went into a little shop a woman tended, and offered my cranberries. She did not seem to want them, but said she would give me eight pence in barter for them, and glad was I to leave them.

One little anecdote I will relate. There was a neighborhood in Woburn which we passed through on our way to Boston, known by the name of Newbridge; there were several families in it by the name of Thompson, who would often put little jokes upon one another, all in good humor. One of them had considerably many cranberries; he was a market-man, and had a horse and cart. He concluded to gather some cranberries and try the sale of them, he gathered six or eight bushels of them, and carried them to Boston and offered them for sale all day, but no one would buy at any price. At sun down he took his cranberries down to the dock and turned them all in, and proceeded homeward. The next morning, one of his neighbors came to inquire about the sale of the fruit, and asked him if he turned his cranberries. He told him that he did, but did not seem inclined to say much about it. His neighbor had cranberries too, so he went home and gathered some, not as many as the first one, and went to market with his, but meeting with no better sale, stored his and came home. He went to the former to know where he turned his; he asked him how many he had; he told him, but there were not as many as the other turned into the dock; he told him if he would gather as many more as to make up the number of bushels he had, he would tell him, as he was sure he could turn as many more as he carried the first time to the same place. So the one who had the less number of bushels, made up to the greater, and then went for the desired information, and was told by the other, after waiting all day, he went to the dock and turned them in, and no doubt he could do the same.

Some few years after, I had two brothers living in Duxbury, Mass., who were a little concerned in navigation; they owned a sloop of some sixty of seventy tons burden; they chartered her for Baltimore. The captain was from some town on Cape Cod; a middle aged man, who seemed to understand his business. He learning that there were cranberries in Wilmington, applied to us to buy the fruit. Having a brother older than myself at home, we gave out word that we would buy cranberries. "Well, what will you give per bushel?" "Why, a pistereen or twenty cents per bushel." The people thought it rather low, but they went to gathering and bringing them in at that price until we were obliged to stop buying, and when they were ready to take them on board the vessel, I went with four oxen, and we hired another man with his team of one yoke of oxen and one horse, and were quite fully loaded with the fruit; novel loads as ever were driven into Boston, for they were the first ox loads of cranberries that ever I knew or ever heard of before going to Boston. The vessel went and made a good voyage of it, and from that single shipment of cranberries grew the immense, profitable trade and culture of the cranberry.

The above purchase and carrying to Boston of the berries took place about sixty years since; I only speak from recollection, as I have no date to refer to. You will find by my writing that I am an old

man, and this is probably the last time you will hear from your humble friend.

Yours respectfully, JAMES WALKER.

Fryeburg Island, Me., May, 1851.

For the New England Farmer.

BIRDS---BE KIND TO THE BIRDS.

I have been instructed by the example of the late Gov. John Cotton Smith, of Sharon, Conn., in providing accommodations for birds to build their nests in his garden, by fastening up boxes on poles fixed in the ground in various positions. The robin, wren, bluebird, and phebe, seek places sheltered from rains and storms for their young, and may be allured to the little houses constructed properly for their use. And they may be allured to these resorts by gentle manners and kind treatment, and become confiding and familiar. They consume incalculable numbers of various insects, that would otherwise prey upon fruits and vegetables, especially when rearing their young. It has surprised me to see what a multitude of these "creeping things" a single chipping bird has brought to her nestlings in the woodbine, fronting a piazza by my door, while her gaping chicks were under her nursing care, till duly fledged and ready to try their own little wings and learn to provide for themselves.

Before sunrise the robins are wont to run over my garden and pick up the grubs and worms that have not returned to their concealment in the earth, after their nocturnal depredations; and with the industry of various birds, the firebird, the oreole, the light colored yellow-bird and others, I have been greatly interested, as I have seen them inspecting the blossoms of fruit trees and gathering insects from branch to branch. To their songs and beauty, so charming to the eye and ear, they add the benefit of a service, which human skill cannot achieve.

There is a branch of education sadly neglected by many parents; that of kindness and gentleness to innocent animals. The noxious and mischievous we may rationally destroy, in self-defence, but what besides savage propensities can induce the habit of youth so prevalent, of stoning and shooting the birds that so winningly court our friendship? Advertisements from country boarding-houses, I have read, holding out inducements to city visitors, from their favorable situation, to test their ability in warring upon the warblers of the forest. Stringent laws, strictly enforced, should stop this cruelty, crime and mischief, so fiend-like in its nature, so destructive to the moral sensibilities of the heart.

Our best protectors are destroyed yearly, by thousands. What though the robin loves our cherries as well as we; forbid him not a share in our own common Father's bounty, unless you have ingenuity to elevate from the top of your trees some object to deter his approach. Even the carrion crow is a useful fowl, a common scavenger, a diligent destroyer of grasshoppers and crickets, and farmers need not destroy him, when so many innocent contrivances will prevent his visiting his corn-fields.

Again I say—"Be kind to the birds." Tame them by showing them friendship. Wrens will kill the millers that murder bees, and therefore, just make them houses. A small oyster keg with a two-inch hole for entrance, and fastened upon a four-foot stake, with a projecting bush for a porch, has suited a pair of them in my garden right well, this spring. A word to the wise suffices.

J. LEE.

Salisbury, Conn., June 7th, 1851.

ERRORS IN COMPOSTING MANURE.

The farmer's manure heap is usually the receptacle for every substance that has served its original purpose; but it is a mistaken idea that everything thrown in there will serve a useful purpose. We may, however, just say here, that this error has considerably influenced farm practice. Belief in the alchemy, rather than the chemistry of the farm-yard, has led some persons to cart soil into the manure yard, and carry it back again with the dung to the very field from which it was taken; adding materially to the bulk and expense of the manuring. They presumed that they added to its value, but the effect of the earth upon the farm-yard manure would be merely to retard decomposition, and thus might be a loss or a gain, according to the circumstances of soil and the crop.

Animal substances, offal, and fish of every description are also very unprofitable applied to farm-yard manure. The natural tendency of animal substances to enter into putrefactive fermentation is well known to be greater than that of vegetable substances. By placing them in the manure heap, we, in a father degree, facilitate the quality in which they naturally excel, and the tendency of which is to rob them of their most valuable element, nitrogen. Judicious practice should avoid this error, by adopting, if possible, a system having an opposite effect.

Lime is one of the substances which it is also an error to use with composts in which we have farm-yard manure. It is equally an error to mix lime with any compound rich with ammonia. The tendency of lime, in all composts, is to promote decomposition and to waste nitrogen, which escapes, by union with hydrogen, under the form of ammonia, which is the very treasure of the dung heap, and of most other manuring substances.—*Prof. Norton's Agriculture.*

THE SOIL.

An acre of soil one inch in depth weighs about 100 tons. The roots of clover descend from 20 to 30 inches in search of their appropriate aliment: and I have traced them to a greater depth. By estimating the mass of earth to the depth of only 20 inches as available for agricultural purposes, we have 2000 tons of soil and subsoil in an acre. Now, so small an amount of gypsum as 50 pounds has added over 1000 to the clover hay grown upon an acre; and 100 lbs. have increased the crop more than 2000 lbs.

Where did the matter come from which formed this immense gain in the weight of the harvest? 100 lbs. of plaster of Paris really contain a fraction less than 80 of lime and the oil of vitrol; the other 20 being what is called "water or crystalization." As gypsum operates with marked effect on limestone soils in Western New York, where the use of lime alone does no good whatever, I am induced to regard the sulphur in this fertilizer as the element that really adds so largely to the growth of vegetation. Doubtless it will appear incredible to you that 18 1-2 lbs. of available sulphur in 100 of gypsum, should cause the organization of some

950 lbs. of carbon, 800 of the elements of water, and 50 of nitrogen, attended by the extraction from the soil of about 150 lbs. of incombustible soluble salts. Whatever effect the sulphate of lime may have on the growth of a ton of dry clover, the above is not far from its composition. Clover is a plant that contains a good deal of sulphur; and salts having this mineral as one of their constituents, are extremely liable to be dissolved out of the surface soil by tillage and cropping. Thus, when sulphuric acid combines with magnesia, it forms Epsom salts. With soda, it forms glauber salts; with alumina and potash, it forms alum; with iron, copperas; and with lime, gypsum. Except the last, all these salts are well known for their ready solution in water, and it is obvious that they do not, as a general thing, abound in unmanured, cultivated lands. So long as the sulphic acid lasts from its combination with iron, either as a sylphuret or sulphate, or with alumina, (the basis of all clay) limeing will suffice to form gypsum in the soil; but after the sulphur is consumed, or nearly so, then gypsum, not lime, must be added to the soil. Similar remarks will apply to the use of bone dust, or burnt bones and lime. So long as phosphoric acid exists in the surface of the earth in combination with alumina and iron, the application of simple lime will suffice to form bone earth; but when this acid is measurably consumed, then bone dust, guano, or phosphorus in some other manure, must be applied to the impoverished land to remove it.—*Dr. Lee's Address.*

MULCHING.

A "practical mulcher," writing from Dedham, Massachusetts, whose communication is published in the *Horticulturist* for May, says:

I regard *mulching* as *our* prime and especial necessity, *the* most indispensable thing in North American Agriculture. For in the first place, the operation of mulching, or covering over the surface of the ground, prevents the evaporation of the moisture that is so requisite to the rooting of new plantations, to the development of luxuriant foliage, and the production of perfect flowers, and fair, juicy, large sized fruits. Again: the operation of mulching not only prevents, to a great extent, the escape of moisture, but also, and what is of greater importance, the passing away from the earth of the volatile gases that are held in solution in the water, and which, sucked in by the minute mouths of the radicles or spongioles, give nourishment to the plant or tree.

That mulching is of great value in the case of young and newly planted trees, by preventing the process of evaporation, is universally admitted in theory, and to a certain extent carried out into practice; and yet but few seem to be aware of its value in retaining the nourishment as well as the moisture in the earth, and thus, both those means, contributing to the luxurious and healthful condition of plants and trees already rooted and well established in the soil. But observation, however, as well as actual experience, has fully convinced me, that trees will not only put forth more luxuriantly, and grow more vigorously, but that the fruit will be far larger, fairer, and jucier, for mulching during the hot season. And I hazard the observation, that in the culture of pears, and certain kinds of apples, such as the Roxbury Russet, that are generally small and knurly on a gravelly bottom, careful mulching is almost equal to a clay subsoil.

And here let me say, by way of parenthesis, that in the cultivation of these fruits, it is not, I think, any nutritive element in the clay soil, but only its power of retaining moisture, that gives it the advantage over a gravely substratum. By carefully mulching, however, I do not mean a wisp of straw, hay, weeds, or small brush, nor a shovel of spent tan, hub-chips, or saw-dust placed just round the trunk of the tree, but a covering of the ground, if possible, as far as the roots extend. There are some absurd people, who seem to think, if we are to judge them by their practice, that somewhere at the butt of the tree is a great mouth in which the tree takes its food and drink; and accordingly, they put all the nourishment, whether liquid or solid, "right round" the trunk. Whereas the truth is, the numerous little mouths that drink in the moisture, and the nutritious elements that are dissolved in it, are in the little spongioles that form the very terminations of the radical branches; and our course of treatment should be based upon this fact, in watering, manuring and mulching.

Mulching, then, in the first place, prevents, in light, gravelly soils—and in dry seasons in all soils—the evaporation of the moisture necessary to that flow of sap, that shall make a luxuriant growth, fine foliage, and fair, large, juicy fruit.

And second, as the elements that nourish the tree are contained in the moisture in solution, and a dry state of the earth must thus cut off the supply of food, mulching actually nourishes the tree. In proof of this, I might, would my space permit, adduce numerous facts; but experiments are so easily tried, that such evidence is hardly necessary here.

In conclusion, as the season for planting flowers, roots, seeds, &c., is at hand, I must say one word in favor of mulching for them.

Mulch your dahlias, if you want free, rapid, vigorous growth, and full abundant bloom. Much the best substance or mulch for this purpose is the soft, spongy meadow moss, though leaves and coarse sedgy meadow hay will do. I have planted two rows of dahlias, side by side, trenched them alike twenty inches deep—manured them alike, and the row that was kept carefully mulched, out-grew and out-bloomed the other, and put it altogether to shame.

Mulch your flower seeds—and what do you mean by that? I mean that flower seeds fail to come up, either from a deficiency or a super-abundance of moisture, both of which extremes are obviated by this process.

When you plant your seeds, cover them over with the same spongy moss spoken of above. And, that I may be perfectly understood, here is my receipt for planting flower seeds. Make the earth very fine with a garden knife, or a common case knife. Scatter your seeds, if small, over the place thus prepared; if large, bury them a little, press the earth upon them; spread your damp moss, and clap a flower pot or pan over them. When your seeds have started, lift up the pot a little by putting a stick or stone under the south side, and as soon as your seedlings look green and strong, take away the moss, keeping the pot or pan handy against a late frost or chilling wind. In this way you will rarely have to complain of your seedsman; and you may have early plants and the most delicate kinds without a hot-bed. My friends are putting the

continual query—"How do you make all your seeds come up and grow?" This is my secret, and in Prof. Lindley's book you will find it more in detail. Let me say in conclusion: Mulch new plantations, if you wish your trees to live and grow. Mulch your young trees if you want them thrifty and luxuriant. Mulch your old trees if you desire fine foliage and fair large fruit. Imitate nature in the fields and forests, who gathers a bed of leaves and moss about the roots of her trees, and follow the advice of an old mulcher.

NATURAL HISTORY OF THE CURCULIO.

St. Louis, Feb., 1851.

Mr. Editor:—By inserting the following you may save some one the time, expense and disappointment I have experienced in the last four or five years, in following out the hundred and one remedies in guarding against the attacks of the curculio.

Last year I varied my mode of warfare by spreading a thick coat of cement on the ground under thirty-five plum trees, extending it to the full size of the top of the tree. As soon as the plum made its appearance from the blossom, say about the 10th of May, I commenced jarring the trees every morning and evening, and continued to do so until the 1st of August, and as the insects fell upon the cement, killed them. The first three weeks, the average number was not far from fifty per day. From the 1st of June to the 20th, nearly one hundred per day; after which time they gradually diminished.

Now for the result: From the thirty-five plum trees, comprising fifteen choice varieties, I saved only about two bushels.

It has been argued by many, that this insect has great instinctive powers, and will not deposit its eggs where the fallen fruit is likely to encounter a pavement.

I know nothing about your eastern or northern curculio, but I can assure you, Mr. Editor, no such repugnance is felt or known by this insect in Missouri, and further, that no pavement ever invented, where curculios are numerous, will guard against their attacks, unless extended to every fruit tree in the garden or orchard. It is wholly inconsistent with the nature and habits of this insect, to suppose that paving under a few trees will protect the fruit, while others near by are unpaved, for the simple reason, that the curculio attacks nearly every description of fruit. The nectarine and the plum are their favorites, but the apple, pear, peach, apricot, cherry and grape, are all subject to their attacks, and all serve absolutely as a means of reproduction.

I have taken the above mentioned fruits separately, placed each in different boxes of earth, and from four to six weeks the change from the larva to the perfect curculio would be complete.

There are three distinct species of this insect, one smaller, and the other larger, than the plum curculio. The small one is nearly round, about half the size of the plum curculio, and is most found upon grapes. The other is full half a size larger, with a smooth shell and not near so numerous as either of the other kinds. Both of these insects, instead of making the well known crescent mark of the plum curculio, perforate the fruit by boring a small round hole, in which they deposite their eggs with the same certainty of destroying it, as the plum curculio.

During the time of jarring the trees, not a day passed without finding more or less of the two new species above described, in about the following proportion. Plum curculio, 25; small do., 8; large do., 3.

At the proper season of the year, by watching their movements patiently, large numbers will be seen emerging from the ground, and after surveying their position, will follow the instinct with which nature has endowed them, by crawling up the tree instead of flying. I have often checked their progress in this way, by putting a thick piece of pasteboard around the tree in the shape of an inverted funnel, but their wings were soon brought into requisition to overcome the difficulty. They can apparently fly a great distance, and in high winds, are blown in every direction; for after such winds I have often found them in different rooms, in the first and second story of the house.

Your readers will naturally say, all this is very well, but give us a remedy that will effectually guard against the enemy.

I can safely say, there is a remedy, and a philosophical one, which, if faithfully carried out, will insure good crops of fruit so far as curculio are concerned. First, then, cut off all means of *reproduction* by picking up every description of fallen fruit two or three times a week, and subjecting it to some process that will effectually destroy the grub or larva.

No advantage will be derived from this process the first year, for the curculio is already in the ground; but the satisfaction of having a good crop of plums the second year will well repay for all the trouble of picking up the fallen fruit.

I have studied the character and habits of this insect for the last ten years—have watched its movements for days and weeks—have tried every remedy published in the different agricultural and horticultural works, all of which have totally failed, excepting jarring the trees, and paving, and these have only proved partially successful.

By picking up every description of fallen fruit, no possible means are left for them to perpetuate their species. I am not aware that any means has ever yet been discovered, that the curculio can in any other way propagate its species, than by depositing its eggs in some description of fruit, and whatever fruit that may be, it must come in contact with the earth in such a manner that the grub can escape, and bury itself beneath the surface.

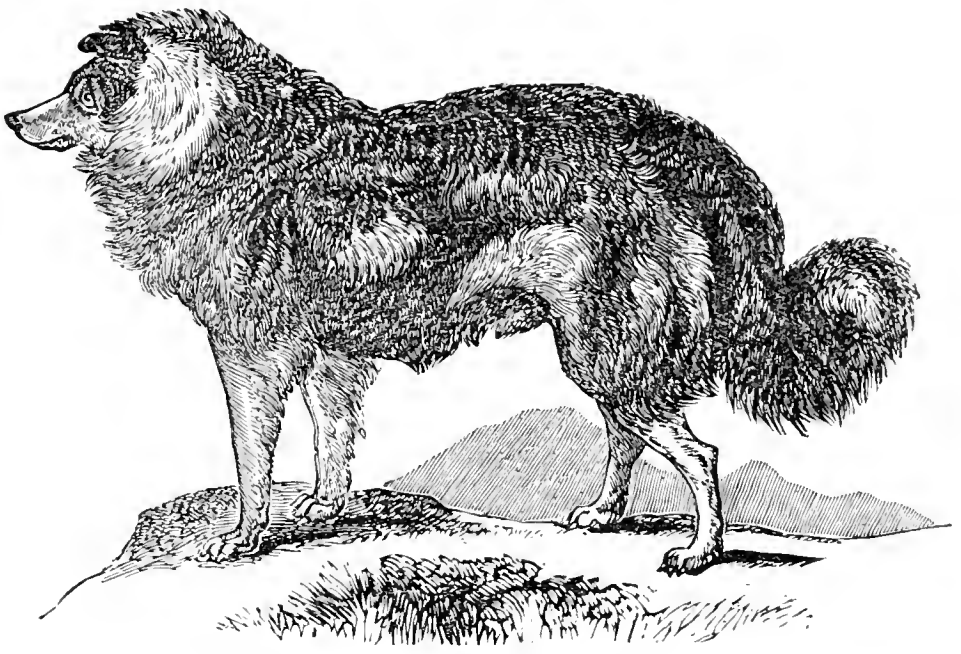
No one can resonably expect to be entirely exempt from this insect, as long as their neighbors are troubled with them, for some few will fly, or be blown into the trees under any and every circumstance, unless completely shielded by some covering, or net work.

The most complete and accurate description of this insect, according to my own observations, has been given by Mr. M. H. Simpson, of Massachusetts, in the June number of Downing's Horticulturist for 1850.

In this communication a remedy was given to guard against the curculio, which proved eminently successful with Mr. Simpson and a Mr. Young, of Kentucky, viz: syringing the trees with lime water. This remedy I have never tried.

Very respectfully, A Subscriber.

—*Western Horticultural Review.*



THE SCOTCH SHEEP DOG.

There are various races of dogs, which seem made by nature for certain definite purposes, to which they attend without training. There are the sheep dog, the pointer, the setter, the hound, the terrier, the spaniel and the bull dog, almost perfected by nature for one office alone. So fixed and peculiar are the traits in some races, that they will all attack an animal in the same way, and at the same point, though the young may not have the example of the old.

The sheep dog, in all ages and climates, preserves its peculiar properties, and though there may be several races, their characteristics are similar; and it is the least removed of any race from the natural type of the dog. For certain purposes this race has been modified, as by a cross with the mastiff a stronger race is produced to guard the flocks against wolves. When the dog is to serve as a guide rather than a protector, he is rather small, activity being an important object.

The muzzle of the shepherd's dog is sharp, the ears short and erect, the tail is long and bushy, like that of a fox; and he is generally covered with thick shaggy hair, particularly about the neck. He is usually black, or black prevails, mixed with gray or brown. The true sheep dog is regarded by the sheep as a guide and friend, but some of the crosses with ferocious races are an object of dread, and often injure the sheep by fright and violent attacks upon them, especially under a brutal shepherd. In such cases the dog is worse than useless.

The sheep dog is distinguished for his intelligence, fidelity, obedience and sagacity, performing naturally what other dogs would do only after a long course of training. In many cases this dog will do more in assisting a shepherd than several men, and often performs what it is not in the power of man to do. The following remarks, showing the fidelity, sagacity and intelligence of this valuable animal, will be read with interest.

Mr. James Hogg, the Ettrick Shepherd, living in his early days among the sheep and their quadruped attendants, and an accurate observer of nature, as well as an exquisite poet, gives some anecdotes of the colley, (the Highland term for sheep dog,) with which the reader will not be displeased. "My dog Sirrah," says he, in a letter to the editor of Blackwood's Edinburgh Magazine, "was, beyond all comparison, the best dog I ever saw. He had a somewhat surly and unsocial temper, disdaining all flattery, and refusing to be caressed; but his attention to my commands and interest will never again be equalled by any of the canine race. When I first saw him, a drover was leading him with a rope. He was both lean and hungry, and far from being a beautiful animal; for he was almost black, and had a grim face, striped with dark brown. I thought I perceived a sort of sullen intelligence in his countenance, notwithstanding his dejected and forlorn appearance, and I bought him. He was scarcely a year old, and knew so little of herding that he had never turned a sheep in his life; but, as soon as he discovered that it was his duty to do so, and that it obliged me, I can never forget with what anxiety and eagerness he learned his different evolutions; and when I once made him understand a direction, he never forgot or mistook it."

On one night, a large flock of lambs that were under the Ettrick Shepherd's care, frightened by something, scampered away in three different directions across the hills, in spite of all that he could do to keep them together. "Sirrah," said the shepherd, "they're a' awa!"

It was too dark for the dog and his master to see each other at any considerable distance, but Sirrah understood him, and set off after the fugitives. The night passed on, and Hogg and his assistant

traversed every neighboring hill in anxious but fruitless search for the lambs; but he could hear nothing of them nor of the dog, and he was returning to his master with the doleful intelligence that he had lost all his lambs. "On our way home, however," says he, "we discovered a lot of lambs at the bottom of a deep ravine called the Flesh Cleuch, and the indefatigable Sirrah standing in front of them, looking round for some relief, but still true to his charge. We concluded that it was one of the divisions which Sirrah had been unable to manage, until he came to that commanding situation. But what was our astonishment when we discovered that not one lamb of the flock was missing! How he had got all the divisions collected in the dark, is beyond my comprehension. The charge was left entirely to himself from midnight until the rising sun; and, if all the shepherds in the forest had been there to have assisted him, they could not have effected it with greater promptitude. All that I can say is, that I never felt so grateful to any creature under the sun as I did to my honest Sirrah that morning."

A shepherd, in one of his excursions over the Grampian Hills to collect his scattered flock, took with him (as is a frequent practice, to initiate them in their future business) one of his children about four years old. After traversing his pastures for a while, attended by his dog, he was compelled to ascend a summit at some distance. As the ascent was too great for the child, he left him at the bottom, with strict injunctions not to move from the place. Scarcely, however, had he gained the height, when one of the Scotch mists, of frequent occurrence, suddenly came on, and almost changed the day to night. He returned to seek his child, but was unable to find him, and concluded a long and fruitless search by coming distracted to his cottage. His poor dog also was missing in the general confusion. On the next morning by daylight he renewed his search, but again he came back without his child. He found, however, that during his absence his dog had been home, and, on receiving his allowance of food, instantly departed, For four successive days the shepherd continued his search with the same bad fortune, the dog as readily coming for his meal and departing. Struck by this singular circumstance, he determined to follow the dog, who departed as usual with his piece of cake. The animal led the way to a cataract at some distance from the spot where the child had been left. It was a rugged and almost perpendicular descent which the dog took, and he disappeared in a cave, the mouth of which was almost on a level with the torrent. The shepherd with difficulty followed; but, on entering the cavern, what were his emotions when he beheld the infant eating the cake which the dog had just brought to him, while the faithful animal stood by, eyeing his young charge with the utmost complacency! From the situation in which the child was found, it appeared that he had wandered to the brink of the precipice, and then either fallen or scrambled down, the torrent preventing his re-ascent. The dog by means of his scent had traced him to the spot, and afterwards prevented him from starving by giving up a part, or, perhaps, the whole of his own daily allowance. He appears never to have quitted the child night or day, except for food, as he was seen running at full speed to and from the cottage.

Mr. Hogg says, and very truly, that a single shepherd and his dog will accomplish more in gathering a flock of sheep from a Highland farm than twenty shepherds could do without dogs; in fact, that without this docile animal, the pastoral life would be a mere blank. It would require more hands to manage a flock of sheep, gather them from the hills, force them into houses and folds, and drive them to markets, than the profits of the whole flock would be capable of maintaining. Well may the shepherd feel an interest in his dog; he it is indeed that earns the family bread, of which he is himself content with the smallest morsel: always grateful, and always ready to exert his utmost abilities in his master's interests. Neither hunger, fatigue, nor the worst treatment, will drive him from his side, and he will follow him through every hardship without murmuring or repining. If one of them is obliged to change masters, it is sometimes long before he will acknowledge the new owner, or condescend to work for him with the willingness that he did for his former lord; but, if he once acknowledges him, he continues attached to him until death.

We will add another story of the colley, and proceed. It illustrates the memory of the dog. A shepherd was employed in bringing up soms mountain sheep from Westmoreland, and took with him a young sheep dog who had never made the journey before. From his assistant being ignorant of the ground, he experienced great difficulty in having the flock stopped at the various roads and lanes he passed in their way to London.

In the next year the same shepherd, accompanied by the same dog, brought up another flock for the gentleman who had had the former one. On being questioned how he had got on, he said much better than the year before, as his dog now knew the road, and had kept the sheep from going up any of the lanes or turnings that had given the shepherd so much trouble on his former journey. The distance could not have been less than 400 miles.

Buffon gives an eloquent and faithful account of the sheep dog: "This animal, faithful to man, will always preserve a portion of his empire and a degree of superiority over other beings. He reigns at the head of his flock, and makes himself better understood than the voice of the shepherd. Safety, order, and discipline are the fruits of his vigilance and activity. They are a people submitted to his management, whom he conducts and protects, and against whom he never employs force but for the preservation of good order. If we consider that this animal, notwithstanding his ugliness and his wild and melancholy look, is superior in instinct to all others; that he has a decided character in which education has comparatively little share; that he is the only animal born perfectly trained for the service of others; that, guided by natural powers alone, he applies himself to the care of our flocks, a duty which he executes with singular assiduity, vigilance, and fidelity; that he conducts them with an admirable intelligence which is a part and portion of himself; that his sagacity astonishes at the same time that it gives repose to his master, while it requires great time and trouble to instruct other dogs for the purposes to which they are destined: if we reflect on these facts we shall be confirmed in the opinion that the shepherd's dog is the true dog of nature, the stock and model of the whole species."

For the New England Farmer.

TAP ROOT OF TREES.

Mr. Cole:—Sir,—Will you please inform me through your paper what are some of the reasons for destroying the tap root of trees? We are taught by most writers upon the subject to cut off the tap root of fruit trees while young, and this instruction is followed in practice by nursery-men.

I have become convinced by experiments that trees with the tap root preserved will grow faster, endure a drought better, and stand firmer against heavy winds; and from observing trees that were never transplanted, I think they will grow larger, bear better, and live to a greater age. Now if these are facts, the doctrine taught is a very serious error, and ought to be corrected. If you will please enlighten us upon this subject, you will oblige your humble servant, Stephen Adams.

West Newfield, Me., June 11.

Remarks.—There is no advantage to the tree in cutting off the tap root, but it is done as a matter of convenience to the nurseryman; on the contrary it is a disadvantage to the tree to lose any part of the tap root; but this loss must inevitably occur, in some measure, as a consequence of transplanting.

A tree that stands where it started from seed, will be more vigorous, healthy, and of greater longevity, than if transplanted, other circumstances being equal. The shortening of tap roots is not a custom merely for the accommodation of nurserymen, but the common result, in some measure, of transplanting. Sometimes the nurseryman transplants trees twice before they become standards fit for sale. Perhaps he has stocks to set out only two or three feet high, and the tap roots are from one and a half to two feet long. Now he has a hard shallow soil, and the labor of deeping the soil and opening trenches, and setting 8 or 10,000 trees, with their tap roots, the full length, would be great indeed; and if the tap roots continued to extend downward, they could never be taken up entire. Sometimes nurserymen allow trees to remain where they started from seed, and this is often the cheaper way, but such trees are not so saleable. They have long tap roots, but not so good lateral roots as those that have been transplanted; and the purchaser, not inclined to dig deep holes, dislikes their appearance.

Another important consideration is the fact that with the greatest care and expense, it is impossible to transplant trees so as to preserve the tap root, and give it the same chance for growth which it has in its native spot. If the point of the tap root, to the extent of only one-eighth of an inch, become broken off, injured or dried, it will not extend downward, but become branch, or send off laterals. So in order to have all the advantages which nature designed from the tap root of the tree, the seed must be planted where the trees are to stand.

We have tried in vain to raise handsome, long straight beets by transplanting. We have taken them up when small, and with a spade run below the roots, so that we thought there was no loss or injury to any particle of root; and we have set them with the greatest care, opening the soft earth, and carefully laying in the plants with the roots perfect; but generally the root would not continue straight downward, but branch, and form imperfect roots, showing a great contrast at harvest between those that were transplanted and those that were not.

For the New England Farmer.

CULTURE OF THE CRANBERRY.

Mr. Editor:—A few weeks since a brief notice was given of the upland culture of the cranberry, by the Messrs. Needham, of Danvers. As the "proof of the pudding is said to be in the eating," so may it be with the cranberry. I have lately received a box of the fruit, grown upon their grounds the last season, longer and fairer than cranberries usually are. They appeared more like ripe cherries than cranberries. They cooked tender, required a moderate proportion of sweetening, and in every respect were superior to the meadow cranberry.

Whether it will be practicable to extend this culture in a manner *to pay*, I am not sufficiently advised to express an opinion. It is certainly true that the cranberry can be grown upon the upland, and that the quality of the fruit is greatly improved by so growing. When the habits of the plant are fully understood, and proper care shall be taken to guard it against the frost of winter, I see no reason why it should not be as successfully cultivated as the strawberry. About one bushel to the square rod of land might thus be raised;—and there can be no doubt, there will ever be a quick market for all that are raised.

The cranberry is ordinarily found on grounds overflowed by water in the winter. This overflowing, in a measure, protects it from frosts. Hence the inference has been, that such overflowing was essential to their growth. The experiments that we have seen would seem to prove, that a slight covering of meadow hay, or bushes of evergreen, or other light substances not burdensome to the plants, would be an equally good protection.

Esteeming the cranberry one of the greatest luxuries for the table, indigenous to our own soil, healthy as well as palatable, I have thought a circulation of the above facts, relating to its culture, might awaken attention to the subject. Heretofore, usually plants have been transferred from the meadow to the upland; but if they could be raised from seed, or taken from nurseries, as are the plants of the strawberry, it is apparent that they would be best adapted to their position. Strict care in this, as in other cultures, should be had to exclude all weeds and meddlesome grasses. P.

Danvers, June 20, 1851.

Remarks.—Cranberries grown on high land are hard and firm, and keep far better than those raised on wet land; and yet they cook soft and are of the finest quality. We picked a quart of cranberries of spontaneous growth on a poor gravelly ridge, and set them in a closet in a room that was kept warm through the winter, day and night. The next spring almost every one was sound, and had

hardly shriveled. It is a curious fact that cranberries, of spontaneous growth on high land, endure the cold of winter, and produce well without any protection during the winter, whilst those cultivated on high land seem to need protection.—EDITOR.

For the New England Farmer.

FARMERS SHOULD COMMUNICATE—COLOR OF HOUSES.

MR. EDITOR:—I see that you have extended a general invitation to your readers to communicate freely whatever they may feel disposed to offer to the columns of the "Farmer;" that it is your wish that they may do so. I hope it will induce many who have heretofore been silent, to cast their mite into the treasury of practical information and thereby do something, even if it be ever so little, towards enabling the tillers of the soil to arrive at the best mode of doing the things appertaining to their invaluable branch of industry, which is the very fountain-source of all life's enjoyment and luxuries.

I am well aware that my unskilled pen can contribute but little or nothing that will prove interesting and useful, or be worthy of the space it would occupy in your valuable publication; yet if I could but be the feeble means of awakening a desire and willingness,—that will eventually be followed up by the act,—on the part of older, and consequently more experienced farmers than myself, to spread the result of their own labors and experiments broadcast before the eyes of the great farming community, where all may read, if they will, and profit thereby; if I can do any thing towards bringing about "a consummation so devoutly to be wished," I hope that you nor I, Mr. Editor, will ever have cause to regret that I have again seen fit to trespass upon your time and patience.

Let our farmers keep an accurate account of the management and profits of their crops, &c., and prepare and send in the results for publication from time to time; let the practice become general, and the benefits arising from it would very soon be made apparent in the growing interest it would awaken in many who, "sick of farming," as they say, plod on in the same beaten path which their fathers trod before them, strangers to all that noble ambition and honest pride, that fills the expanding heart of the progressive farmer, as he casts his eye over his fertile domain that so amply repays him for all the expense incurred and all the labor bestowed, and feels that he is indeed "Nature's nobleman!"

I am sorry that my article on the "Color of Houses" did not, and could not, meet with your approval, for I consider pure white to be *the color* for our dwellings. But we cannot all think alike. It is so ordered, and wisely, and "'tis well;" but the arguments brought against my favorite *white paint* in the article of your correspondent, "J. B. D.," which appeared in the "Farmer and Rambler" of the 5th, are in my opinion "as light as vanity." He says, "Pure white will not harmonize with nature at all." True. But so far from this being an argument against its use, I consider its weight to bear exactly in the opposite direction. The *contrast* between the face of nature and "pure white" is just the reason why our buildings look better white than colored. At least *I* think so; "*J. B. D.*" thinks differently, as he has a perfect right to do, of course. Argument second reads—"When approaching a situation of which a great white house forms the foreground, the beauties of surrounding field and meadow can never be properly appreciated in consequence of the 'horrid glare,' particularly on a bright summer's day." Comment is unnecessary; let each reader weigh each argument in the nicest scales, and then draw his inference from the well of *truth*. "Thirdly,—When viewing the same from a *distance* the eye is irresistibly drawn to the house, and the mind cannot be divested of the idea that it is a great blot on the fair face of nature." Now this is worse than ever, for it gives unmistakable evidence that there is a *very weak* spot somewhere—an entire want of self-control; or, perhaps I should say, a complete captivation of "the eye" by this same "great blot on the fair face of nature!"

After quoting a paragraph from one of Downing's works, "J. B. D." concludes his communication by asking the following question—"If A. J. Downing is not authority in matters of taste, pray who is?" I suppose every one has a perfect right to consult his *own* taste, if he sees fit to do so; and I hope that all will exercise this privilege in a spirit of manliness that will suffer no dictation, from any one. I would not for a moment entertain the thought that A. J. Downing even *wishes* to dictate; but at the same time I cannot but observe that "J. B. D.'s" article gives strong indications that he depends too much on Downing. Let him read "A.'s" article in the "Farmer and Rambler" of May 17th, on the "Effects of Coal Tar on Fruit Trees," and learn a lesson therefrom. Infallibility enters not into the nature of erring mortals. J. W.

Winchester, Mass., June 9, 1851.

For the New England Farmer.

PROFITABLE COW.

MR. EDITOR:—I will give you an account of a cow which I have. I commenced weighing her milk May 17th, and continued 28 days. I found that it weighed 1261 1-2 lbs. I made from the cream produced in 26 days, 43 3-4 lbs. of butter, as handsome as any person ever saw. It may be seen by calling on Col. Aaron Brigham, in front of the market.

The cow is less than middling size; a native, full blooded Yankee—none of your John Bulls. Her age is 11 years. She has had nine calves, only one of which is a heifer. She is 3 years old, and has had 2 calves. She makes from 6 to 7 lbs. of butter per week. I milk three times per day, and give my cow 1 quart of meal in slops, per day.

Yours, &c., WILLIAM F. GLEASON.

Marlboro', June 15, 1851.

REMARKS.—Mr. Gleason seems to depend on the heifers of this cow for a continuance of her good properties; but he should consider that it is an established principle among breeders, and one which is recognized generally among observing men, that the peculiar properties of any animal descends in the opposite sex. He should raise a fine bull of this cow, and look for her good properties in the

heifers that descend from him, rather than in the heifers direct from this valuable cow.—Editor.

THE POTATO ROT.

We have been requested to copy the following letter, addressed to his Excellency the Governor:

Lowell, April 2, 1851.

The undersigned claims that he has discovered a certain and practical remedy for the disease called the potato rot, and that he is entitled to the reward offered by the Legislature of the State of Massachusetts. He says the disease is caused by a small insect, or black bug, which preys upon the leaf until it destroys the vine and causes the root to rot. He has made ample investigation to satisfy him of the fact.

The remedy he proposes, having proved it fully himself, is to dissolve lime in water, and with a sprinkling pot adapted to the purpose, to sprinkle all the vines with the solution, as soon as there is any indications of the presence of the insect, which is always indicated by an appearance of the rust. This rust is merely the perforations made by the bug. The insect commits its ravages near sundown and in the night, and can be best discovered near the close of the day. The solution may be very weak, but must be repeated once a week after the appearance of the insect.

He thinks that two casks of lime to the acre would be sufficient. Phanuel Flanders.

To his Excellency, George S. Boutwell, Governor of Massachusetts.

WHAT IS THE MOST VALUABLE CROP?

Mr. Editor:—In the Farmer of May 1st, I noticed a communication from a subscriber, desiring information on the subject. If you think the following lines will be of any benefit to him, or any of the numerous readers of the Farmer, you are at liberty to publish them.

In regard to what is the most profitable crop, I would say much depends on the season, and the character of the soil which you wish to cultivate. On dry, sandy loams, potatoes or wheat would not be likely to yield a very great profit; but such land under proper management would produce large crops of Indian corn, rye, buckwheat, or clover.—In a hot, dry season, our grass and grain crops would suffer from drought, while we might obtain an excellent crop of corn; but in a cold, wet season, this would be reversed. Considering these circumstances, I believe it is best to raise a variety of crops, selecting such soils as would be most congenial to the nature of the crops. I believe that in whatever circumstances a farmer may be placed, the grass crop is the most important, if not the most profitable; for we depend on this to keep our stock through our long and cold winters; every increase of this adds to the manure heap, and consequently to the productiveness of the farm.

But my main object is to state the few facts I have learned in relation to this subject. For the last two years I have kept a journal of the operations on the farm, in order to ascertain the real and comparative value of each crop. From this I learned that some crops, which before I considered the most profitable, yielded less net profit than some others. Below is a tabular account of the cost and value of the crops, which we raised in the years 1849–50; and also the number of loads of manure applied, containing thirty bushels each.—In the cost is included the value of the seed, and labor at the price paid, (50 cts. to $1,00 per day,) also the use of tools; board is not included.

1849.

Crops.	*Cost.*	*Value.*	*Manure per acre*
Hay,	$2,18 a ton.	$8,00 a ton.	
Wheat,	1,65 a bu.	1,25 a bu.	20 lds. yr. before.
Winter Rye,	75 "	90 "	10 " " "
Corn,	40 "	85 "	20 loads.
Potatoes,	23 "	30 "	18 "
Apples, grafted,	4½ "	50 "	

1850.

Hay,	$2,00 a ton.	$9,00 a ton.	
Wheat,	83 a bu.	1,25 a bu.	18 lds. yr. before.
Winter Rye,	89 "	90 "	20 " " "
Corn,	40 "	83 "	27 loads.
"	96 "	83 "	35 "
Potatoes,	25 "	40 "	13 "
Apples, grafted,	4½ "	50	

It appears from the above that the apple gives the most net profit. In the table the cost of gathering the apples, which was done by hand, is all that is included. If pruning and other labor had been reckoned, it might have doubled the cost. Except the apples, the hay stands highest in point of profit. Indian corn stands next. It will be seen by the table for 1850, that there were two pieces of corn, one of 40, and the other 76 cents per bushel. The first was planted on old ground, the other on greensward,—the latter was also injured by being planted too thick.

It will be recollected that we had a severe drought in 1849, which injured the grass and grain very much, while the corn and potatoes suffered less. In 1850 potatoes suffered badly from the rot.

These are, however, the result of only two years' observation on one small farm. Other seasons and places might give different results. I should be happy to hear from others on this subject, and I would advise all to keep a journal, note down their experience and observations, and publish them in the Farmer.—*Maine Farmer.*

☞ You may glean knowledge by reading, but you must separate the chaff from the wheat by thinking.

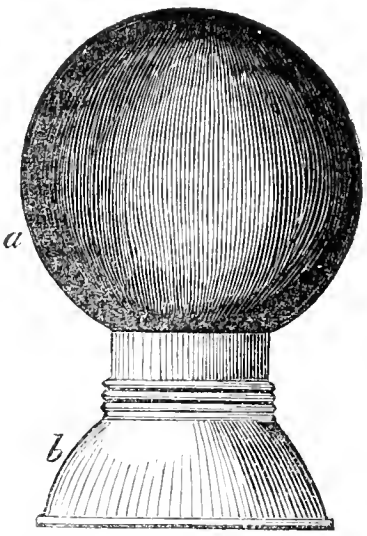
☞ Duty faithfully performed opens the mind to truth.

Mechanics' Department, Arts, &c.

DR. FARADAY ON CHIMNEYS.

At the Royal Institution, in a series of lectures on chemistry applied to domestic purposes, Dr. Faraday has thus philosophized on "a chimney." Various illustrations were given to show the importance of the functions of the chimney. A parlor fire will consume in twelve hours 40 lbs. of coal, the combustion rendering 42,000 gallons of air unfit to support life. Not only is that large amount of deleterious product carried away and rendered innoxious by the chimney, but five times that quantity of air is also carried up by the draught, and ventilation thus effectually maintained. The force of a draught was illustrated by a descending flue. A colored flame was held near the end of a tube bent like an inverted syphon. As soon as the tube was heated, the ascent of the air within the longer arm of the tube drew the flame downwards into the shorter arm with considerable force. Since the as-

cent of smoke up the chimney depends on the comparative lightness of the column of air within to that of an equal column without, the longer the chimney the stronger will be the draught, if the fire be sufficiently great to heat air; but if the chimney be so long that the air is cooled as it approaches the top, the draught is diminished. A case of this kind occurred at a lighthouse on the Isle of Portland. The chimney which ventilated the building and the lantern was carried on the outside, and in the winter time the draught was so much impared that the windows became dim and the lights obscure. An attempt had previously been made to remedy the defect by lengthening the chimney; but that, of course, had made it smoke all the more. The application of a jet of steam to increase the blast of locomotive engine furnaces was illustrated. The lower end of a bent glass tube was placed in a dish which contained colored liquid, the upper end being inverted into a larger and horizontal tube. A jet of high pressure steam directed through the larger tube caused such a rush of air to supply the place of the air expelled by the steam, that the colored liquid rose to the top of the tube. The mechanical force of a jet of high pressure steam was shown by causing it to sustain an egg, which was seen dancing about in the air without anything apparent to support it.—*Scientific American.*



RESTORATION OF SIGHT.

Mr. J. Ball, of New York, has lately patented an instrument for the restoration of sight to aged persons, which promises to be very useful in remedying one of the most trying ills of old age. The instrument,—of which we give an engraving above,—is very simple, consisting merely of a hollow India rubber ball, *a*, attached to a cup, *b*, which fits on the eye. The air is first partially expelled from the ball by pressure between the fingers, before the cup is applied to the eye. On removing the pressure the ball distends and a partial vacuum in produced, drawing on the eye and tending to restore its convexity. The pressure is regulated according to pleasure. Prof. Bronson, and other eminent occulists, accomplish the same result by manipulation, but probably not so efficiently. The price of the instrument is $2,50.

The following is the explanation of the inventor:

"The cause of the decline of sight is the flattening of the lens or cornea of the eye; and the object of this instrument is to restore the convexity if lost, and to preserve it if first beginning to decline. Having tried the effect upon myself, I can speak with confidence, for from having been unable for the last six years to read or discern the form of any letter, I can now, after a trial of six months, read without the aid of glasses. This is effected by a simple instrument, made upon philosophical principles, by which the cornea of the eye is gradually raised to its original convexity, causing the focus to impinge upon the retina without the aid of convex lens; and will be accomplished ten-fold more rapidly than the sight declined. The application will be made once or twice a week with less trouble than that of shaving, and no loss of time, as it is most conveniently applied after retiring to bed."

ON FITTING HORSE-SHOES HOT.

The following is from a review of the Bulletin of the Central Society of Veterinary Medicine, published under the direction of its committee, and the editorship of M. H. Bouley, the Annual Secretary —in the London "Veterinarian:"—

Although hot shoeing has had some enemies in our country we know of but few advocates for the cold plan. M. Delafond, the author of the paper before us, concurs with the committee in the rejection of the *podometre* or foot-measurer, the invention of M. Riquet, and proceeds to inquire if there is any serious or real objection to fitting shoes hot to the feet.

Fitting shoes hot—hot shoeing as it may be called —is said to heat or burn the sole, to dry the hoof, to incline its fibres to separate, to incite inflammation in the internal tissues of the foot, and to produce organic alterations in them of a grave and hardly remediable character. It was not until the middle of the eighteenth century that hot shoeing came into practice, and the first author we find complaining about it is Lafosse, who, in his "Nouville Pratique de Ferrer les Chevaux," 3d edition, published in 1758, has spoken of such accidents under the names of heated and burned hoofs. And his son (Lafosse, jun.,) has well described them in his "Guide du Marechal," and subsequent works.

If burning the hoof is an evil consequent upon hot shoeing, is it a frequent occurrence? The committee and M. Reynal have already come to the conclusion that it is not, and I am quite of their opinion. In order, however, to assure myself further than the mere *on dit* practice of the forge on this point, I resolved to institute a series of experiments on the conducting power of horn of caloric; and the results have proved as follows:

1. That the conducting power of the crust is inferior to that of the sole; whence we derive the indication in practice, that it is absolutely essential that the heated shoe should not be allowed to come in contact with any substance but the crust.

2. That caloric is transmitted tardily either through crust or sole.

3. That it is not before the elapse of three, four, or five minutes after combustion that the thermometer indicates the highest degree of heat in the hoof.

4. That the thinner the horn of the crust is the

more heat becomes transmitted through it to the parts it envelops.

Having thus assured myself of the conducting power of heat of the hoof, I now sought to ascertain the *amount* of heat it was capable of transmitting to the living tissues enclosed by it, as well as the degree of heat required to produce *burning*.

Before, however, I proceed to give an account of these experiments, I wish to show the anatomical structure of the parts situated underneath the sole and the crust, and particularly of those subjacent to the points of junction between these two parts of the hoof.

When, through maceration, the horny sole has become detached from the parts beneath it, we come upon the sub-ungular tissue which Lafosse and Bourgelat have named the *fleshy sole;* and which our honorable president, M. Girard, has designated, after Malpighi, *reticular tissue*, upon whose surface we observe numerous slender prolongations, filiform, which have gone under the names of *fibres*, *filaments*, *villosities*, and in later times *papillæ*. Now, those villosities or papilæ, which, on account of their vasculo-nervous organization, I shall denominate *villo-papillæ*, are extremely numerous over the entire surface of the reticular tissue, and particularly around the circumferent border of the coffin bone, where they come opposite to the parts burnt by the hot shoe. These villo-papillæ, extremely important to be known, and which even up to the present hour authors have not described with sufficient minuteness, vary from four twenty-fifths to six twenty-sixths of an inch in length throughout the entire circumference of the fleshy soil.

Another very remarkable disposition, as it regards hot shoeing, and one which has not, that I know of, been pointed out, is that every plait of the laminated tissue, before it terminates in the circumferent border where it unites with the velvety tissue of the sole, sends off numerous papillæ in digits or teats of no more than four twenty-fifths to six twenty-sixths of an inch in length.

BLASTING ROCKS.

Blasting rocks by the old process consists in making holes in a proper spot by using a heavy iron bar, of which the strokes produce the desired effect; the hole then is cylindrical and rather conical, being wider at the top by the friction of the rod bar against its sides. The power has not then all the effect which it could have, and never can be used in large quantity. A process used with full success, is this: a deep hole is first made in the above manner, then a glass tube is inserted, and strong sulphuric acid mixed with a small portion of water is poured in; the acid dissolves part of the stone; the sulphate is then extracted, and the bottom washed by sending down some water, which is pumped out by any means whatever; this operation is repeated as many times as is necessary to produce at the bottom of the hole a kind of pouch, which is well dried by using rags or anything similar. This pouch is then filled with powder by the common process of ramming, and then blasted. The quantity of powder being as large as it may seem necessary, permits to blow up, with a single charge, as much as with ten of the old process, and to have larger blocks, if desired.

Ornamental Bricks.—A style of ornamental bricks has recently been introduced into England, and patented by Messrs. Bowers, Challinors & Wooliscraft, of the Staffordshire Potteries. These brick, or rather they are a kind of pottery ware, are made, the Scientific American says, from a mixture of clay and other ingredients, calculated to vitrify with the clay. They can be painted and grained with the utmost facility, so as to imitate any kind of oak, rose, satin, or other woods, or sculptures in stone, or be gilded without injuring the brilliancy of the gold leaf. They may supply the place of wood carving in architectural decoration, and, from their fire-proof nature, add to the safety of the buildings.

Flexible Ivory.—M. Charriere, a manufacturer of surgical instruments in Paris, has for some time been in the habit of rendering flexible the ivory which he uses in making tubes and other instruments. After giving the ivory the desired form and polish, he steeps it in hydro-chloric acid diluted with water, when it becomes flexible, elastic, and of a slight yellow color. In the course of drying, the ivory becomes hard and inflexible, but its flexibility can at once be restored by wetting it with a wet sponge; some pieces of ivory have been kept in a flexible state, in the acidulated water, for a week without being either too much softened or injured in the texture.—*Scientific American.*

Ladies' Department.

WOMAN'S SPHERE.

Since the first settlement of America, there never has been a period when women were in so much danger of sinking into a state of mental and bodily weakness, as at the present. The first settlement of the country called for all the strength and heroism that could be developed in human hearts. The women who shared the lot of the pilgrims, met this demand with a moral grandeur seldom equalled in human history. They grew strong—strong to do, strong to endure.

They communicated to their daughters their own glorious spirits, their own wide and exalted sphere. The revolution came, and these children and grand-children of the pilgrim stock boldly thought and acted as though they had a deep and glorious interest in the whole sphere of human rights and duties.

When, in accordance with the then acknowledged duty of self defence, the heroes of '76 buckled on their knapsacks and shouldered their rusty muskets, the wives and daughters assumed the responsibility of directing all the concerns at home.—They even tilled the ground, in many instances, and harvested its fruits, while the husband and his sons contended with the sword for freedom.

They were politicians too, and thought and spoke with glorious independence upon the subject of human rights.

When that period had expired, there were wasted fortunes to repair; the demands of a young and rising State must be met with honor, and there was no room to spare woman then from a generous participation in all the cares and duties of humanity. Her sphere, if not the same as that of her husband's, must at least be parallel.

As soon as the land was fairly established in its prosperity, the fever of emigration seized the mul-

titude, and again woman was required to do and dare. Nay, it was not thought unwomanly for her to follow the fortunes of her husband to the deep shades of the forest, and there to share with him the toils that were destined to convert the wilderness into fruitful fields. She walked for miles on missions of mercy without reproach, piled brush, and, if need be, aided in sowing the fallow, and in reaping the harvest, and no one chided her for her intrusion upon the reserved rights of the other sex.

But now when plenty and even luxury are to be found through all these once savage wilds, there is a strong tendency to limit and define on one side, and to resist on the other.

We believe there has been, of late years, a strong tendency on the part of many, to impress the minds of women with the idea that they were not made to be useful; and from this may have been deduced another false idea, namely, that the discharge of ordinary domestic duties does not, in itself, entitle woman to consider herself equally employed. She feels that her life is not a productive one, because she is mainly engaged in the manufacture of those articles immediately consumed by those around her. Her labor is rarely counted out in dollars and cents, and since it is coined in no mint, it is accounted of little value.

Many a woman pines because she has no great object before her. She feels no strong current sweeping through her veins, impelling forward some mighty work that shall be seen and admired by others. She sees her husband go forth daily to some kind of stirring enterprise: he meets his fellows and they bow to his power: his genius finds applause, and his labors reward, while she sits nursing a fretful infant, repaid by no appreciation, encouraged by no praise. But his is child's play compared with the grandeur of the task that lies before her. And if her labors meet with no well-coined currency in exchange, it is because the world has none in which its value can be estimated. Let no woman sink down in despondency, saying, "My labors all go for nothing in this great scale of human efforts." They are too great for mortal computation, and hence unestimated rather than overlooked. H. M. Tracy.

—*Albany Cultivator.*

HOME.

He who has no home has none of the pleasures of life; he feels not the thousand endearments that cluster around that hallowed spot to fill the void of his aching heart and while his leisure moments in the sweetest of life's joys. Is misfortune your lot? you will find a friendly welcome from hearts beating true to your own. The chosen partner of your toil has a smile of approbation when others have deserted, a hand to help when others refuse, and a heart to feel your sorrows as her own. Perhaps a smiling cherub, with prattling glee and joyous laugh, will drive all sorrow from your care-worn brow, and enclose it in the wreath of domestic bliss.

No matter how humble the home may be, how destitute its stores, or how poorly its inmates are clad; if true hearts dwell there, it is yet a home—a cheerful, prudent wife, obedient and affectionate children, will give their possessor more real joy than bags of gold and windy honor.

The home of a temperate, industrious, honest man will be his greatest joy. He comes to it "weary and worn," but the merry laugh and happy voice of childhood cheers him; a plain but healthy meal awaits him. Envy, ambition, and strife have no place there; and, with a clear conscience, he lays his weary limbs down to rest in the bosom of his family, and under the protecting care of the poor man's friend and help.

RECEIPT FOR BURNS.

As I see many receipts for various cures in your paper, I send you one for burns:—

Take lime water as strong as it can be made, and add to it as much alum as it will dissolve, after which add one ounce of sweet oil, which will turn it to a jelly, like opodeldoc, if the lime is strong enough. This should be kept by every family in a tight bottle in some place where it cannot freeze, and should be immediately applied. A child of mine got her clothes on fire in the absence of the family, and when discovered the skin was almost all burnt off her face and neck; we had to make the preparation, but in fifteen minutes after it was applied, the fire was extracted and the child at ease. I have tried most of the receipts published in your paper, but nothing have I found to equal the above. If rightly made and properly applied it will extract all the burning heat in ten minutes.

Hiram Root.

[We have been acquainted with the use of lime water and olive oil salve, for burns, for more than twenty years, but we never saw it made up with a mixture of alum. It is a very good salve. Poultices of linseed meal are the best remedies that we ever saw applied to burns.—*Scientific American.*

☞ The New England Farmer is published *every other* Saturday by John Ravnolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

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The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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THE CROP OF APPLES.

According to the present prospect, there will be a rather light crop of apples in New England, this season, or at most not more than a medial crop. This is an odd year, 1851, and we never have large crops in odd years, and seldom a middling crop, but generally a light one. We have our large crops of apples in even years. This is the result of more than 30 years' observation. Our natural trees as well as most kinds of grafted varieties bear mostly in even years.

Since we introduced this subject to the public, many observing men have confirmed our views. But a few persons have been disposed to ridicule hem without making observations to see whether they are correct or not. There are a few individuals, in this world of variety, who are too obstinate or stupid to learn, and they remain ignorant in spite of long experience, because they will not open their eyes to the light that is around them.

The fact that we have our largest crops of apples in even years (1850, 1852, &c.) and our lightest crops in odd years, (1849, 1851, &c.) is of great practical importance both to the growers and consumers of fruit. For by proper management the apple crops will be more equal. Let the raiser of fruit cultivate more extensively some of those few varities that bear annually, or yield their principal crops in odd years. And in cultivating those varieties that bear mostly in even years, select scions from those trees that bear invariably in odd years; for such there are. We know a farmer who, when he commenced setting his orchard, grafted all his Baldwin trees from a tree that always bore well in odd years. The consequence is that he gets about two-thirds of his crops of Baldwins in odd years, when they are scarce, and bring a good price. One of the most extensive cultivators of fruit in this region remarked, in confirmation of our views on this subject, that he generally sold his Baldwin apples in odd years for about twice as much as in even years, owing to their scarcity in odd years. His orchard produces twice or thrice as many in even as in odd years; and he said it was the same with others, else the price would not be generally affected.

WATER FOR STOCK.

In many situations cattle and other animals suffer for want of pure water in summer, especially in a dry time. In some cases they are supplied from a small spring or very small stream, and the place for the animals to drink is nothing but a mud hole. A few of the strongest creatures drink and disturb the water so that most of the stock have a poor supply, both in quality and quantity.

With proper management, a large stock can have a good supply of pure water from a small fountain or stream. Conduct the water into a large trough, and cover the spring so that the cattle cannot disturb the water or drop their manure in it; and if the trough will not hold water enough to supply the whole stock when thirsty, add tubs or other vessels. After the animals have drank, wash out the trough and other vessels, as often as once a week scrubbing them with a broom, or brush, as water standing in large vessels, with only a small supply, will soon grow foul in hot weather. When water is supplied from a pump or aqueduct, there should be the same attention to cleansing the vessels.

SUMMER PRUNING OF GRAPES.

As very erroneous notions generally prevail as to the summer management of grapes, frequent hints to cultivators are necessary. We have noticed that in many cases already the main shoots have been cut back to the fruit, thus depriving the fruit of the nourishment and support which without this mutilation would be given by a vigorous shoot, in the foliage, of which the sap, with other matter taken up from the atmosphere, would be elaborated into suitable food for the growth and maturation of the

fruit. By cutting off these shoots the fruit is robbed of its support which nature has provided.

We have noticed in a garden, kept by a professional gardener, where there were a large quantity of grapes, that all the new shoots had been cut back to the fruit, so as to leave it exposed to the sun, excepting on one trellis, where they, fortunately, had been neglected. The grapes on that trellis were well grown, and ripening well, while all the others were imperfectly grown, and remained green.

When grapes are improperly pruned as we have named in July, they will often send out new shoots, and recover, in some measure, from the evil, but when this pruning is done rather late, it often destroys the crop.

There is generally a great error in not pruning grapes thoroughly in the fall, or in the spring, so that there is a great mass of vines, which often leads to the erroneous mode of pruning which we have named. When the vines become too thick from a very luxuriant growth, and previous scanty pruning, the best remedy is to cut off lateral branches, and all feeble shoots, and cut out whole small vines on which there is little or no fruit, and allow the main shoots to run twenty or thirty feet, if they will.

VERMONT STATE AGRICULTURAL SOCIETY.

In pursuance of a call made by over two hundred of the agriculturists and raisers of stock in Vermont, a public meeting was holden at Middlebury, on the 16th of June, 1851, at which it was resolved to hold a State Fair, agreeable to the notice given in our last paper, and the following officers were chosen:—

Hon. Calvin G. Tilden, Pres., *pro tem.;* John Gregory, Secretary, *pro tem.*

The following persons were appointed a committee of nominations:—Hon. N. L. Keese, Esq., F. E. Woodbridge, Esq., John Gregory, Esq., S. W. Jewett, Esq., and A. L. Bingham, Esq., who made the following nominations:—

For President, Hon. Frederick Holbrook.

For Vice Presidents, Hon. William Nash, Hon. George Chipman, Paris Fletcher, Esq., E. D. Barber, Esq., G. A. Austin, Esq., F. E. Woodbridge, Esq., of Addison County; Hon. Chas. Paine, John Gregory, Esq., Hon. Roderick Richardson, of Washington County; Hon. Jno. Wheeler, Rev. L. G. Bingham, Ezra Meech, Jr., Esq., of Chittenden County; Hon. J. K. Hyde, Jesse Hines, Esq., of Rutland County; Hon. Jno. S. Pettibone, of Bennington County; Hon. Epaphro Seymour, Geo. Campbell, Esq., of Windham County; P. B. Southgate, Esq , Ebenezer Bridge, Esq., of Windsor County; Col. J. P. Kidder, Col. J. Thomas, of Orange County; A. M. Clark, Hon. Jno. S. Foster, of Franklin County; Hon. Henry M. Bates, of Orleans County; Hon. Nathan Smilie, Stillman Churchill, Esq., of Lamoille County; Hon. Jno. Dewey, of Essex County; Hon. Samuel Adams, of Grand Isle County; Hon. E. Fairbanks, of Caledonia County.

For Secretary, Maj. E. R. Wright.

For Marshals, Col. Abram Foot, Col. D. S. Church, Col. W. S. Johnson.

Committee of Arrangements, Merrill Bingham, Edwin Hammond, Alonzo L. Bingham, David Hill, Seth Langdon, Wm. Phelps Nash, Lyman P. White, Joseph Warner, S. W. Jewett.

Committee to invite an orator for the occasion, S. W. Jewett.

Editors of papers are requested to copy the above.

ACKNOWLEDGMENTS.

From J. C. Stone & Co., nurserymen, Shrewsbury, a box of very large and excellent cherries. They are the Black Tartarean, and of the largest and most saleable kinds cultivated. In reply to some remarks of these gentlemen, we would say that this cherry belongs to the class called Heart cherries. The Bigarreau cherry is of a light red and amber color. It is a week or ten days later than the Black Tartarean, and in New England, often, if not generally, called White Tartarean by those who have not examined well into the true names of cherries.

From John Washburn, Plymouth, seeds of Downing's Colossal Rhubarb, which are very acceptable, as we have a very favorable account of this variety, and wish to try it.

☞ Several communications are postponed till next week.

For the New England Farmer.

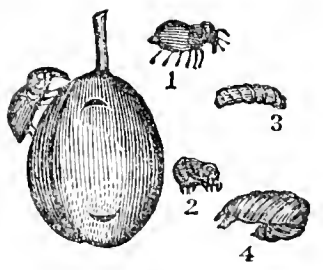
RAPID GROWTH OF PLANTS.

Mr. Editor:—Some time since there appeared in the daily papers an account of an experiment performed in England, by which the growth of plants was quickened to an extraordinary degree. It consisted in placing near the seed, when planted, a piece of copper and a piece of zinc, connected by a copper wire. It was stated that a current of electricity being thus produced, and constantly flowing through the soil, near the roots of the plant, caused it to grow with an astonishing degree of rapidity. It was said that full grown radishes had been raised in three or four hours. Having a desire to try this experiment, I wish to obtain a *particular description* of the manner of performing it, and to ascertain *all the conditions* on which its success depends. Any information on this subject, from yourself or any of your correspondents, will greatly oblige,

Somerville, June. 1851. A Subscriber.

Will some of our scientific readers please give the information desired?—Ed.

☞ The finer the seed to be sown, the finer should the soil be made which is to receive it.



CURCULIO.

Rhyncharus Nenuphar.

We have published several valuable articles this season on the curculio, describing it, and suggesting various modes of destroying it, or preventing its operations. We now present our readers with a representation of it in its different stages:

1. Curculio in the perfect or beetle state, as large as life.

2. Its assumed form, when disturbed, or shaken from the tree.

3. Larva, or worm, as found in the fallen fruit.

4. Pupa, or chrysalis form, in which it lives in the ground, and the last stage before the perfect state.

On the figure of a plum are the crescent-shaped marks as made by this insect.

The color of the curculio is dark brown, variegated with spots of white, yellow and black. These insects appear from the latter part of April until the last of July, according to the season. Soon after the blossoms fall, they begin to puncture the little plum with their snout or rostrum, and lay an egg in the wound. The gum oozes out, the egg hatches, the worm eats towards the centre of the fruit, which falls, often before a quarter grown, and the worm enters the earth, where it remains in the pupa state five or six weeks. It is supposed that some remain until the next season.

These insects are very destructive to plums, sometimes destroying large crops to a large extent; they also attack other smooth-skinned fruits, such as apples, cherries, nectarines and apricots. Apples and cherries are not generally so much injured, though often marked by that insect. This season, we find many curculios at work on our peaches, even on those of very rough skin; they draw away the furze, or woolly stuff, in order to get a smooth place to deposit their eggs. A large number of peaches have fallen, in consequence of their operations. They had done much mischief before it was discovered, as we did not expect to find them on the peach, having never seen them on this fruit before.

Acknowledgments. — From John Washburn, Plymouth, fine specimens of the Doctor Cherries, one of Professor Kirtland's new seedlings from Ohio. These cherries are very handsome and of excellent quality. As they grew on a tree set last spring, they have not attained quite full size.

We have from some person whose name is mislaid or lost, a bunch of fine cherries, medial size, dark red, and of as good quality as the cultivated cherries generally.

STRAWBERRIES.

RICHARDSON'S LATE—FAY'S SEEDLING.

We have an inquiry whether it is advisable to go into the culture of Richardson's Late Strawberry for the purpose of raising late crops for market. From observing this strawberry growing by the side of other varieties a few years since, we came to the conclusion that it was only two or three days later than Hovey's Seedling. We have fruited it this season in a fair experiment with many other varieties, and the result confirms our opinion.

We have supposed that the statement that this strawberry was 10 days later than Hovey's was well calculated to humbug the public and to sell the plants at extravagant prices; and this has been done, we presume, pretty effectually. Many will be sadly disappointed. A gentleman who was recently examining our strawberries, remarked that he had tried Richardson's Late, and he found it only two or three days later than Hovey's, and inferior in some other respects.

Jenney's Seedling is a valuable strawberry, and ripens 5 or 6 days later than Hovey's Seedling, so that the crop is not much more than half gone, when Hovey's is gone. Willey is a valuable productive strawberry, and 8 or 9 days later than Hovey's, so that the crop is hardly half gone when Hovey's is gone. We should recommend these two varieties for late crops.

The editor of the Cambridge Chronicle takes exceptions at our late remarks on Fay's Seedling strawberry, as we remarked that we had discarded it as a poor bearer, and the editor of the Boston Journal gives an account of a great crop which he saw from it. We made a fair experiment with this strawberry for several years with other varieties, treating them all alike with good culture, and compared with other varieties, we found it was not worth cultivating. But we did not give our opinion to the public without further investigation. We found that the best cultivators who had tried it condemned it generally. An extraordinary crop from a little patch in a rich garden, receiving great care and the highest manuring that it will bear, does not show the value of a variety, for general culture. With such treatment great stories may be told of almost any variety. Newland, who played off his game of deception in this vicinity, selling plants of his "Celebrated Mammouth Alpine" at high prices, had certificates to show that it produced wonderful crops, even one from a governor of one of the States. But our cultivators found on trial that it was the old wood strawberry, formerly much cultivated, but recently discarded for new and more profitable kinds.

For the New England Farmer.

QUERIES.

What is the proper time of year for layering grape vines, and when the best time to set out the cuttings?

When is the best time to set out strawberry plants, and how far apart ought they to be set?

What kind of manure is best adapted to each? Please answer, and you will much oblige

N. Raymond, Me. S. TENNEY.

REMARKS.—The proper time of layering is in the spring. The vines should be laid on the ground where they are to be planted, when the buds begin to start, that they may shoot upward. Let them remain till the shoots are four or five inches high Then dig a trench two or three inches deep, lay the vine in it, fasten it down with sticks to the bottom of the trench, then cover it with fine soil. When the weather becomes hot it is better to mulch them. We find this a very successful mode. We now (July 3d) have shoots from layers, five or six feet high, and growing with great rapidity. On some vines six feet long we have eight or ten shoots.

Cuttings should be planted in the spring. They should either be planted early, or laid in fine soil exposed to the sun and covered about one or two inches deep, that vegetation may commence early. This takes place some time before the roots start. In this way later planting will answer.

The best time for setting out strawberries is in the spring, just as the plants have started, that vigorous ones may be selected. They should be set in rows four feet apart; and, generally, they should be about one foot apart in the rows. But, as different varieties differ in vigor and hardiness, the distance should be adapted to the habits of the variety when they are known.

Last spring, we set ten kinds four feet apart in the rows, and the plants one foot apart. This season, we find a great difference in the quantity of the plants. Some are too thick; others too thin. Early Virginia, Boston Pine and Jenney's Seedlings, are about thick enough. Willey's is too thick by one-third. In setting these again we should set the plants eighteen inches apart. Hovey's Seedling and Black Prince are not half thick enough; they grow with less vigor than other plants. And the late tender plants were killed by the winter. We think we set the plants of Hovey's eight inches in the row, as its habits were known to us. Yet we did not get half a crop, owing to the scarcity of the plants. Or a better way might be to set two rows eighteen inches apart, and then leave thirty inches between; making a double row to every four feet, and the plants should be placed eight or ten inches apart. This mode would be more expensive in planting and cultivating, than is required in managing a more vigorous variety.

If strawberry plants are set in July or early in August, and wet weather succeeds, the new plants from the runners will be sufficiently strong to bear fruit the next season. But if they are set late in August, or if set early and there is a long drought and hot weather, the new plants will produce but little fruit another season. And the cultivator would have to rely upon the plants set out for his crops; therefore, we should advise thick setting in summer, as recommended for Hovey's Seedling. Then if no new vigorous plants are formed the old plants would produce a tolerable good crop.

A good manure for grapes or strawberries is a compost of one-third animal manure with two-thirds sand, gravel, loam, mud, or peat, according to the soil. Mud, peat or clayey loam is good for dry soil, and sand and gravel for soils rather too heavy. In addition, bone manure, ashes, soap-suds and various other materials are good. Cinders from the blacksmith's forge and fine brick dust are good for grapes.

For the New England Farmer.

POTATO ROT.

Now is the time to ascertain, by actual observation, the truth or fallacy of the pretended theories of this malady. If it be true, as Mr. Flanders says, that "a small insect or black bug" is the cause, then every one who will take the trouble to look, can discover it. Upon our own vines, no appearance of disease or decay has yet been seen. But some of my neighbors say, they have discovered a black bug, about one-sixteenth of an inch in length, not unlike a flea, in large numbers, about their potatoes; others have seen a similar bug about their squashes; let every one watch carefully, and trace the consequences of their movements. I have before heard of this *bug theory*. I recollect Mr. Mason, of West Beach, in Beverly, so explained the loss of the potato the last year. He actually pointed out the insect upon the vines; and said he had noticed them for years; but nobody gave credit to his explanation—nor did I—nevertheless, a practical, observing man in Beverly, may be as likely to be right, as any such man in Lowell. Look sharp, and if there is any truth in the theory, the present season will settle it. And if there is not, let some other theory be started.

Danvers, June 30th, 1851.

REMARKS.—We have noticed the black bug or fly on our potato tops, but we think it is nothing new, and we do not apprehend any loss of potatoes from his operations. Others recognize this bug as an old acquaintance.

For the New England Farmer.

MULCHING TOMATOES.

FRIEND COLE:—There exists in the minds of cultivators a great difference of opinion with regard to the best method of managing the tomato. Some tie them up on bushes, while most people allow nature to take its own course.

Now, sir, my method is to cultivate well, till the vines get large enough to begin to lean and spread, then to hoe the ground over fresh, and cov-

er the entire surface, one or two inches thick at least, with clean straw.

This proves beneficial in keeping down the weeds, in retaining moisture, and in keeping the fruit perfectly clean. I tried the above method last year, at the suggestion of a friend, and was perfectly satisfied with the result.

Yours truly. A Lover of Tomatoes.

July 2nd, 1851.

For the New England Farmer.

VITALITY OF VEGETABLES.

The propensity of the esculent roots, the potato, the onion, the turnip and others, to grow after being gathered late in autumn, is familiar to all; though the potato shows no signs of growth till warm weather returns in the spring. The potato is thought to be losing its vital energy or vegetating power, according to the opinions of some, and to this cause they ascribe its blight or rot. The correctness of this opinion I much doubt, for reasons which I now state. Those potatoes untouched with that disease, indicate vegetating power, in the cellar and when planted, no less than they did before the rot appeared. Stray potatoes lying in my cellar a year after being dug, confined under an inverted bin, were found last November to have been vegetating all summer, and a large number of pea-sized potatoes were growing upon the branches shot forth from the parent tuber. From this they derived their life and growth. They were preserved during the past winter without any special means for the purpose, being left open to the air like the last gathered crop. Now, the parent and offspring are planted together, and the little potatoes are sending up small vines correspondent with their size. The life of the old potato was spent in propagating the young ones. The result I shall watch with interest. This fact shows the tenacity of life in the parent tuber, and in its imprisoned progeny remarkably.

I observe, also, that some potatoes accidentally left in the ground over winter are shooting forth vigorous branches, and earlier, larger leaves than those springing from my planted hills. Having lain in the earth unexposed to the air, unaffected by its influence, they seem to grow with rapidity and healthy vigor. I see no evidence to convince me, therefore, that this vegetable is subject to rotting from loss of vegetating health and strength, or from decay of its vital principle.

The onion, turnip, beet, &c., as also the cabbage and cauliflower and Scotch cale, refuse to suspend their vegetating process till spring returns, and struggle forward towards the formation of tops and branches for the production of seed. I was surprised, this spring, to find that cauliflower stocks, unfit for cutting and thrown over a box containing turnips in my garden, and there covered with turnip tops and hemlock boughs to protect the turnips from frost, had grown in that position and had flowers fit for cooking. It convinced me that a box covering of boards with a good roofing of hemlock boughs would have enabled the row of cauliflowers to survive the last winter, and continue their growth in their original position, to far greater advantage. Such an experiment may be worth trying with cauliflowers if not with cabbages set out in rows before the hard frosts of November commence.

Salisbury, Ct., June 9, 1851. J. Lee.

For the New England Farmer.

PRODUCT OF CERTAIN COWS.

[Mr. Atherton forwarded to us the following article for publication, which was also communicated to the Ploughman, and has appeared in that paper. —Ed.]

Mr. Editor:—I take this opportunity to inform you of a trial of one of the improved breed of cows, which I hope you will think important enough to lay before your readers, for their special benefit.—And many will still contend they are no better than the common native, unless they have better keep. I have 24 cows that I am keeping at home and milking this summer; part of them are Durham, the rest are Durham and Ayrshire crosses; the latter I think are better when taken in all than either of them are clear. The one I send you the trial of is a Durham, 9 years old, which calved in April.

June 1	morning	20 lbs.	of milk.
"	evening	20 "	"
June 2	morning	17 "	"
"	evening	20½ "	"
June 3	morning	20 "	"
"	evening	20 "	"
June 4	morning	20 "	"
"	evening	21 "	"
June 5	morning	20 "	"
"	evening	21½ "	"
June 6	morning	19 "	"
"	evening	21 "	"
June 7	morning	18½ "	"
"	evening	19½ "	"
		278 lbs.	

Which made 13 lbs. 8 oz. of the very best of butter. I also have another cow 6 years old, which calved in April, that gave in the same time 259 1-2 lbs. of milk and made 12 lbs. 9 oz. of butter; and one 3 years old heifer that I tried only 3 days, which was the 5th, 6th, 7th of June, which made 4 1-2 lbs. of butter in the three days; and I wish it to be remembered that these cows had nothing but pasture feed, and run with the rest, making a drove of 24; neither did they have any kind of grain or roots, for some 8 or 10 days before the 1st of June. They were milked between 5 and 6 o'clock, morn and eve, as near as circumstances would admit.

We invite all that feel interested in breeding the best of stock to call and see ours before purchasing, and we think they never will have cause to regret their journey.

Yours, &c., S. T. Atherton,
Shaker Village, Harvard, Mass.

South Groton, June 16th.

For the New England Farmer.

THE BIRDS.

Mr. Cole:—It is with pain I see so many birds cruelly destroyed by persons who are ambitious of being known as a "good shot," while the prairies of the Great West are open to them, stocked with all kinds of game, where these "good shots" would have ample *amusement* and would do comparatively little harm. It is not generally known that birds destroy more insects and worms than they destroy grain, for which fact we have only to look to the Southern States. Some years ago it was believed that the blackbirds destroyed the rice, so they were shot down by hundreds, and finally driven away from several localities. The farmers were beginning to exult in their triumph, when lo! the rice had all been destroyed by the worms; and

as may be supposed, the blackbirds were all heartily welcomed back again. Innumerable proofs could be produced to show that birds are of a greater service to the farmer than is supposed, and they really are the "farmers' friends," and as such they should be regarded by the farmers, for they destroy more worms and insects than they do grains or fruit. As for those persons termed "good shots," I would recommend every farmer to chase them from his lands as if they were destroying the grain, for in destroying the birds, they destroy the grain.

Northern New York, June 25th. N.

For the New England Farmer.

CULTURE OF THE PEACH.

Mr. Cole:—Recent observations have induced the opinion, that with proper attention to selection of soil, location, and manner of cultivation, as fine trees can be grown and fruit raised, in this, as in any other part of the country. The localities in which we have seen the peach growing in the most promising manner, are on elevated ground, with a southern aspect, protected from northerly and easterly winds. For instance, the orchards of M. Pettingill, of Topsfield; A. Bradstreet, of N. Danvers; and E. Needham, of W. Danvers. Mr. P. has more than two thousand trees, in bearing state, of various ages. His crop was abundant last year, and promises well the present. The Crawford variety is a favorite with him, though he has many other kinds. His trees are situated on the southerly side of one of the large swells of land in Topsfield, and they appear to have a very little attention in their growth; except keeping the ground about them loose, and free of weeds, grasses, &c. These trees have endured the winter, without being headed down.

Mr. Bradstreet has about 700 tree cultivated within four years last past, all of which have a healthy, vigorous appearance, and many of them are loaded with fruit of the best varieties. Mr. B.'s orchard is in the immediate vicinity of Mr. Lawrence's, who has for years supplied the Boston market with some of the choicest varieties of this fruit, for which he has received one dollar a peck, and conferred a favor on the purchaser by selling at this price. The Jenks Rareripe is the favorite with Mr. Bradstreet. This class of trees flourishes best with him. We saw branches that sprung from buds set in the autumn of 1849, less than two years, on which are now growing more than two dozen peaches, which bid fair to grow to maturity —and several such on the same stock. If well matured fruit can be secured in so short a time, no one who has land unoccupied need despair of growing their own fruit.

Mr. B. is assiduous in his attention to his trees, in keeping the earth loose and well conditioned around them, and guarding against the approach of every species of destructive insect. He finds it useful to apply about two quarts of slacked lime about the roots of the tree early in the season. He makes no other application of manure to the land, except what is applied to the garden vegetables that are cultivated between the rows of peach trees. In the month of September he cuts down about one-half the growth of the season. He finds only about one-fourth part of the buds set arriving at maturity worthy of being encouraged. His trees are budded in the position in which they are intended to remain.

Of Mr. N.'s trees we have spoken of in a former communication. The fear of making a long story leads us to forbear saying more. We saw these orchards yesterday. P.

Danvers, June 28, 1851.

For the New England Farmer.

THE BEST KIND OF FOWLS.

Mr. Cole:—As I have for several years been more or less engaged in poultry raising, and have within the time kept nearly all kinds of domestic fowls common to this country, I have often been asked the question, "Which are the most profitable *hens* to keep?" but have not been able to decide fully which were the most so, 'till of late. And I now give you my decision,—hoping that some of your readers may be profited by experience:—

If your object be to keep hens for laying, *keep the pure Black Spanish Fowls.* Even if you pay a large price for them, they will soon pay you back the money with interest. But if your object be to raise chickens for marketing, cross the *Black Spanish* with the *Red Shanghae* or *Cochin China* fowls; as chickens produced from such a cross will attain a larger size and come to maturity much sooner than the clear Asiatic fowls. And those—if any there be—who doubt the above statement are cordially invited to visit my poultry yard and see for themselves.

As I am free to give you *my* experience in *poultry raising*, I hope others will give theirs as freely; and if there are really any better fowls than the above named—and it can be proved so—then I am willing to give up beat. Now, friends, do give us a little of your experience in the matter; and when convenient call and visit my *pure stock* of imported Spanish Fowls.

Yours, truly, J. Dimon.

Wakefield, R. I., July 1st, 1851.

For the New England Farmer.

SAVE YOUR MANURE.

Mr. Cole:—As considerable difference of opinion prevails in this vicinity respecting the management of manure. I take the liberty to write a few thoughts on the subject. My humble opinion is, that manure is better when thrown into a heap to decompose than when suffered to lie scattered about the yard exposed to sun, air and rain. How much is lost I do not know; will some one better versed in this matter let us know? But still we find some who are disposed to doubt the utility of keeping manure piled up, and they will tell us that a load of dry decomposed manure that has been exposed to sun, air and rain all summer, is worth more than a load of green manure; if they call what they can haul a load, I agree with them; but how many loads of the green manure will it take to make one of the dry?

My idea is, keep your manure as much from the sun, air and rain as possible, if you wish to retain its original strength; and if you think it too strong, mix swamp muck or loam with it instead of suffering it to waste to no purpose.

Come, brother farmers, if I am right, back me up; and if not, correct me, for information is what I want. S. Tenney.

N. Raymond, Me., June 24, 1851.

☞ The envious love nothing but the dead.

THE ECONOMICAL USES OF PEAT.

The Journal of the Highland Agricultural Society for the last quarter contains an exceedingly instructive paper from Dr. Anderson, chemist to the society, on the "Economical Uses of Peat." The researches of Dr. A. were directed to the object of determining, by careful experiments, the actual and relative powers of dried peat and peat charcoal to absorb and retain ammonia, and other gaseous bodies, which escape from night soil, stable manure, and other putrescent substances. His report fills fifteen pages in the journal named, and it ought to be reproduced in this country. We can find room only for the results obtained, with little of the details of the processes and experiments. We will state, however, that peat, for making coal, is cut into pieces equal to half of a cubic foot, and placed on trays or baskets of wicket-work, one above another, to dry. It is then carried to the buildings in which the burning takes place, where it is arranged over furnaces and still further dried six or eight days. The furnaces in which it is carbonized may be described as a sort of pyramidal boxes of sheet iron of variable length, and about five feet wide at the bottom, gradually tapering to about a foot at the top where there is a sort of vent-hole. These pyramidal furnaces are open at the bottom and stand in trays also of sheet iron. They are filled by tilting them on the sides, when the dry peat is carefully packed in, and retained in by bars which pass across the bottom; and after being fired, they are returned into an upright position. The combustion is allowed to go on until the flame ceases, which generally requires from five to six hours. Water is then let into the tray so as to exclude all air from the furnace, and thus extinguish the remaining charcoal. The reader will see that this is a very simple apparatus and must be effectual. The water in the tray does not rise high enough to reach the peat or coal in the furnace. When it is cooled down sufficiently, the coal is removed and put through large sieves, the large pieces being employed as fuel and the fine powder as a deodorizer. In Ireland, the cost of production appears to be as follows:

	£.	s.	d.
Draining the bog and cutting the turf to produce a ton of dried peat,	0	1	6
Packing on the trays and wagons, and conveyance to the furnace-house,	0	2	0
Wear and tear, &c.,	0	0	6
	£0	4	0

It requires four tons of peat to make one ton of coal.

	£.	s.	d.
Four tons of peat, at 4s.,	0	16	0
Labor and expense of burning,	0	4	6
Grinding and sifting,	0	2	6
	£1	3	0

By the above figures it will be seen that a ton of peat coal costs nearly six times more than a ton of air-dried peat.

We must now pass over much that is valuable to reach the comparative power of dry peat and peat coal to absorb ammonia.

"*Experiment* 1. A glass tube about half an inch in diameter, had a piece of cloth tied over its lower end, and was filled to the depth of about twelve inches with Irish peat charcoal and a solution of ammonia, containing 2.12 grains to the cubic inch, poured into it. The first drop of fluid that passed through it was as distinctly alkaline as the original fluid, indicating that no rapid or abundant absorption had taken place."

In the second experiment, putrid urine, which had a distinctly alkaline reaction, was used, and the first drop was distinctly alkaline. The liquid, however, lost both its smell and color in passing through the coal.

In the third experiment, a small quantity of ammonia, in solution, was poured over 1000 grains of charcoal and carefully stirred in. The smell of ammonia *did not disappear*, even after it had been covered up some time, and a test paper suspended in the upper part of the vessel was strongly affected. An additional quantity of ammonia was added, until, in all, 1.7 cubic inches had been used. This quantity of the solution contained 4.11 grains of ammonia, and it was consequently obvious that peat charcoal cannot absorb one-fourth of one per cent. of ammonia—4 parts in 1000.

Without pursuing these experiments farther at this time, suffice it to say, that they contradict and seem to overthrow all previously conceived notions of the relations that subsist between ammonia and charcoal; but if these notions are really erroneous, the sooner they are overthrown the better.

1000 grains of surface peat—not charred, but dried at a temperature of 212°—took up 8.3 cubic inches of a solution of ammonia, equal to 20.08 grains of the alkali, or 1 per. cent of the peat. 1000 grains of peat, dried to the same degree, taken 4 1-2 feet below the surface, took up 21.78 grains of ammonia, or over two per cent. These experiments prove that thoroughly dried peat imbibes some eight times more ammonia than the open peat charcoal. Hence, dried peat is one of the best substances known to mix with manure of all kinds, and for bedding for horses, cattle, sheep and hogs, to absord their urine.

Dr. A. experimented to determine the relative power of "a good wheat soil" and dry peat to absorb and retain ammonia. The soil was found to contain 0.186 per cent. of nitrogen, (the fertilizing base of ammonia) and only 0.203 per cent. when fully saturated; indicating the absorption of only 0.017 per cent. under the circumstances. As peat absorbs about 2 per cent., the difference is greatly in favor of the latter.

The readers of the Farmer in 1845 and 1846 will remember our urging the importance of digging and drying swamp muck for bedding for domestic animals and to absorb all liquid and semi-fluid manure. When applied alone, the experiment made by Mr. McVean, and others in Wheatland, did not indicate so high a value in muck or peat as Prof. Norton suggests in his excellent letter in our last.—*Genesee Farmer.*

HINTS UPON CHEESE MAKING.

Mr. Editor:—Being a constant reader of your most valuable paper, I have often seen communications from farmers on the subject of dairying, but principally on butter making. On this I shall not attempt to make any remarks, but as my wife has the name of making good cheese, I thought I would give a few hints on that part of the subject. One of the greatest errors committed by our cheese making community is this—they hurry the process too much. By this means quite a portion of the richness of the cheese is lost. Another error is this—they strain their milk in the evening and let it stand over night. There will be a separation

take place. Some are cautious enough to take off the top, (meaning the cream.)

Our method is the following :—As soon as the milk is brought in at evening, strain it into a brass kettle prepared for that purpose, (as we think brass superior to wood to set milk in,) and as soon as the milk is strained the runnet is put in. Let it stand till the curd comes; then cut it and let it stand till morning, when it will be settled. The whey will then be as clear as spring water. We then dip off the whey, disturbing the curd as little as possible; then take out the curd into a strainer, strain the milk into the same kettle, and put your runnet in as before, not hurrying it by any means, for by so doing you will extract quite a portion of its richness; after it has thoroughly, drained we cut it into thin slices and put it into a suitable vessel and pour on scalding water; let it stand until it gets about cold; then take it out, spread it, and let it lie until it is cold. After this, chop it fine, salt it just right, and it will then be ready for the hoop and press. In all these operations, we repeat, it should not be hurried. In pressing cheese, you cannot press it too much. It is good economy not to make a cheese to weigh more than twenty or twenty-five pounds, as one of that size is more saleable than larger ones S. L. M.

—*Maine Farmer.*

POULTRY.

There seems to be no branch of domestic economy less understood than profitably raising poultry. When we say profitably we do not speak of their value in dollars and cents, for we hold that every dwelling, however humble or splendid it may be, should have a few chickens around them; for there are times in almost every family, both in sickness and health, when money cannot buy the little luxuries that chickens give us. What profit is there in keeping fifty or a hundred hens without a corresponding supply of eggs! Most people think that chickens must pick their own living, and yield a good supply of eggs in the bargain, but we have found that chickens forced to roam for their daily food have little time or inclination to lay; and those who expect a good supply of eggs without generous feed, may as well plant their choice vegetable seeds in a sand bank, and look for tender, delicious vegetables.

We have some little experience in the "henery," and have found a great secret in getting a supply of eggs through the whole season, but not in driving the hens uphill, or in feeding them exclusively on gravel, or in supplying them with chalk nest eggs. The whole secret consists in giving them plenty of food, grain and flesh; any of the grains will answer, as the chicken's mill is very convenient. For six or eight months in the year the chickens will supply themselves with animal food, in the shape of insects, but the rest of the time feed them regularly with flesh as well as corn. Boiled potatoes is an excellent food for fowls, but with it they want grain of some kind, and flesh also. In our long, hot summers, poultry are inclined to become lousy; but if clean, good ashes are placed convenient to the hen-house, the hens will dust themselves in them until the vermin disappear. Nature is their teacher, and hers is an unerring guide. A good shelter should be provided for the chickens to roost under; the manure of chickens, properly saved, will repay all expenses of feeding. It is a great error to crowd too many chickens together.

We know nothing of the patent chicken-hatching machines, but we know that fifty hens will lay more eggs and raise more chickens upon one lot or enclosure, than will one hundred. They do not flourish in a crowded state, neither will hens lay as well when great numbers are together. A hen is a right prudish old lady, and affects great modesty in selecting her nest, and laying her eggs, always taking a quiet, sly place, when it can be found. We say then to our readers, keep no more fowls than you can, and will feed well. Provide good shelter for them, save all the manure, and your gardens will pay in their increased productiveness for all your culture of chickens; and when beef resembles sole leather, and bacon becomes stale, young chickens and fresh eggs will prove a luxury indeed.—*Soil of the South.*

ON THE USE OF MULES.

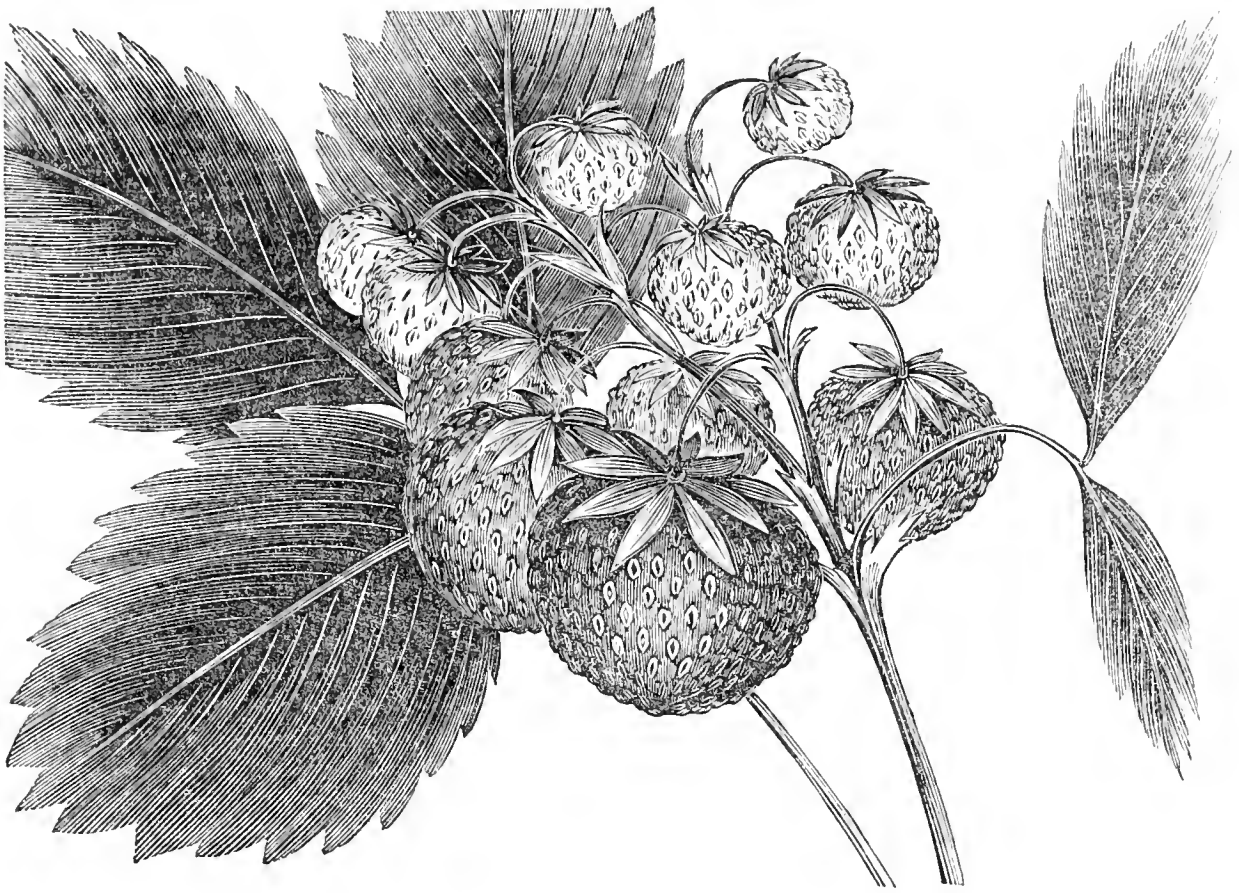
1. Mules, on a generel average, live more than twice as long as horses. They are fit for service from three years old to thirty. At twelve, a horse has seen his best days and is going down hill, but a mule at that age has scarcely risen out of his colt-hood, and goes on improving till he is twenty. Instances are recorded of mules living sixty or seventy years, but these are exceptions. The general rule is that they average thirty.

2. Mules are never exposed to disease as horses are. Immense sums of money are annually lost in the premature death of high-spirited horses by accident and disease. The omnibus lines in the city of New York have not been able to sustain their losses, and are beginning to make use of mules, as less liable by far to accidents and disease. This results from the next consideration, which is that—

3. Mules have organs of vision and hearing far superior to those of the horse. Hence they seldom shear, and frighten and run off. A horse frightens, because he imagines he sees something frightful; but a mule, having superior discernment, both by the eye and ear, understands everything he meets, and therefore is safe. For the same reason he is surer footed, and hence more valuable in mountainous regions, and on dangerous roads. I doubt whether on the Alpine paths a mule ever made a misstep. He may have been deceived in the firmness of the spot where he set his foot, but not in the propriety of the choice, all appearances considered.

4. The mule is much more hardy than the horse. A pair of these animals, owned by a neighbor of mine, although small in size, will plough more land in a week than four horses. Their faculty of endurance is almost incredible.

Another very important fact is, that in the matter of food, a mule will live and thrive on less than half it takes to keep a horse. The horses of England, at this time, are consuming grain which would save the lives of thousands of British subjects. In a national point of view, the agricultural interest is so great, that the greater the demand for grain of all kinds, the better for the farmer. But yet individual farmers, who are in debt, and whose land is not improved, would find it profitable, in the course of ten years, to have the labor of a full team, and save one-half and more of the food necessary to keep it up, as might be the case in substituting mules for horses.



JENNEY'S SEEDLING STRAWBERRY.

This is a new variety, raised from seed a few years since by a Mr. Jenney, of Fairhaven. It is a strong, vigorous grower, perfectly hardy, and very productive. The fruit is rather large, and of the highest quality; in our engraving many of the berries are represented as they were, green and only partially grown.

The fruit is rather large; roundish-conical; deep red; flesh rather firm, juicy, slightly acid, but of a fine high flavor. Pistillate. Ripens ten days or a fortnight after Early Virginia, about the time that variety is gone, and forms a good succession with it. It is several days later than Hovey's Seedling.

For the New England Farmer.

EXHIBITION OF FAT CATTLE AND SHEEP, IN FRANCE.

Mr. Cole:—The great cattle market in France is held weekly at Poissy, and approached by railroad, about twenty miles out from Paris.

Annually, an exhibition of fat cattle, sheep and swine, takes place at Poissy, under the direction of the minister of agriculture and commerce, who is president of the institution.

I was present on the 14th of April last, at the great exhibition; a few swine, about 1,100 fat wethers and 140 beef cattle were upon the ground, The cattle and sheep were all in high condition, and a portion of them as good as I ever saw. I think the highest prize of 1,500 francs was awarded to the conductor of the model farm at Gregnou, for a fat ox of the short-horned Durham breed. The cattle generally were very large and fat, but many of them rather coarse, descendants of the Normandy breed. The sheep, on the whole, excelled anything I ever saw, for size and fatness. Most of them were a cross of the Merino upon the natives of that country, and I judged their live weight to average over two hundred and thirty pounds each. Very few of the English mutton sheep were at the show, though liberal premiums of 500 francs were offered.

The highest prizes of 800 francs were awarded to the French Merinos and their grades. Upon looking at their size, fatness and large beautiful forms, I could not imagine why they have never been introduced into England or America. It is but a few years since these large Merinos have been kown in America; and while in England, I made inquiries of the Farmer's Club, but they could give me no information about them.

The swine at Poissy were rather inferior; the English breeds were the best; but any town in Vermont could have beat them in size or quality.

All of the stock were covered by tents, very costly, commodious and neatly arranged. The premiums awarded amounted to 21,900 francs, paid over by the royal commissioner to each person as the names were called off by the secretary. As each person received his prize, he was cheered by the spectators, and a band of music played to heighten the entertainment.

The model farm at Gregnou is owned by a company of wealthy citizens of Paris. It contains about 500 acres, enclosed by a wall 12 feet high, laid in lime mortar. More than half of the farm is subjected to the plough, and all of which is in very high

cultivation. There is an artificial pond in the centre, of about ten acres, well supplied with fish; carp and eels. Two days in March are devoted to taking fish from this pond. I happened to be present when three tons were taken by a net at one haul. Every department of this farm was conducted with a system superior to anything I ever saw in our country, and at a profit, I have no doubt, to the owners.

Their large and commodious barns of stone were well filled with fat cattle and sheep. I saw 200 wethers there of the Merino species, that would, in the Boston market, command from ten to twenty dollars per head.

Very respectfully, yours,

SOLOMON W. JEWETT.

Weybridge, Vt., July 1st, 1851.

For the New England Farmer.

RENOVATING OLD APPLE TREES.

MR. COLE:—For several years past I have read in our agricultural papers many articles tending to show the profit of an increased attention to old and decaying apple trees. The *gist* of these communications would seem to indicate that old, sward bound, unproductive, and even diseased trees, might be regenerated and become profitable,—if the original fruit were good; and, if otherwise, it might be made good by grafting—by cultivation of the soil in which they stand, by pruning, washing, scraping and liberal manuring about the roots.

Some years since I purchased a small landed estate in this town, upon which were no fruit trees, excepting two apple trees, in the green sward, apparently about three-fourths grown, and believed to be from twenty to twenty-five years old. These trees, although not vigorous, did not exhibit any strong marks of decay. On inquiry, I learned that one of them was a greening, and had formerly produced a great variety of this fruit; and that the other bore small, and nearly worthless apples. It was an object for me to obtain fruit in the shortest time possible, and to effect this purpose with greater certainty, I transplanted many small apple trees, two years from the grafting, and also attempted to resuscitate and invigorate the two older trees. The ground around them was ploughed and cultivated for four years; or from 1847 to 1850, inclusive. The land, generally, was well manured, and an extra load the first year was spread about the roots of these trees; and for the three following seasons they were enriched in addition to the manuring of the land, either by material from my barn cellar, or with wood ashes.—They were carefully pruned by an experienced hand and thoroughly washed with a solution of potass, made by dissolving one pound of the alkali in two gallons of water. They have been scraped each year, and washed, sometimes with very strong soap suds, and at others, with lime water,—and no worm has been suffered to live on their branches. The tree, producing worthless fruit, was grafted in '47; but the greening was left untouched in this respect. The greening has not, under this treatment, produced one fair apple! and the few which have grown upon it were small and unsightly. The grafted tree produced last year about half a dozen fine apples; but this year the fifth season since I have had the tree under care, not one can be found on its branches.

My small trees, transplanted four years ago last spring, are very thrifty and promising. Many of them already produce fruit; and some of these have trunks of twelve and fifteen inches in circumference, with large umbrageous tops. From this orchard of young trees I could select perhaps fifty, any one of which I should prefer to either of the large, unreformed specimens. The expense of extra labor, and of fertilizing materials, expended on these older trees, in four years, cannot be less than $8 or $10; a sum sufficient for the purchase and careful transplantation of at least twenty young trees of choice fruit.

My own experience, it will be seen, is not in favor of the expenditure of time and money to recruit old apple trees; undoubtedly the experiment sometimes proves highly successful; but still I am inclined to believe that if the result of *all* the efforts of this character were spread before the public, they would not, in the aggregate, afford much inducement for continued efforts of this nature.

ABRAHAM T. LOWE.

Bridgewater, July 4th, 1851.

For the New England Farmer.

PROGRESS OF KNOWLEDGE.

MR. COLE:—There is no such thing as a fixed position for man in this world. A man must be going forward or backward; for he who is not learing is certainly forgetting what he has learned before, if he ever knew anything. If we do not strive to go beyond those who have lived before us, we shall be inferior to them. No generation can possibly transfer its precise measure of knowledge to another generation. In passing from the hand of age to the hand of youth, many small particles will slip through the fingers.

The only way to keep up the standard and character of our agriculture, where our fathers had their standard, is by striving earnestly to go beyond them. We all fall far short of our aims, if they are elevated as they should be.

Those who have gone before us found the soil which we now cultivate in a very different state from that in which they left it to us. They encountered their difficulties, and we must also meet ours; but it is useless for us to suppose that we can cultivate the soil as they cultivated it, and obtain such rewards for our labor as they obtained. New difficulties, which they never encountered, and new questions which they never studied, are open to us. We may drink from the cup of knowledge and be strengthened by so doing; or we may murmur at our hard lot, and censure the hand of Providence.

Agriculture is to have a place in the study of youth in our schools. Professor Johnston's "Catechism of Agricultural Chemistry and Geology" is to be recommended by the superintending school committee of this, and probably of some other towns, for introduction to our common schools.

Every boy that grows up in our republic, whether his parents are rich or poor, ought to know how to cultivate the soil. Then, if he engaged in some other pursuit from choice, but did not meet with success, he would not be cast upon the world in hopeless want, to beg or steal. He would exercise his rightful lordship, and with hoe or spade, or axe, go to a ready task with cheerfulness, and live and learn, and every day grow wiser, and ev-

ery day grow better, just as he would every day grow older.

But what a speculating host are seen! How many pine in want, because they are lacking knowledge. Up with you, idle dreamers; there's much to learn, and there's much to do, in this wide world of ours. There's land enough in Yankeedom, that lies untilled for want of workers. There is knowledge to be gained, of the most important matters. Science offers her aid to agriculture Shall we wait for the establishment of Agricultural Colleges? Are there not now many engaged in cultivating the soil who could take students and teach them? I observe a disposition to wait for some great and renowned, or, at least, until some extensive and expensive preparation is made for an agricultural school, before we can have one. Can we not have farm schools—private instruction given to young men—under the direction of some of our most scientific farmers? Will not the editor of the N. E. Farmer give an opinion upon it, and, if agreeable to his judgment, put the idea along a little. It appears to me that a few smart and active boys might make up a good class, and greatly aid the farmer who might for proper considerations be interested to teach them.

Mason, N. H., June, 1851. C.

Remarks.—We have occasionally given our opinion on the subject of agricultural education. We think that one or several agricultural colleges in our State would do no more to enlighten farmers generally, than our present colleges would do for the education of the great mass of people without common schools and academies.

We should have proper text books to be used in our common schools, and to be studied in private families, in order to diffuse useful information over the whole land, affording to the most humble the advantages of instruction.

For the New England Farmer.

FRUIT, INSECTS, POTATOES, &C.

Mr. Cole:—I send you a few memoranda respecting my small enclosure devoted only to culinary vegetables and fruit trees. Facts are best stated when fresh in the recollection, and I would take leave to suggest that if farmers and gardeners would record, from time to time, on a journal for their own use, all such important facts relating to their business as occur under their own observation, they might thus collect valuable materials to aid the general interests of agriculture.

Fruit Trees.—Their buds swelled early in April, and the blossoms were ready to expand, but were kept nearly stationary for an unusually long time by cold weather and several freezing nights. May opening warm, they rapidly put forth and in profusion, but the petals were shed sooner than usual. No caterpillars appeared. Examined for borers and cut out and killed them and applied ashes liberally to the roots, and afterwards scraped the apple trees and rubbed them and the other trees freely with common soap. Also mulched several with forest leaves to kill the sod around the bodies. Around a plum tree, in full bloom, spread a thick coat of leached ashes and stamped them smooth and hard, to warn curculios that they would have no chance for their progeny to burrow.

Results thus far.—The apple trees of vigorous growth cast their apples to a great extent, as if propense to produce wood rather than fruit, as they have heretofore done. The clusters of blossoms, the petals having fallen, were not unfrequently attacked, together with the leaves adjoining, by a web worm folding up leaves, and devouring their life. A portion of apples were set, but from the size of a pea and onward the crescent mark was placed upon them, sure stamp of the bug destroyer. They are falling fast, the last week in June, and few or none will escape. Cherries were punctured quite as soon and as extensively perhaps. The plum tree cast its fruit almost wholly. Curculios followed, and probably have already made sure of the plums that set, as they are falling fast. Caught a few upon a sheet by rapping the tree, but gave up the contest with the foe, for the ground was won and the victory secured already.

The peach tree put out curled leaves, and many buds after a sickly setting of leaves exuded gum, and many extreme twigs died. Considerable fruit is set, and healthier twigs and leaves are growing, but the blasting of leaves and the numbers already fallen are remarkable. I observe likewise a progressive decay and fall of apple tree foliage, of the earliest growth, which I can trace to no known cause. My experience thus far since attempting to raise apples inclines me to despair wholly of success, in the pent quarters of a small enclosure, especially with neighbors' trees adjoining, breeding in current bush hedges all sorts of destroyers. Indeed the original grant of every green herb, to the beast, the fowl and the creeping thing for food, cannot be abrogated, and plainly from providential interposition, fruit trees are not exempted, for man's exclusive use and enjoyment.

Potatoes. — Planted Peach Blows principally, for they rotted least and kept best last year. Some are upon a plat manured with vegetable compost, and some on land where turf-turned soil yielded well last year. Three other kinds are on trial. A third of the peach-blow hills are struck with the curl-top disease, and to save the ground a bean hill stands beside them. The other kinds are free from this symptom. The corn-stalk borer enters some stalks and kills them, and for two or more weeks the yellow, striped-bug slug-breeder has been very industrious laying nits, and the progeny are busy in their work, consuming the leaves, to the very best of their ability. The appearance of many healthy hills of peach-blows, and all of the other sorts, is thus far promising. The result is with the Ruler of the seasons. Lost in the multitude of counsellors, I have followed most of them, yet have planted a few with forest leaves and small hemlock branches, to gratify my personal curiosity.

Salisbury, Con., July 1st, 1851. J. Lee.

For the New England Farmer.

CISTERNS FOR MANURE.

Mr. Cole: — Being about building a cistern for saving liquid manure, I would inquire, through the medium of the Farmer, if frost will have any bad effect on hydraulic cement.

Yours respectfully, S. W. C.

Deer Isle, Me., June, 1851.

Remarks.—We have no definite information on this subject, but in directions for making cisterns of hydraulic cement, it is generally recommended to place them below the region of the frost. Will some of our readers who are well acquainted with the above subject, communicate their views?

For the New England Farmer.

WHITE WEED.

Mr. Cole:—Please inform your correspondent, that ten years ago I had white weed in several spots in four small fields and a pasture, and that I have destroyed it entirely. I followed it for four or five years with a spade, dug up the sods and buried it, but I found it still gaining upon me. I suppose the roots spread farther than I dug, and sprouts came from the roots that were left. I finally resolved to try salt, which has succeeded perfectly I cannot find a single plant on my farm. I went over my land when it was in bloom, picked off every blossom (for fear there might be seeds in them) and buried them, and covered the ground with salt for several inches around each plant; the second year, there were but few plants to be seen; the third, less; the fourth, but one plant; this year is the fifth, and none to be found. The cost and trouble is trifling, and if my land was covered, I would undertake its destruction. If your correspondent will inform me of as cheap and certain destruction for witch grass, I shall be much obliged. Stephen Adams.

West Newfield, Me., July 2, 1851.

For the New England Farmer.

BREEDERS' CONVENTION.

Mr. Editor:—The breeders of Vermont have agreed upon a State Show and Fair to be held at Middlebury the tenth and eleventh of September for the exhibition of stock, where there will be a large collection of fine horses and sheep for sale. The celebrated Morgan horse, Black Hawk, and two hundred of his colts, will be upon the ground. Fine specimens of stock from the Old Gifford Morgan and many of the Hamiltonian and Eclipse colts, and descendents of the Old Messenger. In fact, it will be one of the best exhibitions of the "Yankee harness horse," and French and Spanish merino sheep, that has ever come off in America. We shall have a good display of cattle too.

Those who wish to buy a carriage horse of great speed and endurance, had better attend this fair, where there will be a good opportunity to select from a large number, and many a fine stallion will be upon the ground, of good action and fast on the trot. Arrangements will be made with the different railroad companies to carry passengers to and from Bosten and New York at half price.

A Breeder.

HOW TO MAKE VINEGAR.

There are many great notions entertained among our farmers about making vinegar. The grand old plan was to put out cider, or water and molasses, in a cask, to the sun and expose it to the luminary with a bottle in the bung hole. There are still as many ideas entertained about making vinegar as there are about making soft soap, and *luck* is frequently held to be the umpire who decides whether it will be vinegar or no vinegar.

The reason why cider or other fluid mixtures change their nature and become vinegar, is owing to a transformation of the particles and then a separation of one or more, and a combination of others. The oxygen of the atmosphere, although it is not now as was once believed to be, the only acidifier, still it is the great one, and vinegar is formed by the cider parting with its carbonic acid gas, which it cannot do without absorbing oxygen. The reasonable way, then, to make vinegar rapidly and surely is to expose the cider as much as possible to the atmosphere. The new way, and what is supposed by many to be a patent way to make vinegar, is to let the cider percolate over a very exposed surface. This is the way they make it in the vinegar manufactory. The apartment where it is made is freely exposed to the air, and is kept at a temperament of about 60°. The cider is left to run in small streams into troughs with bottoms full of small holes, then from that over very fine wood shavings, such as soft maple, and let these be fully exposed to the air and resting on a slatted bottom made of clean bows or laths, below which the vessel for receiving it should be placed; vinegar can be made from molasses and water, grapes, corn-stalks, beet roots, and many other substances, by this process, in a few days. Cider, however, makes the best vinegar. Many modifications (for cheapness) of the above plan may be resorted to, the grand secret being the exposure of the liquids to be changed into vinegar, in layers or strata, to the oxygen of the atmosphere. There is not a farmer but with a cask, an old tub, and a few shavings, could make good vinegar in one-fifth of the period now required by the common plans in use for that purpose. In those vinegar factories introduced here by Frenchmen, the plans adopted are those we have narrated.—*Scientific American.*

Remarks —It is a general opinion that cider makes the best vinegar, and it is probably the best substance generally used for this purpose; but maple sap is superior to cider for vinegar. The juice of blackberries makes a very superior vinegar for table use, retaining the beautiful color and fine aroma of the fruit. The juice of the little wild red cherry, and many other small fruits, make excellent table vinegar. In the days of our childhood, in a new country, all the vinegar used in the family was made from the wild fruits, or from the sap of the maple. And in this respect there has been no improvement in the quality of vinegar, but a deterioration.—Ed. N. E. Farmer.

BLUE-STEM WHITE WHEAT.

I suppose you and your readers have heard and know something about the "Blue-Stem White Wheat" which is growing so abundantly in Pennsylvania, Ohio, Maine, Maryland, and even in the Southern States. It is a very large and beautiful species of grain, and many claim the honor of having discovered it first. But I believe there are very few who actually know the original discoverer, or anything at all relative to its origin. I have seen stated in different papers, the names of persons who were supposed to have discovered it, and spread it over the country; but by no means have they given credit to the right person. My father is personally acquainted with the man who

first found it, and he ought to have the credit. For these reasons I have thought it not unfair to announce to the public, through your columns, the name of the true original discoverer, the time, place and history of its origin.

It was discovered in the winter of 1836, by Henry Glahs, son of George Glahs, whilst at work one day threshing wheat. (George Glahs lives near Freeburg, Union County, Pa.) He happened to observe one head quite different from the rest. He picked it up and shelled it, and found it to contain much larger and finer grains than the other heads; part of it being already shelled before it was taken up. He only retained sixteen grains. These he put in his desk to preserve, with the intention of sowing them the coming season. When the time arrived, and his grain already green in the fields, he thought of his new seed in the desk Immediately he planted the sixteen grains, which brought sixteen heads for the next year; the third year brought nearly half a bushel; the fourth year he gathered from the products of the third six bushels, and the fifth year the product was one hundred and ten bushels. In a few years all the farmers in the neighborhood raised it in abundance. It also soon spread over the State, and, as I before said, is cultivated largely in many of the other States.

At the same time, the Hon. John Sydney, then a member of Congress, addressed a letter to my father, which contained an order for a certain amount of this wheat, to be sent to Baltimore for some Virginia farmers. The amount for which the order called, and some more to the amount of two thousand bushels, were sent down by boats, most of which was sold to the Virginians for seed. Mr. George Glahs, on whose farm it was first cultivated, is still living. He has attained the age of seventy-three.—J. W. G.—*Selin's Grove*, 1851.—*Philadelphia Dollar Newspaper.*

THE PURE MERINOS OF FRANCE.

S. W. Jewett, Esq., of Weybridge, Vermont, whose name has lately been mentioned in the papers in connection with the importation of foreign sheep, has sent us samples of the wool taken from the fleeces of six yearling rams, which, since their arrival in Weybridge, about ten days ago, were shorn in the presence of several gentlemen interested in sheep raising. The fleeces were of less than eighteen months' growth, and the average *twenty and a half pounds* each, of a fine, even quality of wool, and free from long hairs. The samples may be seen at this office. Mr. Jewett says that this race of large, beautiful animals will compete successfully with the English breeds for mutton-sheep, owing to the great size of their frames, and the fact that their lambs mature much earlier—the ewes being remarkably large milkers. He says that while in France he actually ate of cheese made from the milk of these ewes. He mentions among the qualities of these Merinos, that they take on fat readily, and are of an exceedingly quiet disposition, a trait which is now hereditary, and is attributed to the fact that, for more than a century, they have been attended by shepherds, and have not been permitted to roam at large. Mr. Jewett says there are now but five flocks in France of the pure Merinos, which descended from the government flocks in Spain, and that a good deal of excitement prevails in France at the present time, among the breeders of these sheep, in consequence of visitors from all parts of the world, led thither by the great exhibition in London. He saw there a Prussian, by the name of Jachin, who owns a flock of 44,000, and two men from Australia, one of whom owned 33,000, and the other 45,000 sheep. These men paid as high as $500 for rams, to be sent 8000 miles over the water. Mr. Jewett's purchase is the largest, as to amount of money, ever made of foreign live stock by an American. Several of the best farmers of Addison county have taken a joint interest with Mr. J. in the flock, and they design to distribute them, as far as they may be wanted, among the wool-growers of Vermont. The whole amount of money expended on this importation is about $30,000.—*Burlington Sentinel.*

ECONOMY OF FRUIT.

Every man of family who keeps a good supply of stewing and baking apples, of his own raising, saves a great many hard dollars yearly, otherwise to be paid to the miller or butcher. Or if he raises his own grain and meat, an equal amount is thus reserved for market. Then, what a valuable addition to the comfort, variety and luxury of the table! By the first of summer, the thick trusses of strawberries begin to redden in the sun; and half a dozen quarts of this melting crimson fruit may be had each day for the table, from as many half-rod beds. Cherries, currants, and raspberries, continue through the first half of summer, followed by early juicy apples; rich, bloom-dusted plums: golden, perfumed apricots; and buttery and melting pears.

Now, we do not say, as some mistakenly remark, that this fine and delicious supply costs nothing after the trees are planted; for good fruit cannot be relied on, unless the ground is well cultivated and manured. But it does not cost half as much to cultivate an acre of fruit, as an acre of potatoes or corn; while the amount obtained is greater than either; and all ready for the table, without going through the process which the grain crop requires, of threshing and winnowing, and grinding, and kneading and baking.

By planting rich, high-flavored apples for stewing and for pies, instead of poor and insipid ones, each family may save fifty, a hundred, or two hundred pounds of sugar annually, in sweetening and spices. A friend of ours finds it cheaper to buy good fall pippins for fifty cents a bushel, than poor sorts sold as "cooking apples," for fifteen cents a bushel. He uses the Talman Sweeting largely, for baking and for puddings, and thinks that an Indian apple pudding, made by this natural sweetening, the cheapest and best pudding in the world.—He saves from $75 to $100 annually in the cost of his table, by his fruit.

DAIRY STOCK.

A writer in the Agricultural Gazette recommends the following mode of managing a milk stock, the principles of which are followed by the best milk-selling farmers. Curry and wisp the cattle once a day, give water twice a day, when in the stall, and an hour's airing in the yard. Let the food be given to them exactly at the same hour every day; and likewise the water. When food is given and the cow does not take it readily, take it from her and let her be without any until next

feeding time,—this is the way man should do to remain in health.

Never pamper immediately after calving. At milking time, the master or mistress should assist, or be present, in order to see that the milkers milk briskly and without talking. A great deal depends on these two points. A milker may sing or whistle, but not talk, but then it must be tunable. There is an old saying that "the last drop is the richest," and should be drawn. This is wrong, for the last drop from a good milker never does come. I have seen milkers pulling at the udder for the "last drop," while a weekly constituted cow has been made nearly sick.

A mother who has suckled children can understand this, and yet I have known thoughtless mothers to forget it when milking cows. In stripping a cow a milker finishes with his right hand, by taking the teats in rotation, and getting what can come out; and when he gets hold of a teat, if he can get milk twice, he must try that teat again after he has gone them round; but if he can only get milk once, he should give up; for the last drop which ought to be taken is then come; and if more after this is got, it is a pull upon the milk veins, and is no richer than milk taken at the first, or rather it is of an average quality.

If a farmer intends to follow his business to the best advantage, either he or his wife must themselves milk, or be present at the time of milking. One of the best managers I am acquainted with always did the stripping himself, and left the others to do the regular milking.

LABOR SAVING.

It is a notorious fact that many of our farmers regard but narrowly their own best interests. They do not consider what great losers they are by permitting things to go as they do by sixes and sevens. I was, several years ago, paying a visit to a friend, by whom I was taught a lesson I shall not soon forget, in reference to the advantages gained by the farmer in having a place for everything, and by keeping everything in its proper place.

The friend of whom I speak was a farmer in moderate circumstances, yet he had eveything around him arranged to the best advantage. His house stood upon the summit of a hill. A short distance from his kitchen door he had a high wall built, surrounding his pig-sty, the location of which was at the bottom of the hill. Beside this wall, and upon the top of the hill, he had his granary erected, adjoining which was his tool-house, where might be found every implement suitable for agricultural purposes, and also a work-bench, containing many tools used in carpentering. These were so arranged that not one of the family dare misplace them; yet all had the privilege of using them, but each one knew that they were to be returned to their appropriate places in the tool-house as soon as they were done using them. I saw at once how much was gained by adopting a system of this kind. Having a place to keep each article in, much time would be saved hunting it up when wanted; as he assured me there was not one of his family but could go and lay their hands upon any article they wanted in the dark.—*Dollar Newspaper.*

☞ We should be careful to practice, and treat the humblest menial with courtesy as delicate as we would show the children of affluence and honor. So shall we transfuse in them a corresponding refinement which will tend eventually, perhaps, to make them purer in morals and more elevated in mind.

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 mayest go forth into the world, and find thyself everywhere at home; thou canst cultivate in thy own little chamber: thy friends are ever round 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, the rainbow, and music's sweet chords, offer to thy soul hospitality.—*Frederika Bremer.*

AYRSHIRE STOCK.

We had the pleasure a few days since of examining the full blood Ayrshire stock at the N. H. Asylum for the insane. It consists of a bull three years old, a cow we think a year older, and two heifer calves. They are beautiful specimens of the breed. The bull is a noble animal with all the fine points of the true Ayrshire about him, very gentle and large of his age. The most attractive of the lot is a calf six weeks old, that appeals to our senses of the beautiful very strongly. Dr. McFarland has been offered thirty dollars for the calf as it stands, but declines the price. It is destined to be a noble cow. We advise all who wish to see good specimens of the Ayrshire blood to visit these at the hospital.

Mechanics' Department, Arts, &c.

YOUNG MECHANICS---THE WAY TO RISE.

We stated last week that few of our mechanics rose direct from the workshop to important places of trust in the republic, and we also stated that but a few of the great many were qualified to fill important situations even in connection with the trades they learned. Why is this? Is it not possible for men to be as well educated in the workshop as anywhere else? Do mechanics not possess the same abilities as those who follow the profession? Yes. Well, then, why is it they are not in general fit to march out from the workshop to fill the highest and most honorable offices in our country?

The answer is, they do not in general try to qualify themselves to fulfil their proper duties, as citizens of this great republic. We suppose that our mechanics themselves would be planet-struck, if it was proposed to run one of their number for President, but it is not our object, except in an angular direction, to point to political situations; we hope the point, however, will not be lost.

We have alluded to the absence of a taste for sound and solid reading among our mechanics, and we have now to complain of the absence of a

pure and lofty conversation. The majority of our young men belong to fire or military companies, and during their spare moments, their conversation consists more in what this and that engine can do, &c., and not about how it can be done. Idle, vain and frivolous conversation has a very injurious tendency, like reading bad books. A pure conversation and gentlemanly discussion of useful questions, has a very elevating tendency. Young mechanics, we speak to you, in all earnestness; if you wish to rise, you must be enthusiastic about your business, and in the pursuit of knowledge connected with it. In your spare moments, endeavor to seek enjoyment in talking about the principles of your trades, seek to know the why and the wherefore of everything connected with them, and whatever your hand findeth to do, do it well and with all your might. Do not be eye servants, do not use profane language, and give yourselves the best education you possibly can. Every machinist should learn to draw, so should every carpenter, and do not be content until you fully understand, and can construct every machine, apparatus, or whatever it may be, and can take charge of and superintend every branch of business connected with your trades. Men possessing such qualifications are sure to rise. And what is to hinder you from possessing such qualities, along with a character for honesty, fidelity and ability? Let every one put this question to his own heart.—*Scientific American.*

MACHINE FOR PRINTING OIL CLOTH.

Mr. Simeon Savage, at the Lowell Machine Shop, has succeeded in the invention of a machine for printing floor cloth, which promises to be of great utility in the manufacture of this most desirable of floor coverings. We will not attempt any description of the construction of this machine, as no patent has yet been obtained for it, although one will be applied for as soon as a model can be built. This machine is capable of printing 2,000 yards of floor cloth per day, in eight different colors at the same time, and by the same principles twenty colors could be as readily printed. We saw a specimen of floor cloth printed by it, which warranted us in the belief that more perfect goods can be made by this machine, which is worked by power, than can be made by hand.—*Lowell Courier.*

BALL & CO.'S INDESTRUCTIBLE WATER PIPE.

We learn that the citizens of Rockland, county of Lincoln, Maine, have contracted with Messrs. Ball & Co., of this city, to supply them with pure water from a pond distant 3 3-4 miles from their village. The contract embraces 8 or 9 miles of pipe of the diameter of 9, 6, 4 and 2 inches, which, including hydrants, gates, stops, &c., amounts to some twenty-five thousand dollars. We are pleased to see this improvement being thus very extensively introduced in various sections of the country, as we know from personal experience that the Indestructible Pipe is a most invaluable invention, and as put down by the proprietors themselves, well calculated to resist the efforts of time almost beyond calculation, while the water is as pure as though passing through a marble conduit. These pipes are far superior in regard to the purity of the water, their durability and economy, to those in general use. Our "Down East" friends will have without doubt their work well and promptly done, and like many others, will only wonder that they had not attempted it before.—*Farmer and Mechanic.*

Ladies' Department.

THE UGLY BEAUTY; OR A FAIR MIND MAKES A FAIR FACE.

"I wish," said little Mary, "I was as handsome as my cousin Frances. Every one praises her beauty, and too often have I heard it contrasted with my plain and almost ugly features." The fact was that Mary was very ill-tempered, and it gave to her face an ugly scowl, which prejudiced every one against her. "I wish," said she, "I could be beautiful; I would willingly become a slave to purchase a fair face."

At this moment a strange being touched her on the shoulder, and said, "If you will do what I bid you, for one year, I will engage to make you as beautiful as you can wish." "I will submit to anything," said Mary. "I only insist upon your being amiable to all," said the stranger; "you must give up your own wishes to oblige others, and do all in your power to make them happy. If you fail in one instance, I shall not return."

Mary promised; but she would rather have promised to do any hard labor, than to love her companions, and to give up her own wishes to please others. She longed, however, to be beautiful, and she determined on making an effort to become so. At first, the effort was painful and difficult, but it was not impossible, and she succeeded.

In less than a month, she was surprised to find every one treating her kindly, and saying how much better she looked than she used to. She herself thought that her face had grown more pleasant, but she concluded she must be deceived. She persevered, and the kindness with which she was received by all made her so happy that she was not aware that the end of her year of trial was at hand.

As she was sitting at her window one evening, she overheard the mother of Frances saying to a friend: "How happy my sister must be in possessing such a daughter as Mary! I wish my Frances was half as lovely." Mary could not believe her own ears, and yet she felt that her aunt's approbation was sincere.

At this moment, the mysterious stranger touched her shoulder as before, and told her, she had come to fulfil her promise. "Shall I make you as beautiful as your cousin Frances?" said the stranger. "I am contented," said Mary, "with my face. I have learned that it is the mind and disposition, beaming through the features themselves, which constitute beauty."

TREATMENT OF SCARLET FEVER.

The following communication comes from a gentleman in whose judgment we have entire confidence:—

Cleanse the stomach by a mild emetic, such as warm water or ipecac, (but not emetic tartar—it is too prostrating for this disease.)

When the fever rises, wash the patient all over in warm water, rendered a little slippery between the thumb and finger, by white ley or saleratus. As frequent washings will be required,—that is, as

often as the fever rises,—a soft towel should be used, and very gently, so as not to make the skin sore. On this account, when the skin is thoroughly cleansed, less ley should be used; and if the patient become sore, a little rich milk in the water may be substituted. The feet should also be bathed in warm weak ley.

Such washings operate like a charm; and have never failed, under my observations, to put out the fever as water puts out fire—for a time; but frequent repetitions will be necessary. A girl in my family was washed ten times in one day; and a neighbor who was very weak before he came under my care, was washed twenty times in one night.—The effect of these applications is most salutary and soothing. I have seen a child of five years old, who was taken from her bed crying and moaning, become playful as soon as she was washed.—Another child, on whom the fever had risen high in the night,—was cooled off by the same process in a few minutes.

Warm water is more soothing and agreeable than *cold* water—which (latter) ought not to be applied in this disease, on account of its inducing re-action.

If the throat is much swelled, surround it with a cloth containing hops sprinkled with hot vinegar, and extending upwards above the nose, so that the patient may breathe the fumes. Volatile liniment,—made by turning *aqua ammonia* into sweet oil in a phial and shaking it well,—may also be applied round the throat, to irritatate the skin as a rubefacient.

The *strength* of the patient should be most carefully preserved, hence neither *bleeding* nor *strong cathartics* are admissable. Some, indeed, live through such improper treatment, because scarlet fever is one of the most variable diseases in regard to intensity: on some being very light and on others very severe. The more urgent the case, the greater is the danger from bleeding. *The patient has not one drop of blood to spare*—no more than he would have in typhus; and strong purgatives are scarcely less improper. Only the mildest cathartics, like tamarinds, should be employed; but as elder-flower tea is both sudorific and aperient, in most cases no better medicine need be sought.*

After the fever has ceased, children often become pale and bloated; and a near neighbor lost a fine boy under the care of a regular physician, when the disease seemed over and past. In all cases, however, that have come to my knowledge, a dose of calomel, when given, has roused them from that torpid state, and they have rapidly recovered.

Be very careful for many days after, not to take cold.—*Albany Cultivator.*

*Decoctions of slippery elm, catnep, or sage, may be used where elder-flowers are not to be had.

GIRLS.

Have you a father, have you a mother? Do you love them? Girls, do you know the value of your mother, if you have not lost her? Nobody loves you, nobody will love you as she does. Do not be ungrateful for that love; do not repay it with coldness, or a curse of coldness will rest upon you, which you can never shake off. Unloved and unloving you will live and die, if you do not love and honor your father and mother.

One thing, never call either "old man" or "old woman." It is quite a habit in this country for young people to name their parents thus. This is rude, impudent and undutiful. Any aged person is an old man or an old woman. There should be something sacred, something peculiar in the word that designates parents. The tone of voice in which they are addressed should be affectionate and respectful. A short surly answer from a child to a parent falls very harshly on the ear of any person who has any idea of filial duty. Be sure, girls, that you each win for yourselves the name of a dutiful daughter. It is so easy to win, that no one should be without it. It is much easier to be a good daughter than a good wife and mother. A child's duties are much more easily performed than a parent's; so that she who is a good daughter may fail to be a good wife or mother; but she who fails in this first, most simple relation, need never hope to fill another well. Be sure, then, that you are a good daughter. It is the best preparation for every other station, and will be its own reward. The secret you dare not tell her is a dangerous secret, and one that will be likely to bring you sorrow. The hours you spend with her will not bring you regret; and you should never feel disappointed or out of humor, for not being permitted to go to some place to which you wish to go. You should love her so well that it would not be felt a punishment to give up the gayest party to remain with her.

Nothing is more beautiful than to see a girl take off her things, and sit smilingly down with her mother, because she wished it. Go and kiss mother, as you used to do when a child, and never grow too large or wise to be a child at her side.

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☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston

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WORK FOR THE SEASON.

AUGUST.—Before the close of this month, the scythe, the sickle and the cradle will have passed over many fields and shorn them of their crops. Much of the grandeur and beauty that have adorned nature the previous months will be gone. During a part of August, the farmer has some little respite from his hard labor, yet there is much to do in securing the matured crops, taking care of those that are growing, and doing many things in preparation for the future which cannot generally be so well done in any other season.

Haying is not yet completed in many parts of New England, and the sooner it is done the better, as grass dries up very fast, after it is fit for the scythe, and it soon loses much of its good qualities. When hay has many bushes, brakes and other weeds among it, put about half a peck of salt to each ton. and the cattle will eat up the coarse part much better.

Cutting Grain.—The greater part of the wheat harvest comes off in New England during this month. It should be cut soon after the berry begins to harden, as the straw is then drying up, and can afford no more nutriment to the grain. By cutting rather early, there is often a chance to save it from a long storm, or a long time of dull weather, which is often very destructive.

Weeds.—These require considerable attention, and yet they have generally been neglected during the haying season, and if not destroyed immediately, they will seed the ground plentifully. Those that are maturing their seed should be burned, or put into compost and the seed allowed to vegetate before the manure is applied to the land.

Bushes.—Cut bushes about the middle of this month, and they will sprout but little—less than if cut at any other season. On many farms in New England bushes are numerous, and occupy no small part of field and pasture. Their extermination would render the farm more beautiful, more pleasant to work, and greatly increase its profits.

Pruning Trees.—August is one of the best, if not the best month for this operation. The bark does not readily start from the wood; and as the tree is in foliage, the operator can see to thin the limbs judiciously. But the great advantage in pruning at this time, is that where the limb is cut off. the trunk remains sound whether it heals over soon or not.

Digging Wells.—In August or early in September, when there is a severe drought, is a good time for digging wells, as it generally will be done thoroughly. Frequently there is great loss in attending to this business when water is plenty, and the well is not sunk deep enough, and must be made deeper in a dry time at great expense.

Wet Lands, properly improved, are our most profitable grass lands, and though much has been done in some sections to reclaim these valuable lands, in other parts they are almost wholly neglected, while the grass crops are failing on high lands. This is a good season for clearing up, ditching, ploughing, hauling on sand or gravel, manuring and sowing wet land to grass; and if well done, a good crop of grass will pay no small share of the expense another year.

Weaning Lambs.—In this month, or early in September, according to their age, lambs should be weaned, while the feed is sweet and succulent. They bear weaning better at this season than late in the fall when the feed is dry, hard and innutricious; and the sheep are far better for early weaning, as they have a chance to get in good condition before winter. See that the lambs have a plenty of good sweet feed on being separated from their mothers.

Winter Wheat.—Prepare for sowing winter wheat, which should be sowed in this month, or early in next. Large quantities of this grain are now raised in Maine, and generally with profit. The Blue Stem is a variety that succeeds well there.

Manure.—Mud, muck and peat must be carted

from the low lands, and put in the barn yard, and also laid in a proper place for making compost, and a supply must be provided for the barn cellar in winter, and for bedding for cattle where there is no cellar, that the liquid manure may be saved.

Stone Wall, when the material is convenient, is the best and cheapest fence the farmer can make. Animals seldom attempt to go over it, or throw it down; and if it falls down a little in the course of the year, the materials are always at hand for repairing it. But do not cut the farm up into too small lots, as they are more difficult to till and to mow than open fields; besides the great waste of land for many interior fences. We have known farms of moderate size on which the waste of land for unnecessary fences, and the strips on each side not convenient to till, was sufficient to produce $100 worth of fruit annually, if set in trees.

THE PEACH BLOW POTATO.

The experience of our correspondent, Mr. Lee, as given in our last number in relation to this potato, corresponds with our own, and that of many others. The first year we cultivated this variety, it was on green sward, and among many varieties, it was noted for its great luxuriance and superior height of its top. There was no sign of disease. Afterwards we cultivated it on old land, and among forty or fifty kinds, all flourishing and healthy in their tops; the Peach Blow was affected with the curl. We planted it several years with the same effect. The curl would stop the growth of the tops so that the tubers would not be bigger than potato balls. We lost from one-tenth to one-half of our crop from this disease, and then gave up its culture.

In some locations this variety is not diseased, and as it yields well, is of good quality, rots but little, and bears a high price in market in spring and summer—frequently higher than any other variety—it is a profitable kind in soils adapted to its culture.

NOTICES OF PUBLICATIONS.

The Journal of Agriculture is the name of a new paper just started in this city, published in book form at Horticultural Hall, School Street, semi-monthly, at $2,00 a year. William S. King, Editor; Prof. J. J. Mapes, Assistant Editor. The first number contains a variety of interesting and useful matter, and favorably commends itself to the liberal patronage of the agricultural community. Success to the new enterprise.

The Cottage and Farm Bee-Keeper.—A very neat little work, published by C. M. Saxton, Agricultural Book Publisher, New York, containing in a small space much valuable matter, on the management of this industrious and useful insect.

Elements of Agriculture, for the use of primary and secondary schools. This appears to be a book of the first authority in France, and it is adapted to the use of schools in the United States by F. G. Skinner. Neat pamphlet form, 92 pages, price 25 cents. Published by C. M. Saxton.

ACKNOWLEDGMENTS.

Of John Fatler, gardener to Jacob Hittinger, Esq., Watertown, a box of very fine, well-ripened tomatoes, which he raised in the open air. These are very early, as they were received a week ago.

Of Solon Dike, Stoneham, a box and a twig of cherries, a seedling of his raising. The fruit is rather small, but the quality is sweet and good, and the tree is a great bearer.

From Hon. Samuel A. Elliot, Agricultural Department of the Patent Office Report.

J. C. Stone, Shrewsbury, has sent to us as a curiosity, a rose that grew on a bush that belonged to his great-grandmother, which bush is probably 125 years old.

We received, late last week, of John Fatler, gardener to Jacob Hittinger, Esq., Watertown, some very fine chenango potatoes of a large size and excellent quality, being very good and mealy. We are much obliged to Mr. F. for his acceptable and seasonable favors.

For the New England Farmer.

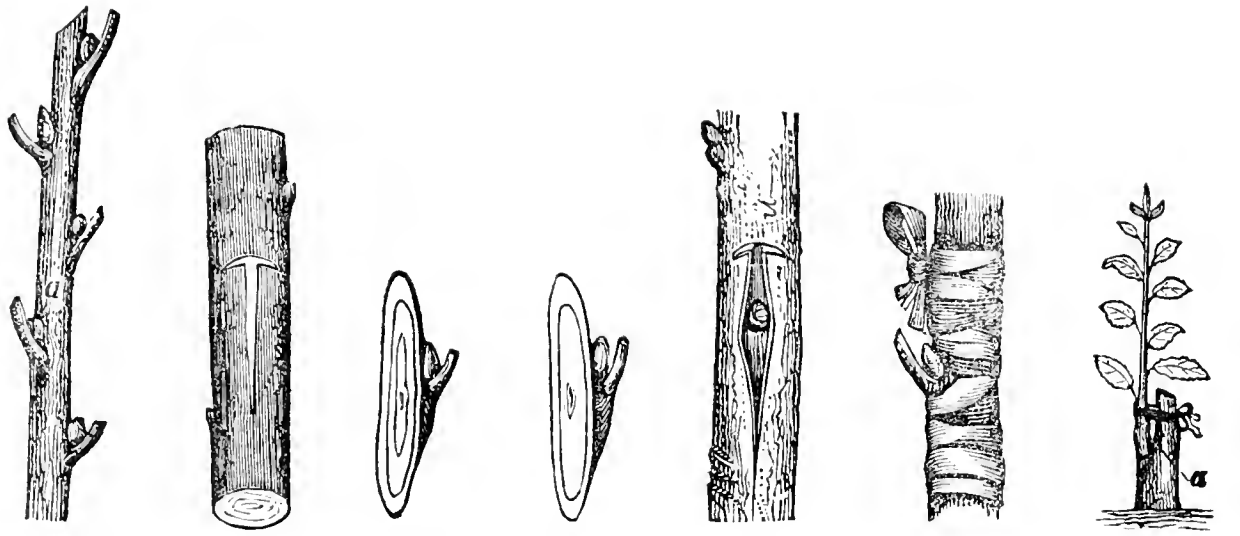
LUNAR INFLUENCES.

In the July number of the Albany Cultivator, p. 230, is an interesting article on "Irrigation in Switzerland," taken from the *Journal of the Royal Agricultural Society.* Coming so far, and through such a medium, it must be worthy of regard; nevertheless, the following passage, relating to the influence of the moon upon the growing of grass, needs some collateral support:

"M. Herzog also informed me that he never irrigated during the full moon, as he had always observed that when the meadows were allowed to remain in water during the clear moonlight nights, that the grass was perceptibly weakened, and that its very color was affected. He had applied water to different parts of the same meadow during the full and new moon, and had experimentally verified this fact."

That this gentleman's observation of the *growth* and *color of the grass* may have been as mentioned, we will not presume to question. But that *the moon* was the cause of this, we think there is no good reason to believe. The custom of charging the moon with this and that influence, has been so common, that many things have been placed to her account, with which she is in no manner chargeable. Conductors of scientific journals should be careful in giving circulation to such fanciful notions. Suppose an individual should have observed, for several years, that the blight upon the potato made its appearance on the *third day* of the full of the moon in August, and should have drawn the inference that this blight was caused by the direct rays of the *full moon;* would not such an inference be plausible? It is hardly worth while to wander to the moon for causes that can be found much nearer home.

July 19, 1851.



1. 2. 3. 4. 5. 6. 7.

BUDDING.

1....Stick of buds.
2....Stock prepared for the bud.
3....Shield or bud with the wood in.
4....Bud with the wood taken out.
5....Stock with the bud inserted.
6....Stock with the bud tied in.
7.....Growing bud tied to the stock.

Budding, though a simple process, that may be readily learned and practised with ease and expedition, is wonderful in its operation. There are many kinds of fruit that can be propagated rapidly only by this process, and by grafting, which is similar. The apple and pear are propagated very slowly and with difficulty by layers, cuttings, and inarching, and almost every variety will fail to produce its like by seed.

But budding affords so easy and rapid a multiplication of trees, that from one tree a thousand may be produced in one year, and each one afford numerous buds for a further multiplication. So that a single tree, of excellent variety, may be scattered all over the country, in a few years, or over the world, so far as civilization, and, consequently, useful arts, adapted to an improved condition of society, have extended.

Any one who would practise budding, and is not acquainted with the operation, should learn from a practitioner, if convenient; but he may learn the art by reading. In this way we learned it, and our first attempts were successful.

The buds should be cut from shoots of the present year's growth, that are becoming ripe or firm, as those very tender or succulent are too soft, and more liable to fail. There is often a great error in not preparing the stick of buds immediately after cut, for the moisture is constantly passing into the leaf; and sometimes on a hot dry day, the buds will be spoiled in two hours, if the leaves remain on, the bud becoming dry and dead.

In preparing the stock, it is better to make the cross cut in a circular form, as in Fig. 2, that the band may cross it, rather than press into the cut. The bark on each side of the perpendicular cut, at the top, should be raised with the handle of the budding-knife, by lifting, not by forcing it down between the bark and wood, which may disturb the *cambrium*, or new layer of soft matter, called *sliver*, in some sections.

Some years past, it was a general practice to take out the small slip of wood cut out with the bud, which is represented by the inner circle, Fig. 3. Of late years, most persons, and nearly all who have recently commenced the business, leave the wood in. Old practitioners say, in regard to this new mode, that it is better to take out the wood in buds from rather large, firm scions; but when the scions are small and succulent, it is better to leave the wood in. Beginners will generally succeed better by leaving the wood in, as they are liable to injure the bud or bark around it, in removing the wood. Many budders always leave the wood in, and succeed well, and this mode is the most convenient; and this will give a preference for the American mode over the slower English process. In taking out the wood, if the root of the bud come out with it, which may be known by a minute hole in the bud, at the point marked in the centre of Fig. 4, that bud must be rejected. This may be prevented by cleaving off the wood with the point of the knife, to the root of the bud, and then cut the wood off there, smooth with the bark, with a thin, pointed knife.

Some budders use small thin gouges, with a very keen edge, to take out the wood. They are made on a circle generally, corresponding with that of the scion. The better way is to have a pair, one for large scions, the other for small. They are hung by a string, at a convenient height for the hand to take hold of them instantly, and their shape is such, being flat at the hand, and a little curved, that the operator may know when he has them in the right position for use, without looking at them.

This gouge is run between the wood and bark, and the wood is taken out very neatly, and in less time than in any other way; and it is sure to save the root of the bud. In cutting out the wood, the gouge should be pressed gently against the wood.

In cutting the bud from the scion, insert the knife below the bud, and take a thin slip of wood, especially if it is allowed to remain in. After slipping in the bud, cut off the bark at the cross cut, as in Fig. 5. Wind the band closely and neatly around every part of the cut bark of the stock, barely leaving out the bud, as appears in Fig. 6. As the stock grows, so that the band binds too tightly, loosen the band and retie, and let it remain till the bud is firmly united with the stock.

Various materials are used for bands in tieing in buds. Most nurserymen select a nice, soft Russia mat, which is a good and cheap material, and easily procured. The matting should be wet, and used moist. The inner bark of Bass Wood or American Linden is excellent for bands, if it be soaked several weeks in water, to soften its fibre; otherwise it is too hard and stiff. A great deal depends on putting on the bands; if they are only a little too loose, the buds will fail, and this is very liable to occur under some circumstances. For instance, if the bud is from a small stick or scion, and the wood is taken out, and it is set in a rather large stock, there will be a vacant place between the bud and stock, unless it be tied pretty close, so as to press the bud down to the stock.

As to the time for budding, no definite rules can be given. It varies with the season, the weather, the age and growth of stocks, the ripeness of the buds, and other circumstances. We generally commence about the first of August. First with the plum, then the cherry, pear, quince and apple, extending nearly, and sometimes quite through the month. If the cherries are young and vigorous, they may be omitted till the middle or latter part of the month.

We have budded cherries the first of August, as they appeared to be nearly done growing; afterwards the weather became wet and warm, and the trees grew more than one-half, and threw out the buds, and we budded again the first week in September with success. Some seasons we have known the pear to stop growing so early that it could not be budded after the first week in August. Again, we have known it budded the first week in September, and notwithstanding it was so late, the buds started, and grew an inch or two that fall, and the winter killed them. So no precise rule can be given for future action, any more than for the time to cut hay or grain. The better way is to begin in season, and if there be a failure from budding too early, repeat it. It is necessary that the stocks should continue to grow about ten days after the buds are set, that they may unite firmly with the stocks.

Peaches should generally be budded from the first to the middle of September. Old trees early in the month, but young trees from seed this season, about the middle. Generally vigorous trees of two years' growth should be budded about from the 5th to the 12th of September. We have succeeded in budding peaches as late as the 20th of September, but warm wet weather succeeded. If the weather had been cool and dry, they would have failed.

A great deal of care is necessary to see that the bands do not bind too closely, and to see that they are properly retied after being loosened. Generally the bands need to be loosened in about ten days after budding; sometimes earlier, and frequently later. In some cases the bands will not bind too tightly during the season.

ORIGIN OF HOUGHTON'S GOOSEBERRY.

As this gooseberry is worth far more than any other variety, and probably worth more for general cultivation than the thousand imported kinds of boasted excellence, its origin is of some importance, particularly as the good people of Lynn are pleased to claim its origin, and Mr. Abel Houghton, who raised it from seed, may justly indulge an honest pride in conferring so great a favor on the community.

Our attention is called to this subject, from seeing an article in a late number of the Boston Cultivator, stating that Houghton's Seedling Gooseberry originated in Salem; and though the article appears as editorial, we recognized that it was a copy from a western work.

Now if the editor of the Cultivator would consult some of the back volumes of that paper, or the American Fruit Book, instead of works published in a distant part of the country, on the subject of New England fruits, he might furnish his readers with a correct history of this gooseberry—might instruct with facts, instead of misleading by error—and do justice to all concerned. As this fruit is a favorite with us, we feel interested in having its history truly chronicled.

For the New England Farmer.

TO PROTECT TREES FROM MICE.

Mr. Editor:—I noticed in a back No. of the Farmer a communication on coal tar to prevent mice from destroying fruit trees in the winter season. As the writer of that article did not approve of coal tar, I will give my method in protecting trees from mice. I take sheet lead or tea chest lead (which can be bought for a nominal price) and cut it into strips eight inches wide and sufficient length the other way to go around the tree once and a half or twice; then wrap it around the tree lightly and it will stay without any further trouble. It can be taken off in the spring and laid away for subsequent years. I have tried the above method with entire success.

L. W. Stow.

New Haven, Vt., July 16th, 1851.

For the New England Farmer.

THE WILLEY STRAWBERRY.

Mr. Editor:—In your number of the Farmer for June 24, I notice a query respecting the Willey strawberry. I have, as you remark, expressed my belief that the variety known here and distributed pretty largely by myself, as the "Willey," may be identified with the "Hudson" of Cincinnati.

Mr. A. H. Ernst, of Cincinnati, a gentleman well known to the pomological world for his enthusiasm and correctness in these matters, doubted my views. I therefore requested him to send me a few plants each, of the Hudson and Willey, as he had them; this was done, and I planted them with great care in beds, side by side, that I might examine them in connection. They both fruited last and the present season, and referring to my notes made in portfolio, I find as follows:—"The berry of Willey rounder and borne on shorter footstalks, trusses larger and more abundant in fruit, flavor slightly more acid than the Hudson.—Neck not as universal or as distinct as in the Hudson." My impressions of their identity were before made from my recollections of the Hudson, when living at Cincinnati, and so nearly were they alike that I could not class them as distinct, until after having thus carefully examined them side by side for two years.

The origin of the Willey seems unknown, and cannot be traced other than as follows:—Two varieties of berries were brought here some years since from New York. On opening the bundle for planting out, the name of one variety was mislaid and finally lost. These passed into the hands of Mr. Willey, then of Cleveland, who fully distributed to all that wanted, as the plants increased; but at the same time without having care taken to eradicate seedlings of chance. The result has been that the variety known and grown by many as the "Willey" is a mixture, and having more false than true plants. The Willey is pistillate.

Respectfully,

F. R. Elliott.

Cleveland, Ohio, July 2, 1851.

For the New England Farmer.

THE POTATO DISEASE.

Mr. Cole:—On Saturday last, I was informed by Mr. Page, the superintendent of our town-farm, that while examining his early potatoes for the insect spoken of by Mr. Flanders, he had discovered a depredator of a much more formidable character, and such as he had never before seen. He described it as a worm, about half an inch in length, that eat the leaves of the potato, in a manner not unlike that of the silk worm, on the leaves of the mulberry. On going among his potatoes, I found that his description was not exaggerated. On every hill, more or less of these worms were to be found. On some of the leaves, clusters of half a dozen were found together, voraciously devouring the leaf. Some of the vines were entirely stripped of their leaves. If this insect should spread among the potatoes, as its appearance now indicates it may, it is apparent that it must destroy them *root and branch*. I called the attention of a gentleman* of as much observation in these matters as any among us, to this insect, and he said he had never seen anything like it before. It struck me as being sufficiently novel to be worthy of notice. The worm appears to be of every dimension, from a half-inch in length downwards. Its head is black and shining. Its back is a yellowish brown. It has six legs in front and two in the rear. Its general appearance is sluggish. Its movements and manner of eating very much resembles the silk-worm. I state such features as I saw, not knowing its scientific characteristics. I do not put it forward as the cause of the *potato rot*, because I have little confidence that *any insect* is the cause, but I do think it threatens destruction to the potato wherever it abounds. Numerous deposits of its eggs, of a yellow color, were to be seen on the stocks and leaves where it had been.

In connection with this allow me to state, that Mr. Page finds a small *black fly* on all his potatoes, operating very busily, and puncturing the leaves with innumerable holes, about the size of a common pin. He thinks these insects are not new. He thinks he has seen such ever since he has known the potato. He has made a liberal application of lime upon his fields, to save his crop if possible. The last year he lost by the *rot* about one thousand bushels. He is a farmer of much practical observation, whose judgment is worthy of entire confidence.

Very truly yours,

Danvers, July 7, 1851. J. W. P.

*Dr. Andrew Nichols, late President of the Essex Nat. His. Soc.

Remarks.—We have had this same kind of a worm on our potatoes for several years. Sometimes quite numerous in patches, or on a few hills; and another season, but few were seen. So we do not think that they will be very numerous, and generally destructive.

There are numerous insects that infest the potato, generally doing but little injury. As insects are something tangible, and may be magnified into importance by glasses of great power, it is high time that those who hold that they cause the potato rot should give us something definite on the subject—should collect the insects, describe and exhibit them.

For the New England Farmer.

THE SEASON, THE CITY AND THE COUNTRY.

Summer's beauty is around us—warm winds, cool dews, refreshing streams, rich foliage, waving trees, shady woods, verdant flowers, all conspire to enjoyment. The whispering insects on the ground, the hum of bees among clover, the song of birds in the boughs, the bleatings of cattle over hill and dale, the sun's first rise in a heaven of blue, his last rays over the hills of the west, the balmy hour of evening with the soft moon far above, awaken feelings which nothing but poetry can express; nay, reader, have not poets ever been trying to give expression to what is inexpressible—the inward condition of soul whose pulse beats ever in unison with nature without.

But alas! the resident of the city hears little of rural sounds, sees little of its beauty and feels less of its enjoyment; what he sees must be passing glimpses, what he hears he heeds not, and what he imagines must come through the pages of the

novel, the stage scene or the canvass of the painter. How he strives and struggles to surround himself with artificial substitutes, and still how painful is the void! The frivolities of dress, the nicknamed ornaments of home, the extravagant expenditure on appearance in everything, all fail to yield solace to a mind whose attributes have ever been love of harmony, beauty and wisdom.

Dweller in the city,—advantages we know you have; even some of them of a refined kind, we admit; but is it true that intellectual life can be enjoyed to greater perfection in the city than in the country? Can the city soothe the woe-worn spirit, relieve the limbs from disease, promise hope for the future, give relief in the decline of life, or make the blood flow as quick, as healthful through the veins of youth? I need attempt no comparison; the poet uttered truth,—"God made the country, man the town." J. B.

Spencer, Mass., July, 1851.

For the New England Farmer.

DOCTORING A TREE.

It is an important point to know how to select a good, healthy tree. It is a very important matter to know how to take up a tree, how to prepare a place for setting it, how to prune and prepare the roots of it, and how to set it out in the ground. But, after all, trees, as well as men, are liable to be sick; and the doctor's aid is necessary when they are sick, to preserve them alive and restore them to health again.

Last year I had a sick pear tree. It was, to all appearance, a very difficult case to cure. It had been transplanted in the spring, from a nursery near the sea-shore in Massachusetts, to a farm among the hills of New Hampshire. It so happened that the tree got a bad position in the bundle where it was packed for transportation, and the roots became much broken; besides which, a cord chafed the bark entirely off of one side of the tree where its limbs branched. After it had been set in the ground for some time a careless hand drove an ox-team on to it, and tore off the bark near the ground to a sad extent.

It leaved out with a fine appearance; but as the heat of summer came on, it wilted, and every leaf turned black. Here was a fearful case. The tree was too valuable to lose. Well, then, it must immediately be put under the care of a tree doctor.

Rationale of proceedings.—The leaves being entirely dead, the bark of the twigs dried, and even the bark of the limbs and body were dying, there could be no more support gained to the tree from the atmosphere. The roots too much broken and impaired to give much assistance, it was evident that the sap which the body contained was not sufficient to renvigorate the limbs of the tree; while every limb and every twig which was not entirely dead or dryed, was drawing from the body, and rendering its fate equally hopeless with that of the limbs and twigs. The first step, then, is amputation. The whole of the top, limbs and the twigs depending upon them, must be taken off, so they should draw no more away from the body. Then boards are put upon the sunny side of the tree, a little distance from it, to allow the air to circulate freely, and at early evening, as often as convenient, the tree is gently showered with pure soft water, not very cold.

Such was the treatment of my pear tree. I watched the tree with expectation of seeing it recover. After a few weeks had passed, it began to assume the appearance of a living tree. The few small twigs on the side of the body first put out leaves, and then appeared new shoots, and before the cold of autumn stopped its progress it had given the most positive assurance by its growth that it was positively *cured*. This year the tree grows finely.

My opinion is, that without taking off the top of the tree quite down to the body, its life could not have been saved. Even then, without lessening the sun's action upon the body, the case would have been doubtful.

When observing the difference in the success of different individuals, in managing young fruit trees, it becomes evident that many lose a great deal of labor in setting trees, and no little money which they pay for them, by not learning how to treat them when they are sick.

We have a great number of men who offer their services to cure "the ills that flesh is heir to;" we have our "horse-doctors" and our "cattle-doctors;" but is it not also important to have more than we now have among us who know how to doctor a fruit tree? I submit the question to those who lose many of the trees they set with the hope of being soon supplied with choice fruit.

While upon the subject, I will mention another case of curing a tree. It is an apple tree of the Baldwin variety. In the summer of 1843 it produced a few apples, perhaps a peck, all of which were small, and quite worthless; not coming to maturity. Several limbs of the tree died during that season, and the leaves fell prematurely from the rest of it. Most persons said that the tree was worth nothing, except for fuel.

In the autumn of that year I began an experiment for the "*cure*" of the tree. The soil about it had been stirred by cultivation from year to year; but as the tree stood upon ground slightly elevated, the surface soil had been worked away from the tree, leaving the large roots too near the surface, and the the surface itself quite hard, among the roots. The first step was to deepen the soil. Rich earth was carted under the tree, sufficient to cover the ground eight or ten inches deep all around the tree to the distance of perhaps fifteen feet. In the spring of 1850 this was leveled down and a large dressing of manure spread upon it. Then all was ploughed together, and the ground was planted. The tree blossomed about the same as the year before. Early in summer the whole top of the tree, (the dead limbs having been removed,) assumed an entirely new appearance. The dark colored and luxuriant foliage bespoke a change. In autumn I took from it a quantity of apples about sufficient, even at the low price at which Baldwins sold last year, to pay all expense of doctoring the tree. And what is to me the best of all, they were equal in beauty to any I ever looked upon, and as rich in flavor as any I ever tasted. Under and around the tree was a luxuriant growth of potatoes and winter crookneck squashes, which more than settled the bill for repairs. This year, how with the tree? It is even now bending its limbs quite low with a splendid burden of fruit, while the whole tree bears the best appearance of health. In gratitude for a little friendly care, it is making a bow, in a manner so graceful and beautiful that it wins the admiration of ev-

ery observer. It teaches the thinking observer a great and beautiful lesson. It proclaims that nature is never ungrateful, in trees that wave, or in plants that grow. He that blesses the earth shall be blest by the earth.

Mason, N. H., July, 1851. C.

For the New England Farmer.

EDUCATION AND FARMING.

Mr. Editor:—It is often intimated that it is unnecessary for farmers to have any more than a common education, by which it is meant almost no education at all, and indeed it is a lamentable fact, that farmers in general are almost entirely destitute of what is properly denominated *learning*, although nearly all in our country know how to "read, write and cipher," and hence pride themselves in the belief that they have a sufficient amount of knowledge for most "practical purposes."

It may be well to examine the ground for this too prevalent opinion, and to show, as I shall endeavor to do briefly, that it is entirely erroneous, and that on the contrary a thorough education is as useful and necessary for those who cultivate the soil as for those in most other professions,—in order to work to the best advantage, that is, to gain the most with the least labor.

To say that a man is capable of being a good farmer without understanding the principles of agricultural chemistry, without knowing the nature of the different soils, the effects of the various kinds of fertilizers on the several crops, and a thousand other things "too numerous to mention," many of which are comprised under the head of chemistry, would be absolutely absurd.

It is a fact undisputed by those whose opinions are to be credited, that a man in order to be in every sense of the word a *good farmer* must have a thorough knowledge of the principles of agricultural chemistry, and must know how to put this in practice. Now, to intimate that a vast majority of our farmers are almost destitute of this knowledge, would be only to say what would be readily admitted; but this is not the worst aspect of the matter, for the knowledge requisite for the best farming is not only not generally possessed, but it is not in most cases realized, if indeed it is known that such scientific knowledge would be of any value.

That this is the case is plainly admitted, when it is considered that a great many, perhaps a large majority, refuse to take an agricultural paper, even at the mere nominal prices at which they are now afforded; and if it is suggested to them that such a paper would be exceedingly useful, that it would pay many times its cost on account of the valuable information it would give, it would be too probable that the reply would be that "book learning" does more harm than good, and that they had always "worked on a farm," and hence that there is very little as regards agriculture which they do not already understand; and perhaps the case of the man would be related, who, following the directions as given in a popular work on agriculture, soon after his *beans* which he had planted "were up," *cut them off*, the book saying that thereby the crop would be greatly increased.

If it is not a fact that it is highly important for farmers to be well educated, why is it that professional men who have retired from business, and devote their attention to farming, are almost always patterns for good management, that their farms are always better than those of their neighbors, and that from them they realize a greater profit than others?

It may be said in reply that they have means aside from their farm, and that thus they are enabled to manage in a manner very different from those who have nothing but their farms and the appurtenances thereto, and were it not for this they would not be better farmers than others. It is true that this is often the fact, that they have extra money, but yet it is not universally so, for the cases are not rare, in which a liberally educated man, and sometimes men in the learned professions, being disgusted at their employment, choose farming for their calling, and so well succeed as utterly to surprise their neighbors.

Thus it is almost capable of demonstration that farmers should be men of intelligence and education, and indeed the truth of the theory might be plainly shown, from the fact that a person intending any other profession must specially qualify himself for that particular business, and hence, as of course, a farmer is not exempted from the same duty.

Thus I have "spun out" a long article, and if it shall have induced but *one* farmer to more thoroughly inform himself of all topics connected with the important business of agriculture, I shall be amply rewarded for my labor. D.

Franklin, N. H., July 5, 1851.

Remarks.—One reason that intelligent gentlemen, who leave other professions for farming, do not make it profitable, is that they often have ample means, and farm it for pleasure, thus accomplishing their design, which is to enjoy life. They often spend thousands of dollars on buildings, and hundreds or thousands of dollars in ornamenting their grounds, making beautiful walks, groves, ponds, &c., which the farmer would not spend while profit was his object.

We asked a gentleman of considerable means, who had thirty acres of land, whether he attended to farming; and he replied, "no," he was not able. We asked for an explanation, and he said that he wanted several thousand dollars, if he attended to farming, to improve and embellish his lands. There are many, who do not wish to farm it for the sake of dollars and cents.—Ed.

For the New England Farmer.

MULCHING GOOSEBERRIES.

Mr. Editor:—I noticed in a recent number of the Farmer, that old hay, &c., were recommended as mulching for gooseberry bushes. I have some set out where the soil is full of orchard grass, and the course I have taken with them has been to raise a bank around them or cover the ground under them with small stones, and the result is, I am rewared with a good crop. Stones possess two advantages over straw for this purpose; they afford the mice no shelter, and are always there, and they do not rot. S. Tenny.

N. Raymond, Maine.

☞ True charity consists in the performance of every duty of life, from the love of justice.

For the New England Farmer.

HONOR TO THE FARMER.

Yes, honor to whom honor is due. And to whom is it due if not to the farmer? The honest, industrious farmer need not envy monarchs or kings, for who is so happy and independent? and who so free from the cares and ills of life, as the industrious, temperate farmer? Surely no one. His field is a flower garden, yielding him both pleasure and profit. He walks forth into his fields, not like those who revel in affluence, to while away their wearied leisure; not like the mechanic, to invigorate his emaciated frame; but like the robust man going to his field of labor, which to him is a field of pleasure. And what employment is so natural to man as agriculture? None. It is man's nature to till the ground. It is the employment intended for him by nature. It is as instinctive to man to till the ground as to bees to gather honey. When we consider that over two-thirds of the population are employed in the pursuits of agriculture, that it is natural and indispensible to man's existence, why should so many of our farmers consider their station a low one? Especially our youth. They seem to think it is not respectable to dig in dirt, and away to some disreputable work-shop, where they soon see their folly, and return to the domestic life of the happy farmer. Farming is every day becoming more and more popular. The time is approaching when the farmers will be looked up to as the most popular and noble people in the world. They are in reality so now. I have seen the most noble and intelligent of men employed in the pursuits of agriculture. And many of our most noble statesmen, as well as those who have attained the highest degree of eminence and honor, were farmers. Q. Gavins.

June 30th, 1851.

For the New England Farmer.

MANAGEMENT OF MOWING LANDS.

Mr. Editor:—The judicious management of mowing lands is one of the most important features of good farming. Any thing that will increase their productiveness tends to improve the condition of the farm, as the cutting of a good quantity of hay is the most practicable means of obtaining fertilizing manure, with which to enrich our soil; and whatever tends to lessen the fertility of our meadows will necessarily affect the productiveness of other farm crops and the profits of farming.

I believe the practice of grazing mowing lands to much extent is an injudicious one. Every one is sensible that the feeding of them in the spring will diminish the amount of hay, but it is more injurious to feed them in the fall, for several reasons. If the aftermath is allowed to die down on the sward, it will have the effect of a top dressing, enriching the soil, and thereby increasing the amount of the succeeding crop of hay. If stock were not permitted to graze upon our meadows, many of them, I think, would show no perceptible deterioration in the soil for a series of years, provided the hay was cut when in bloom, which is decidedly the best time, as we then obtain a better quality of hay and the soil and roots are not as much exhausted as when the grass stands until the ripening of the seed.

Some of the most valuable grasses are quite liable to "winter kill," and if the sward is well clothed with grass when cold weather sets in, it forms a very important protection against the life-destroying effects upon the roots by the freezing and thawing of the turf. Another advantage of not feeding meadows, is that the aftermath tends to keep up an equal state of moisture and heat through the summer months, and the grass is much less liable to be injured by a drought and the land to become turf-bound.

An occasional top dressing of mowing lands is a matter of the highest consequence, when the manure is properly prepared and applied, and should be practised as much as possible without robbing the tillage crops. Manure applied to grass land should be well decomposed, and it is the best way to compound it with rich swamp muck, mould or earth. From a compost made of equal parts of yard manure and one of these substances, we may, under many circumstances, derive as much and even more benefit than from clear manure.

It is an excellent and almost indispensable practice to pass the brush and roller over the manure after it is spread; this serves to more thoroughly pulverize the manure and press it down upon the sward, so that the roots will sooner feel its effects, and will be subject to less waste by evaporation. Mowing lands that are not too wet, should be broken up in from four to seven years, according to the character of the soil. The turning under and decay of the turf will, I think, generally enrich the soil as much as two-thirds of an ordinary dressing of manure.

I believe that land can be as much benefited for the production of grass by deep ploughing, as other farm crops; for the roots will attain greater size and vigor, and are much less subject to be injured by drought, frost, &c.

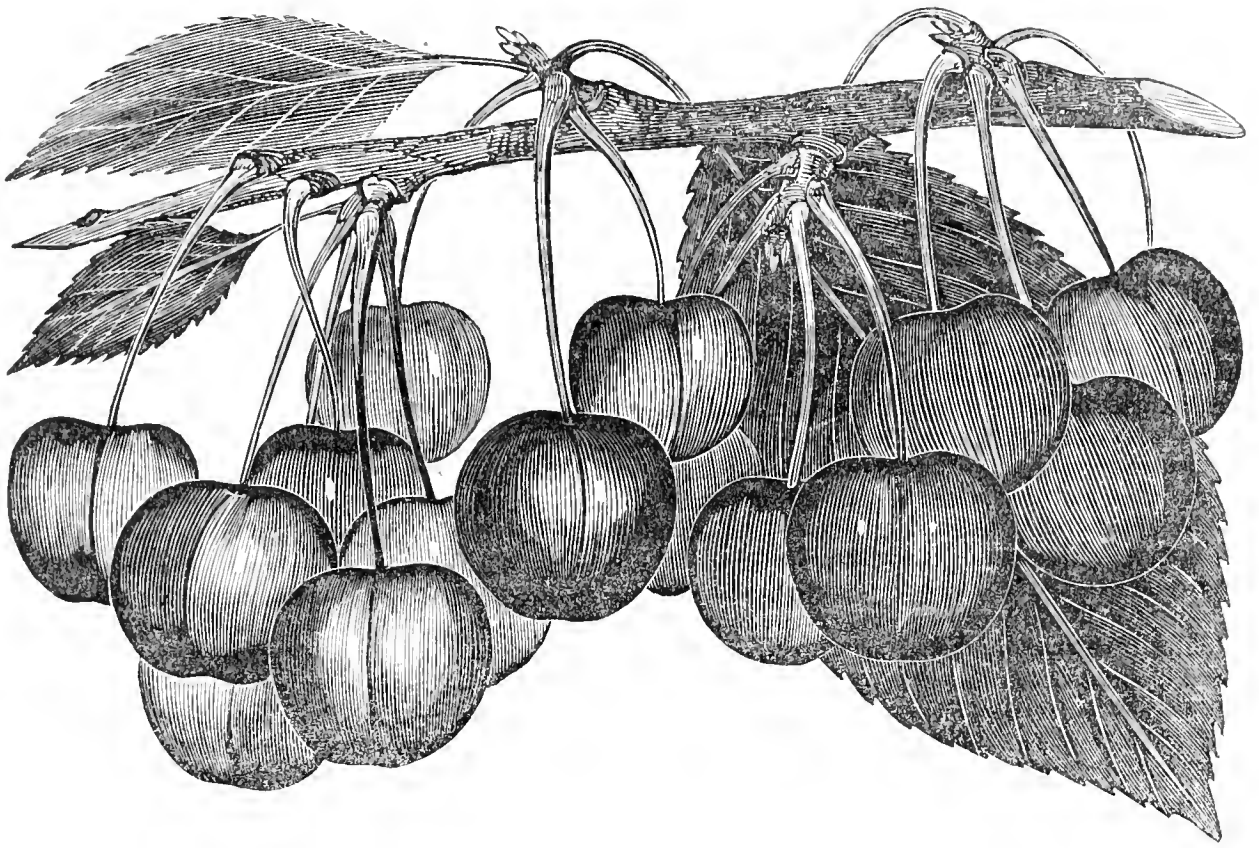
By enriching our meadows, it gives a chance to enlarge our pastures, and thereby remove the necessity that some farmers feel to graze their mowing lands.

We should never overstock a farm with the view of increasing the profits of farming. Seventy-five sheep well kept will give us as large an annual income as one hundred kept in poor condition, and in the same proportion with most other kinds of farm stock; besides, when pastures are fed very close, it has a similar effect to the grazing of meadows; and if stock are kept so short through the foddering season as to eat up all the straw, orts, &c., the manure is not near as valuable, as it is necessary that there should be coarse forage mixed with it to retain its strength by absorbing the juice, gases, and prevent waste by evaporation.

Pomfret, Vt., July 10th. Eben'r Bridge.

A Thriving Animal.—Mr. A. A. Knowles, of North New Portland, informs us that the calf belonging to him, which weighed one hundred and twenty-six pounds, at the age of four days, weighed in four weeks from that time, two hundred and thirty pounds, being a gain of one hundred and four pounds in just four weeks.—*Maine Farmer.*

To Restore Pork.—In warm weather, the brine on pork frequently becomes sour and the pork tainted. Boil the brine, skim it well, and pour it back on the meat boiling hot. This will restore it even where it is much injured.—*Genesee Farmer.*



THE DOWNER CHERRY.

Synonyms,—*Downer's Late, Downer's Late Red.*

This cherry, from its combination of excellent qualities, in tree and fruit, is one of the most valuable kinds that have become generally known to the public. The tree is very hardy, a good grower and great bearer. It usually has a very vigorous and healthy appearance. The fruit is the most hardy of any kind within our knowledge. When we have had two or three weeks of wet weather, about the time the cherries ripen, we have noticed that while half the crop was rotten of many varieties, and the most tender kinds were nearly all spoiled, the Downer cherry was scarcely any affected. This is of great importance, as a great many cherries are lost by wet weather. This cherry was raised from seed by Samuel Downer, Esq., a veteran pomologist, of Dorchester, in this vicinity. It was budded with other cherry stocks in the nursery, but the bud failed, and the tree was allowed to grow and bear. Mr. Downer has raised several seedlings from the original tree, all of which resemble it very strongly, but are generally slightly improved in flavor.

The fruit is tolerably large; roundish, slightly heart-shaped; red, often mottled with yellow, light amber in the shade; stalk rather long and slender; flesh very tender, extremely juicy, sweetish, a slight mazzard bitter till fully ripe, and then very fine, rich and luscious. It ripens late with the Honey Heart, generally from the 5th to the 12th or 15th of July. The tree grows upright.

For the New England Farmer.

ON EMIGRATING WEST.

Mr. Editor:—Sir—Is it advisable for a man possessing a comfortable home, a small farm, and a quiet wife with a family, to give up all these conveniences, leave the home of his fathers, tear himself away from all valuable society and emigrate to the West, haunted by the idea of bettering himself, which, in his notions, means getting more money? The loss of society does not so much affect the man himself as his wife and children. And what money or land compared to the effect which a total absence of school instruction will have on his growing children? In clearing a farm at the West, much time and toil is expended, which, if spent upon his farm at home, would quickly have raised the emigrant to the position he so much covets.

Though emigration is not, in my opinion, the best plan for people in such situations, yet there are many to whom it is adapted. If a young man possesses a good constitution, is well used to the labor of a farmer's life, and the owner of from three to five hundred dollars, has a desire to emigrate, I think it would be the best course for him to do so. Let him take his wife, or, if he have none, get his lady-love's consent *to* have one, for a smart young man with the above qualifiations is sure to have a lady, and without loss of time start for the land of his hopes. A young married man going there is in a different position from a man with a family, for by the time his children are of a suitable age for instruction, it would be highly probable that the country around him would be thickly enough settled to support a school.

I think nothing can hinder a young bachelor

from going thither, especially if he intends to remain single a length of time. There is no doubt that such a person could do well. Suppose a case. A young man 21 years of age, having $200, emigrates, chooses the locality for his home, and buys, we will say, forty acres, the government price being $1.25 per acre; land costing $50; his other expenses need not amount to more than one hundred dollars, which, allowing fifty for his passage out, uses up his funds. He builds his hut—clears his land gradually, a small piece year by year—sells his produce at a low price, to be sure, still for something, and, a bachelor's expenses being small, gets along quite easy. The time comes when he feels himself competent to take charge of a wife and let her do no more work than a woman should do. He has a cleared farm, and a good house, &c. By going to work in this way he saves his own health, spares his wife a great deal of hard labor, and fairly starts in the world with a very pretty property. This I think is a good course for any young person who desires to emigrate and is free from all incumbrances.

Yours, S. S. P.

For the New England Farmer.

INQUIRIES.

Mr. Cole:—Having read an article in the last Farmer, from your correspondent, B., on "*Saving Manure*," I wish to inquire which he thinks is the best method of securing cattle in the stalls; as he says they should be put up every night; and I would also like your opinion of the same. And, furthermore, I wish to inquire what kind of ox-harrows are the best for smooth land. And likewise inform me what kind of horse-rakes are best adapted to the same.

Yours truly, J. Dimon.

Wakefield, R. I., July 6, 1851.

Remarks.—Tie chains are safe, economical and convenient, and allow the animal to lie at ease. We suppose the square harrow drawn by one corner, is as good as any simple construction. There are other implements variously constructed, made in different parts, and joined together by hinges, which may work more evenly and effectually, but they are more expensive.

On smooth land, the revolving horse rake is a valuable implement. On rough lands the spring tooth rake works better, but it is hard to manage, and it gathers much dust with the hay, which is a serious objection. The independent horse rake is adapted to both smooth and rough land, and is very well approved of. But it is of recent introduction, and has not been tested extensively.

For the New England Farmer.

ANOTHER PROFITABLE COW.

Mr. Editor:—I saw in your valuable paper of June 5th, an account of a profitable cow, given by Mr. Gleason, of Marlboro', Mass., and I thought I would give you an account of a cow which I have. I commenced keeping her milk separate, 8th of last June, and continued 11 days only—she gave 812 lbs. of milk, averaging 58 lbs. per day, from which we made 36 1-16 lbs. of as handsome butter as ever graced any man's table. She was milked but twice each day; yarded her nights, and put her into good grass feed one hour in the morning, and one hour in the latter part of the day, and gave her four quarts of meal per day. The remainder of the time she run in the public highway. She is 9 years old, has had 8 calves; 4 of the last are heifers; two of them now give milk. We judge they are as good as the cow was at the same age. I will send the 36 lbs. of butter to the editor, or any other gentleman that may order it, or any other quantity that we may have, together with a sufficient testimony to satisfy any man of the facts. The cow is half native and half Durham.

Hoping there are many better cows than mine, I subscribe myself,

Yours, with respect, Shuball Dimmick.

Lyme, N. H., July 8th, 1851.

Remarks.—The above account shows a large yield indeed, and a great profit, but we must advise our friend that so high feeding on Indian meal, if continued long, will dry up and spoil the best of cows, as it had done in many cases before farmers had experience on this subject. Two quarts of Indian meal per day, with one quart of oil meal to each cow, is as high feeding on these articles as cows will bear in a long run. This accords with the opinion of many of the best judges, who have had long experience. Bran, shorts, roots and succulent food may be fed liberally.

For the New England Farmer.

LICE ON APPLE TREES.

Mr. Editor:—Charles Moody asks through the columns of the Farmer a remedy for bark lice on fruit trees. I know of no certain cure, but I have tried scraping, with very beneficial effect. A neighboring farmer who has had considerable practice in growing apple trees, assures me that to scrape them well and thoroughly, mop them in cold water a few times, will effectually remove them. We think they are frequently caused by the tree's being set in unnatural soil, improper trimming, &c. He also recommends a wash of tobacco to be beneficial. Yours, truly,

Q. Gains.

June 30, 1851.

NATIVE STRAWBERRIES.

Mr. D. W. R. Davis, of this vicinity, found a few years ago a solitary strawberry plant growing on his place, of remarkable size and vigor. He had no knowledge of its origin, but as it possessed many attractive points, he transplanted it with every care and it soon bore fruit. He was so well pleased with the quality that he bestowed great attention upon its after culture, and has now increased his stock to some sixty plants, each one so large as to require twice the space of ordinary strawberry plants. The flower stem shoots up four to six inches above the ground and bears the berries in clusters out of the reach of sand and dirt. Mr. Davis brought us yesterday a specimen of the fruit, which is unquestionably the finest as to size and flavor we have ever seen. The berries are equal in dimensions to Hovey's Seedling, and pos-

sess so little acidity as to require no sugar. They have received the name of "Davis's Seedling," and are destined to make as much noise among the cultivators of this delicious fruit as any yet brought into notice.—*Mobile Tribune.*

INSECTS NOT THE CAUSE OF POTATO ROT.

We copy the following remarks and communications from the Salem Observer. Dr. Harris shows conclusively that all the various theories about insects causing the potato rot are without foundation; and this has always been our view of the subject. The sudden and extensive manner in which this malady comes like a blast upon us over a vast extent of country, and sometimes nearly over the whole world, clearly shows that it cannot be the work of insects. Again, if insects were the cause, they must be so numerous that they could be discovered.

THE POTATO ROT.

The correspondence which we publish below will, we think, be equally valuable and interesting to a large number of our readers. The subject is one whose importance to our whole community cannot be over-estimated, and which has for the last few years formed a staple article for newspaper discussion. The large reward offered by our Legislature for a solution of the mystery, has brought forth one or two new theories on the subject, and we feel that no apology is necessary for taking up considerable space with Dr. Harris's letter. It is probable not necessary for us to inform our readers that Dr. Harris is the Librarian of Harvard University, and that, as an Entomologist, he is acknowledged to have no superior. His remarks, therefore, have the weight of *authority* to support them.—*Salem Observer.*

Danvers, July 8, 1851.

To the Editors of the Salem Observer:

Gentlemen:—In your paper of the 5th inst., there appeared a brief note, intimating the belief jhat the pretended discovery of the cause of the intury to the potato, in the *small black bug* mentioned by Mr. Flanders, would be found a *delusive hope.* Feeling a deep interest in this subject, I addressed a line to Dr. Harris, of Cambridge, giving him such a description and specimen of insects, found on the potato, as I had at command; and have received from him the following letter, the publication of which I trust the author will pardon, as the subject is one of great public interest at this moment. Very truly, your obt't servant,

John W. Proctor.

Cambridge, Mass., July 7, 1851.

John W. Proctor, Esq.:

Dear Sir:—Your description of the insects on the potato vine, with the specimens (though the latter had suffered some in transmission,) applies well to the *larvæ* of *Criocceris trilineata*, described in the work on insects injurious to vegetation, pages 95—96, to which I beg to refer you for particulars,—at the same time thanking you for your offer of other specimens if required. You may be assured that this insect has nothing to do with the potato rot, which, as far as I can judge, has no connection with *insect depredations* of any kind.

A year or two after the potato rot appeared in England, a Mr. Smee thought he had discovered the cause of it, in the attacks of certain plant-lice or *aphides*, and he wrote a work on the subject, and dedicated it to Prince Albert. British naturalists, however, did not sustain him in his views.

Three or four years ago, some person sent to me, through Mr. Cole, a lot of insects, which he was confident were the cause of potato rot, having found them in considerable numbers on the vines. They proved to be the *larvæ* or young of a species of *Coccinella*, or lady-bird as commonly called, an insect innocent of all offence against vegetation, and living in all its stages upon plant-lice.

In the summer of 1849, a young farmer in Watertown brought to me a slender, striped, smooth caterpillar, (or worm as he called it,) which he found burrowing in the potato-stalks. I have found the same not only in potato-stalks, but in the stems of the common pig-weed. It is the larva of a small moth, and though capable of doing some mischief, it is by no means so common or so abundant as to warrant even a suspicion that it was the cause of the potato-rot.

Last summer, the farmer employed by Mr. Wm. C. Bond, astronomical observer, announced that he had discovered the cause of the potato disease, and stated that it was occasioned by the punctures of insects, great numbers of which were to be found on the vines. At my request, he collected and sent to me several of them in spirit. They proved to be identical with the little black jumping beetles that often infest cucumber vines, and which are described in my book, pages 103—104. These may be the same as those mentioned in your communication.

I could enumerate at least half a dozen more kinds of insects that are occasionally or always to be found, in their season, on the potato vines,—insects varying in size from the minute black *Haltica*, above mentioned, to the big potato-worm, or *Sphinx quinquemacuta*,—all of them destructive according to the extent of their powers, but innocent of the great offence, which might be charged to them with as much propriety as to other insects, of causing the potato disease. I will only advert to one more, namely, the *Baridius trinotatus*, an insect for whose history we are indebted to a lady, Miss Margaretta Morris, of Germantown. In the larva state it lives in the stems of the potato, where it is finally transformed to a little grey beetle having three black dots on its shoulders. This insect, though common enough in the middle States, I have never seen in New England, in the course of 30 years' observation, and am confident that it must be rarely found here, if at all. Miss Morris, when she first discovered its habits, thought that she had detected the real culprit, but has become convinced that the potato-rot is not caused by it, though the ravages of this insect are admitted to be very considerable.

And now Mr. Flanders comes forth, as the claimant of the premium offered for the discovery of the cause and remedy for this pestilence, telling his Excellency, the Governor, that "a *black bug* preys upon the leaf until it destroys the vine and causes the root to rot," &c., &c. The claimant ought at least to produce his *black bugs*, and have them examined by a naturalist, to see whether they are native or imported insects.

As the potato rot has spread over Europe, and

prevailed there to an alarming extent before it reached America, and as the disease found here occurs with precisely the same symptoms and results as in Europe, it must, wherever and whenever it appears, have *one common specific cause.* If occasioned by insects, then the insects causing it must be *of the same kind or species* in all regions where the disease has extended. It would be entirely unphilosophical, and contrary to all analogy and all experience, to attribute the disease to one kind of insect in one country, and to an entirely different kind of insect in another country,—to aphides in England, to "black bugs" in America, to *lady-birds* in Massachusetts, and to the *Baridius trinotatus* in Pennsylvania. It is a well-established fact that the insects of America and of Europe are not identical, excepting only in those few cases where some one species of one country has been introduced by the intervention of man into the other country. It has never been shown, and I think will never be proved, that any one species of insect, of sufficiently destructive powers to prove extensively injurious to the potato crop, is to be found alike on the potatoes of Europe and America; and until such proof is produced I shall continue to maintain the opinion that I have ever held, that insects have no concern or connection with the potato disease.

I have written out my views hastily, but somewhat at length, on this important subject,—as your inquiries and observations seem designed to call for my opinion. But though perfectly willing, as in the present case, to express an opinion, when asked, I have no wish to sit in judgment upon others, and might have maintained a reserve upon the latest humbug concerning the potato pestilence, if your own sagacity had not led you to suspect the smallness of its pretensions.

With respect, yours, T. W. Harris.

THE ANIMAL KINGDOM.

Sir Charles Lyell, in his Principles of Geology, offers some excellent observations in points in reference to the animal kingdom, which apply with equal force to the cause of vegetables. He says:

"The modifications in the systems of which man is the instrument do not, in all probability, constitute so great a deviation from analogy as we usually imagine; we often, for example, form an exaggerated estimate of the extent of the power displayed by man in extirpating some of the inferior animals, and causing others to multiply; a power which is circumscribed within certain limits, and which, in all likelihood, is by no means exclusively exerted by our species. The growth of human population cannot take place without diminishing the numbers, or causing the entire destruction of many animals. The larger carniverous species give way before us, but other quadrupeds of smaller size, and innumerable birds, insects and plants, which are inimical to our interests, increase in spite of us, some attacking our food, others our raiment and persons, and others interfering with our agricultural and horticultural labors. We force the ox and the horse to labor for our advantage, and we deprive the bee of his store; but, on the other hand, we raise the rich harvest with the sweat of our brow, and behold it devoured by myriads of insects, and we are often as incapable of arresting their depredations, as of staying the shock of an earthquake, or the course of a stream of burning lava. The changes caused by other species, as they gradually diffuse themselves over the globe, are inferior probably in magnitude, but are yet extremely analogous to those which we occasion. The lion, for example, and the migratory locust, must necessarily, when they first made their way into districts now occupied by them, have committed immense havoc amongst the animals and plants which became their prey. They may have caused many species to diminish, perhaps wholly to disappear; but they must also have enabled some others greatly to augment in number, by removing the natural enemies by which they had previously been kept down. It is probable, from these and many other considerations, that as we enlarge our knowledge of the system, we shall become more and more convinced, that the alterations caused by the interference of man, deviate far less from the analogy of those affected by other animals than we usually suppose. We are often misled when we insinuate such comparisons, by our knowledge of wide distinction between the instincts of animals, and the reasoning power of man; and we are apt hastily to infer, that the effects of a rational and an irrational species, considered merely *physical agents*, will differ almost as much as the faculties by which their actions are directed. A great philosopher has observed, that we can only command nature by obeying her laws, and this principle is true, even in regard to the astonishing changes which are superinduced in the qualities of certain animals and plants by domestication and garden culture. We can only effect such surprising alterations by assisting the development of certain instincts, or by availing ourselves of that mysterious law of their organization, by which individual peculiarities are transmissible from one generation to another. * * * * The distinctness, however, of the human from all other species, considered merely as an efficient cause in the physical world, is real, for we stand in a relation to contemporary species of animals, and plants, widely different from that which other irrational animals can ever be supposed to have held to each other. We modify their instincts, relative numbers and geographical distribution in a manner superior in degree, and in some respects very different in kind, from that in which any other species can affect the rest."

CORN FLOUR.

A new article has just appeared in our market, called "Extra Superfine Corn Flour." It is a preparation from yellow Indian corn, by Stafford's patent process, at the Atlantic Dock Mills, New York, and is warranted to keep fresh and sweet in any climate. This is a great desideratum, for hitherto no grain or meal has been more difficult to keep pure and sweet any length of time when exposed to the common vicissitudes of moisture or dryness, heat and cold It is on this account that it has been so generally rejected in Europe as an article of food,—it could seldom be obtained there in its pure and untainted state. By mixing this prepared corn flour with wheat, rye or buckwheat flour, a very superior article of food is obtained, and which may be eaten by persons troubled with weak digestion. Those who have tried it in this vicinity, speak highly of it. It can be obtained of Davis & Mulliken, in this city.—*Maine Farmer*

EFFECT OF PLOUGHING IN GREEN CROPS

AS COMPARED WITH FEEDING THEM.

It is yet a common notion that herbiverous animals have some distinct and peculiar mode of action upon the various constituents of their food, by which those parts expelled as excretæ are rendered more fit for the food of plants than could be the original food, rotted or decomposed in any other way. It is also ordinarily received that the deposits of a number of animals fed upon an acre of any green crop, will be more beneficial to the land than an acre of the same crop, ploughed in and properly decomposed in the land.

For some years past, I have endeavored to combat these opinions, but as they are still retained in some quarters, I intend in this letter to repeat my arguments, and to give instances where *practice* has proved the truth of theoretical deductions. I shall not here argue as to the amount of profit and loss attached to either mode of proceeding, as in fact, must always depend upon circumstances, of which the farmer is the best judge. Nor shall I attempt to prove that under all possible circumstances, to plough in a green crop will give a greater produce than to feed it off. For in case of exceedingly light lands, the mechanical action of the treading of the feet of the sheep, however, is, that under general circumstances, in ordinary soils, *the ploughing in of any green crop, and its subsequent decomposition in the soil, will give more manure to that soil than if the crop had been fed off;* and that the effect of this greater amount of manure will be seen in the subsequent crops. The arguments in proof may be stated as follows:—

Firstly: It is well established that animals in breathing, give back more to the air than they derive from it. They receive nitrogen and oxygen, and return them again, plus a certain excess of nitrogen, carbonic acid, and aqueous vapor. Animals also transmit to the air much insensible and sensible perspiration.

Secondly: The experiment of Boussingault and others have shown that the liquid and solid excrements of animals weigh less than the food from which they have been derived, and that as regards the food excretæ are deficient in *nitrogen*, carbon and hydrogen.

Thirdly: It is well known that animals consume a considerable portion of the farinaceous and oleaginous portions of their food for the production of *animal heat*, and the greater portion of the excess is laid up in the form of fat; that of the nitrogenous portion is consumed by the voluntary and involuntary motions of the muscles, and part forms fresh flesh for the growing animal. Of the inorganic matters of the food, a portion is required for the formation of bone. It is, therefore, quite clear, that there must be less manuring matter in the excrements than in the food, of which they are merely the unconsumed remains—*the ashes.*

Fourthly: It is known that animal and vegetable substances are composed of the same original elements; that all animal particles have first had vegetable life; that though the proximate changes and combinations of their aliments are most innumerable, yet that the results of the ultimate decomposition of animal and vegetable matter in contact with air are the same.

Fifthly: To sum up; if as it has been proved, the excretæ of animals weigh less than the food they have eaten; if there is a diminution of the most valuable of the ingredients in passing through the animal; and if in their ultimate decomposition, the food and the excretæ give the same products, it follows that the products of the decomposition of the original food will be greatest in quantity and richest in quality; but practical experiments are, in this instance, so easily made, that I should be wrong if I omitted to mention some of the numerous facts which experimentally prove the truth of my assertions. Mr. W. Trumper, Mr. Oakley, and others, have forwarded me the results of trials made on their respective farms. Mr. Trumper, in a field of rape part fed off by sheep, and the other ploughed-in, found in the succeeding wheat crop a difference of a quarter per acre in favor of ploughing-in.—*Mark Lane Express.*

CHEMISTRY APPLIED TO AGRICULTURE.

The true principles of farming are just beginning to be understood. It is but a few years, at least in this country, since the farmer has sought assistance, in his important vocation from the safe and sure guide of science. The processes of the culture of the soil have been handed down from father to son for a long period of time without any attempt at improvement. The time has already past when the tiller of the soil was content to produce just a sufficiency for the support of animal life, and that too of an indifferent kind. He has already begun to reap the advantages of calling in scientific principles to his assistance.

Within a few years much has been done to improve in a high degree the choice and delicious fruits of our climate. Our markets are now loaded with fruits of the most tempting kind, which by their abundance are brought within the reach of all classes of society. Who can estimate the amount of happiness and substantial comfort thus bestowed upon mankind?

For the last fifty years the energies of science have been in an unparalled degree bestowed upon inventions and discoveries in the principles of mechanics and the multifarious modifications in machinery, growing out of the motive power of steam. Let the same amount of scientific energy be applied to the investigation of the laws which govern organized bodies, both vegetable and animal, and the result of such investigation will no doubt be the knowledge of organized matter astounding as those remarkable physical laws which we are daily witnessing.

The whole community are beginning to be waked up to the importance of this matter. Our schools, especially in this State, are introducing the study of the principles of chemistry, as applied to agriculture. The guardians of the State Normal School are doing very much towards disseminating a knowledge of these principles, by preparing its pupils for teaching the same in the schools which they may hereafter be called to take charge of. When the teachers of our schools can be made to feel the importance of this new branch of education, we may expect rapid and permanent improvement in farming. It is in our common schools alone that a large portion of our farming population are educated, and for this reason it would seem very proper that considerable attention should be given to this branch of education in these schools. Let all who are entrusted with the supervision of schools

see that encouragement is given to this study.—*Albany Journal.*

LORD SPENCER'S RULES

FOR THE SELECTION OF MALE ANIMALS FOR BREEDING.

The first things to be considered in the selection of a male animal are the indications by which it may be possible to form a judgment as to his constitution. In all animals a wide chest indicates strength of constitution, and there can be no doubt that this is the point of shape to which it is most material for any breeder to look to in the selection either of a bull or a ram. In order to ascertain that the chest of these animals is wide, it is not sufficient to observe that they have wide bosoms; but the width which is perceived by looking at them in the front should be continued along the brisket, which ought to show great fulness in the part which is just under the elbows; it is also necessary that they shoud be what is called thick through the heart. Another indication of what a good constitution is, that a male animal should have a masculine appearance; with this view a certain degree of coarseness is by no means objectionable, but this coarseness should not be such as would be likely to show itself in a castrated animal, because it thus might happen that the oxen or wethers produced from such a sire would be coarse also, which in them would be a fault. Another point to be attended to, not merely as an indication of a good constitution, but as a merit in itself, is, that an animal in itself should exhibit great muscular power, or rather that his muscles should be large. This is an usual accompaniment of strength of constitution; but it also shows that there will be a good proportionate mixture of lean and fat in the meat produced from the animal, the muscles being that part which in meat is lean. A thick neck is, in both bulls and rams, a proof of the muscles being large, and there can hardly be a greater fault in the shape of a male animal of either sort, than his having a thin neck. I am inclined to say, that in the new Leicester breed of sheep, which is the breed to which I am accustomed, a ram's neck cannot be too thick. Other indications of muscle are more difficult to observe in sheep than in cattle. In a bull there ought to be a full muscle on each side of the back bone, just behind the top of the shoulder plades; he ought also to have the muscles on the outside of the thigh full, and extending down nearly to the hough. It will seldom happen that a bull having these indications will be found deficient in muscle. As I am writing for the use of farmers, it is quite unnecessary for me to attempt a description of what is considered a well shaped bull or ram; it is also obviously impossible to express in words what is meant by good handling. It is sufficient to say, therefore, that no small animal is fit to be used at all as a sire whose handling is not good, and that the more perfect his shape is the better.

☞ An agriculturist says:—"I wish to impress upon every one who keeps a flock, if not more than half a dozen, that Venetian red is the best thing that I ever saw used to paint mark sheep. It is, as most all know, a cheap red paint, only a few cents a pound, and one pound will mark a thousand. Take a pinch of dry powder, and draw the thumb and finger through the wool loosing the powder at the same time, and it will combine with the oil of the wool, and make a bright red mark that rains will never wash out, and does not injure the wool. It is readily cleansed out by the manufacturer."—*Granite Farmer.*

Mechanics' Department, Arts, &c.

TERRA COTTA FOR ORNAMENTAL ARCHITECTURE.

Who, in passing through the streets of our principal cities, has not been struck with the barrenness of the brick walls, and the want of something to break the monotony of their smooth fronts; and who has not stopped to gaze with wonder and delight when his eye rested upon some beautiful stone building, with its finely chiseled ornaments, and bold projections. This has been, not from a want of taste in our architects or builders, but from the want of some *material* for ornamental work, that would harmonize with brick and stone, at a cost that would bring them within the reach of all. Even for buildings for ordinary purposes as well as for residences, very few in constructing a common building would think of going to the expense of ornaments of chiseled stone, and no architect of good judgment would trim a building of brick or stone (designed to last for ages) with wooden ornaments. This objection is now being entirely overcome by the introduction of ornaments of terra cotta.

Terra cotta has been manufactured in this county during the past two years, and is now getting into extensive use. "Corinthian Capital of almost any size, from 10 to 40 inches, are made in a style that cannot be approached in stone, for it is impossible to give that relief to stone that is done in these,—Ionic Capital—of various orders, as the Grecian and Roman—Garden Vases—Window Caps—and an infinite variety of Brackets, Modillions, Consoles and Ornamental China top." Some of this work has been in use through the present, and also through last winter, and is not affected in the least by frost or the weather. It is equally desirable to trim wooden, as brick buildings, and costs less than wood.—*Mass. Spy.*

GREAT EXHIBITION.

Ice Produced by Steam Power, and Steam Converted into Snow.—That ice can be produced by mechanical means many may have heard; but that steam may be used as an auxiliary for the purpose will seem hardly creditable to anybody; and that *steam* itself may be converted into *snow* by the aid of steam, is a phenemenon of which but very few have heard. Yet these are facts, and are now being daily demonstrated at the Great Exhibition, in the refreshment room adjoining the department of machinery in motion. Mr. Thomas Masters, of the Royal Polytechnic Institution, Regent Street, the inventer of various ingenious machines for freezing, has adapted one of them for being put in motion by steam-power, and which is now in operation daily in the western refreshment room. This apparatus is capable of freezing upwards of 100 quarts of dessert ices (six different sorts are produced in the one machine) every fifteen or sixteen minutes. An unlimited supply of dessert ices can thus be obtained, and of a perfectly smooth quality.

The economy of time, labor and expense thus insured must be immense. A more perfect and simple contrivance for producing a perennial supply of these delicacies, in a crowded place like the Exhibition, could not be conceived, and the invention is undoubtedly one of the most ingenious novelties in the section devoted to the machinery in motion, The machines, however, are not limited to making dessert ices; they are made to produce cylinders of *solid ice*, sufficiently large to hold decanters of water and many bottles of wine. These cylinders are made in the form of castellated towers, and have a very novel appearance. They not only cool the wine and water placed in the centre, but diffuse a most agreeable coolness through the atmosphere. The converting steam or vapor into snow is effected by forcing it through the machine, and in this way a whole room may be easily cooled down in the hottest weather. These are very singular effects. They are, however, easily to be understood by an examination of some of the patentee's smaller machines, of which there are several exhibited in class 22; and which are calculated for use in a small family or bachelor's chambers. The cost of turning pure water into ice for sherry cobler, cooling wine, and other purposes, is less than it can be purchased for at the ice stores. The machines are well worthy the attention of the curious and scientific. Mr. Masters, the patentee, is, we understand, the contractor for the supply of the confectionary and dessert ices to the eastern as well as the western refreshment rooms in the Exhibition, and visitors have thus every opportunity of informing themselves of the merits of these singular inventions.

STONE PUMPS.

While at Newton Falls, a few days since, we visited the Stone Pump Factory of Mr. J. G. Calender, formerly of Warren. His establishment is now in complete working order, with improved machinery, and turns out a large amount of pipe per day. These pumps will probably supersede all others in a few years. The material neither rusts nor corrodes, is proof against the strongest acids, and is almost as hard to break as iron. Mr. C. is likewise manufacturing conduit pipe of various sizes, for conducting springs, draining marshy lands, &c. His establishment is worthy of a visit from the curious in such matters.—*Ex.*

Locks in the Great Exhibition.—There has been some little excitement here by a feat performed by an American, who has a lock on exhibition from New York. The crack lock of England, called, I believe, *Chubb's lock*, which had, as I understand, received the endorsement of some Royal Scientific Society here, as *the lock of the world;* and as I understand, an essay delivered in honor of the inventor, was opened by the American lock-maker, on the first trial, *in fourteen minutes*, and on the second, in from *five* to *seven minutes*.

This lock is the great safeguard which secures the Queen's valuable *Lahore Diamond*, called Koh-i-noor, and valued at £2,000,000 sterling, which is put out of sight each night, and exhibited under a strong iron cage during the day. It would prove but little security against the American lock-maker.—*B. P. Johnson.*

Ladies' Department.

HOME.

"Home, thy joys are passing lovely—
Joys no stranger heart can tell."

What a charm rests upon the endearing name —my home! consecrated by domestic love, that golden key of human happiness. Without this, home would be like a temple stripped of its garlands; there a father welcomes, with fond affection; a brother's kind sympathies comfort in the hour of distress, and assist in every trial; there a pious mother first taught the infant lips to lisp the name of Jesus; and there a loved sister dwells, the companion of early days.

Truly, if there is aught that is lovely here below, it is home—sweet home! It is like the oasis of the desert. The passing of our days may be painful; our path may be checkered by sorrow and care; unkindness and frowns may wither the joyousness of the heart, efface the happy smiles from the brow, and bedew life's way with tears, yet, when the memory hovers over the past, there is no place which it delights to linger, as the loved scene of childhood's home! It is the polar star of existence. What cheers the mariner, far away from his native land in a foreign port, or tossed upon the bounding billows, as he paces the deck at midnight alone—what thoughts fill his breast! He is thinking of the loved ones far away at his own happy cottage; in his mind's eye he sees the smiling group seated around the cheerful fireside. In imagination he hears them uniting their voices in singing the sweet songs which he loves. He is anticipating the hour when he shall return to his native land, to greet those absent ones so dear to his heart.

Why rests that deep shade of sadness upon the stranger's brow as he seats himself amid the family circle? He is surrounded by all the luxuries that wealth can afford; happy faces gather round him, and strive in vain to win a smile! Ah! he is thinking of his own sweet home; of the loved ones assembled within his own cheerful cot.

Why those tears which steal down the cheeks of that young and lovely girl, as she mingles in the social circle? Ah! she is an orphan; she, too, had a happy home; its loved ones are now sleeping in the cold and silent tomb. The gentle mother who watched over her infancy, and hushed her to sleep with a lullaby, which a mother only can sing, who in girlhood days taught her of the Saviour, and tuned her youthful voice to sing praises to his name, has gone to the mansions of joy above, and is mingling her songs, and tuning her golden harp, with bright angels in heaven. Poor one! She is now left to thread the golden path of life, a lonely, homeless wanderer.

Thus it is in this changing world. The objects most dear are snatched away. We are deprived of the friends whom we most love, and our cherished home is rendered desolate. "Passing away" is engraved on all things earthly. But there is a home that knows no change, where separation never takes place, where the sorrowing ones of this world may obtain relief for all their griefs, and where the sighs and tears of earth are exchanged for unending songs of joy. This home is found in heaven.

In the shadowy past, there is one sweet reminiscence which the storms of life can never wither;

it is the recollection of home. In the visioned future, there is one bright star whose lustre never fades; it is the hope of home—of a heavenly home. —*Musical Visiter.*

THE ENGLISH IDEA OF BUTTER.

Mr. Stephens, in his book of the Farm, thus dwells upon the philosophy and its application to butter and butter making:

Butter assumes a texture according as it has been treated. When burst in the churning it is not only soft but frothy, and on being cut with a knife, sticks to it, and seems as if it could be compressed into much smaller bulk. When churned too rapidly, particularly in warm weather, the butter may not be agitated to the state of bursting, but it will continue soft and never become firm, though worked up with ever so much care, and in the coolest manner,—and when a lump is drawn asunder in two pieces, they each present a jagged surface, and also sticks to the knife that cuts it. Butter in either of these states of softness will not keep long, whether salted or fresh. When overchurned—that is, when the churning has been continued after the butter has been formed, the butter becomes soft, not unlike the state when it is too rapidly churned. When properly churned, both in regard to time and temperature, butter becomes firm with very little working, and is tenacious,—but its most desirable state is that of wax, when it is easily moulded into any shape, and may be drawn out to a considerable length before breaking. It is only in this state that butter possesses that rich nutty flavor and smell which impart so high a degree of pleasure in eating it, and which enhance its value manifold. It is not necessary to taste butter on judging of it; the smooth unctions feel, on rubbing a little between the finger and thumb, expresses at once its richness of quality; the nutty smell indicates a similar taste; and the bright, glistening, cream-colored surface, shows its high state of cleanliness.

What I have stated in reference to the making of butter, applies particularly to that obtained from cream alone, and from cream in the usual state for butter, namely, after it has become sour by keeping; but butter can be obtained from sweet cream, though churning renders its butter-milk as sour as that from sour cream. To have butter in perfection from sweet cream it should be churned every day; as a daily supply of cream must be small, a small churn must be used, to have butter fresh made every day. The table churn becomes useful for this purpose. I see it alleged, in advertisements of table churns, that butter may be made in them from cream in ten or twelve minutes. I have made several experiments with such a table churn, in churning cream at different temperatures, and with different volocities, but never obtained good butter in less than thirty minutes, and when formed so quickly as in fifteen minutes the butter was soft and frothy. I have heard it alleged that butter of the finest quality cannot be obtained from sweet cream, but I know from experience that butter of the richest quality, flavor and appearance, can be made from sweet cream. Were not such butter super-excellent, would noblemen have it on their tables every morning? I consider butter out of the churn and before it is washed most delicious. It is true that sweet cream requires longer churning than sour, still butter is obtained from it in from thirty to forty minutes. For my own use, I would never desire better butter, the year round, than that churned every morning in a small churn from sweet cream. Such butter, on cool new baked oat-cake, overlaid with flower virgin honey, accompanied with a cup of hot strong coffee, mollified with crystalized sugar and cream, such as the butter has been made from, is a breakfast worth partaking of, but seldom to be obtained.

VEGETABLE POISONS.—Mr. E. S. Fox, of Athens, N. York, publishes the following: "Almost every farmer is more or less troubled with poison ivy, sumach, parsnip, and the like, from which I have suffered very much myself, and after trying a great variety of remedies, have found out that a poultice made of buckwheat flour and buttermilk, with a piece of blue vitrol the size of a pea, pulverized and dissolved, added to the mixture, has had the happy effect of removing the trouble, and effecting a cure in a short time."

HOW TO MAKE A GOOD CUP OF TEA.—M. Soyer recommends that, before pouring in any water, the teapot, with the tea in it, shall be placed in the oven till hot, or heated by means of a spirit lamp, or in front of the fire (not too close, of course,) 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.

☞ Men of genius are often dull and inert in society; as the blazing meteor, when it descends to the earth, is only a stone.

☞ The silent eye is often a more powerful conqueror than the noisy tongue.

☞ The NEW ENGLAND FARMER is published *every other* Saturday by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market Street, Boston.

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RECLAIMING WET LANDS.

There are in many parts of New England numerous swamps or wet meadows, of various extent, from one acre or less, to hundreds of acres: which are almost entirely level, and are covered with water during the wet season. In these swamps vegetables have been growing for ages, which have decayed, forming a vast accumulation of peat, mud or muck, which may be made a rich mine to the farmer. When these lands are properly improved they furnish large crops of excellent grass, which may be relied on in case of a severe drought, when high lands fail; for if they are drained deeply and thoroughly, so as to make them sufficiently dry in a wet season, the main drain may be dammed in a dry time, so as to furnish a sufficient supply of moisture, by keeping the water tolerable near the surface. As a small amount of manure will keep these lands in a very productive condition, and as they furnish materials enough for a large amount of manure, there will be a considerable surplus to aid in keeping the upland in good condition.

This month is generally a good season for reclaiming wet lands. In the first place clear up all bushes, and remove the wood, such as old logs, stumps, &c.; if it be too soft to remove these at the present season, or if there be a very large quantity on the meadow, and it be not convenient to remove it in the summer, pile it up and remove it in the winter, when the ground is frozen.

In draining, make a main drain through the meadow, to carry off the stream, if there be one, or the water from the springs. This drain must vary in depth, according to the amount of water to be conducted off, and the descent and length of the meadow. In some cases, where the meadow is long and nearly level, and a large amount of water is to be discharged, it is necessary to cut the drain four or five feet deep at the foot of the meadow. After making the main drain, make marginal drains around the meadow at or near the highland, to carry off the water that oozes off of the highland. Many persons neglect this in the beginning, and have to make them afterward, to complete their draining. If there be not marginal drains, and drains are made twenty or thirty feet apart, running directly from the highland to the main drain, the water will run out of the banks and extend down a number of rods between the drains, as may be seen by the worthless plants growing there.

Make cross drains from the marginal drains to the main ditch, sufficiently near to drain the meadow well. They should be twenty, thirty or forty feet apart, according to the depth of mud, the degree of moisture, the descent of the drain, &c. We have seen meadows two acres in extent, of an oblong form, completely drained so as to be dry enough for tillage merely by a marginal drain, for there was no water on them except what run from highlands; as that was cut off by a marginal ditch, the draining was thorough.

The depth of drains should vary according to circumstances. Generally the drains should extend through the peat or mud, into the hard soil, unless the mud extends to a great depth; and in this case the drains should be pretty deep, generally two-and-a-half to three feet deep. Drains may be made with the sides slanting, and these sides covered with sods of grass, which gives them a beautiful appearance, and they will yield grass even to the bottom of the drain. If the sides are quite slanting, a team can pass over them conveniently. Some persons fill the drains with small stones to the surface, so that they can be passed over conveniently. Others fill them with small stones till within a foot of the surface, and then fill up with earth, so that grass will grow over the drain. These modes will answer where there is a good descent, and the drains are short. But if the drains are long and the descent small, the water will pass along sluggishly and clog, and the drainage be imperfect. This evil may be avoided by making channels in the bottom of the drain. But if the mud is deep, so that the drain does not extend down to the hard soil, flat

stones, planks or boards should be laid at the bottom, else the stones laid on each side, to form a channel will sink in the mud, and the mud will rise and obstruct the channel.

Soon after the drains are made, the meadow will settle, and the earth become more firm and dry.—When there are no roots or other obstructions, and the ground is sufficiently hard, it is best to plough, as this operation will more thoroughly destroy the weeds and wild grasses. Whether the meadow is plouged or not, a good coat of gravel or sand should be hauled and spread. Gravel is best, and sand or sandy loam is preferable to a more compact or tenacious soil. After applying the gravel, add a good dressing of compost manure. Harrow thoroughly, sow herds grass and red-top the latter part of August or early in September, and work it in with a brush harrow, and clover seed in March, and a good crop may be expected the next season. If the ground be not sufficiently firm to cart on gravel or sand, it must be delayed till it is frozen in winter. Compost manure may be carted on also and spread with the gravel as soon as it is thawed in March, and brush over with a harrow before the meadow is thawed. Then sow herds grass, red-top and clover, and the seed will take without brushing. A tolerably good crop may be expected the same season.

These general remarks may be of advantage to the inexperienced; there are various circumstances attending these operations on which the operator must exercise his judgment at the time of performing them, as no precise rule can be given, adapted to all circumstances. There are meadows is Massachusetts, which, before drained, were valued at only ten or fifteen dollars per acre, that have been reclaimed at a moderate expense, and are now worth two hundred dollars per acre; as they will usually pay the interest on that sum from the net profit

DRAINING CELLARS.

Some cellars are so wet that they not only need a drain from the cellar, but it is necessary to make a drain round the cellar at the edge, to keep the surface sufficiently dry; or instead of a drain around the cellar, there must be a floor of plank or other materials. One of the most expensive and worst modes is a plank floor; it not only costs a good deal in the beginning, but this cost occurs very often, as the planks soon decay, from the moisture under them. A cellar with a plank floor is not good to keep vegetables in. Another great evil is the unwholesome air produced by the decay of the planks, which affect not only the atmosphere of the cellar, but that of the rooms above.

The following is a very cheap and excellent mode for making a good cellar, where the soil is wet. Sink the cellar walls about one foot below the surface of the cellar. This lower part may not have a good face, but no part of the stone should project in far, as they will be in the way of the drains. After the walls are made, dig a channel around by the wall about one foot deep, and of the same width, with a slight descent towards the drain from the cellar. Then lay at the bottom of this channel, a few inches from the wall, draining tiles or pipes. At the corners, as the pipes cannot be inserted into each other, nor the end of the tiles brought in close contact as in straight draining, some stones should be laid neatly and firmly around the open space at the corners, and covered with a thin flat stone.

All should be well done, so that the rats cannot disturb them. Then cover the tiles with gravel or gravelly loam, and fill up the channel with the same soil that is used for the surface of the cellar. At the end of the tiles, at the outlet, place a wire screen, or some pieces of wire or long nails, so that the rats cannot enter the tiles. If the soil in the cellar is not suitable to make a good surface, procure fine loam and spread it over to a suitable depth. Tread or beat it down solid, and it will make a good firm floor; and if it keep a little moist, it is the better for keeping both vegetables and fruits. A sandy cellar is very unfavorable for many purposes.

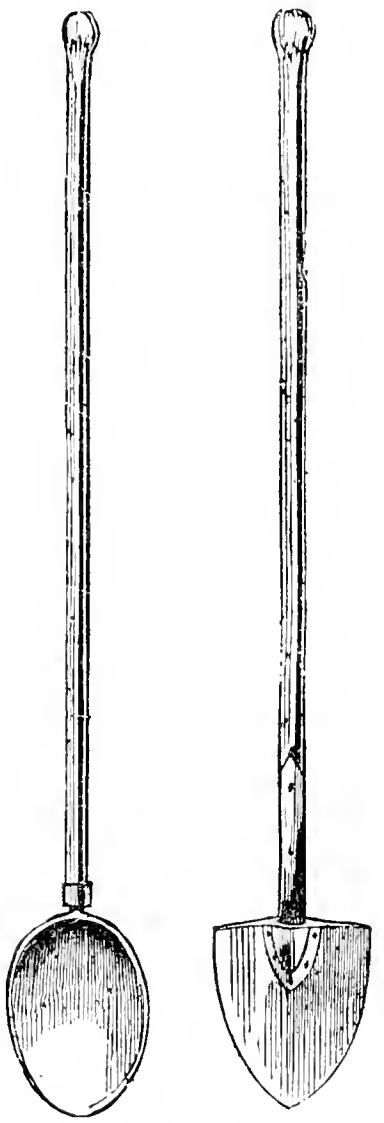
A cellar thus drained will be sufficiently dry when there are no springs inside the drains. In that case the water should be conducted off by tiles. The degree of moisture at the surface of the cellar, which should be slight, such as we find in common tillage land in fair weather, must be regulated by the depth of the loam, much depending on the wetness of the soil, and its texture in regard to retaining moisture.

This mode of making a good cellar, where the land is wet, is very cheap and durable. The tiles or pipes would cost only about one dollar for a cellar 25 feet square, and the cost of laying them is but a trifle. Pipe tiles suitable for the purpose are made in this vicinity, specimens of which may be seen at the horticultural store in School Street.—We hope this subject will receive more attention, and that wooden floors for cellars will be dispensed with.

A SUCCESSION OF STRAWBERRIES.

The following is a good succession of strawberries for a long period: Early Virginia, Hovey's Seedling, Jenny's Seedling, and Williey. We had fruit, from them for nearly five weeks. These varieties are all great bearers, and the fruit is excellent; excepting the fruit of the Williey, which is pretty good. They are all remarkably vigorous and hardy, excepting Hovey's Seedling; this needs to be planted thick, as it does not form runners or ofsets so fast as the other varieties, and it is also rather liable to be winter killed.

☞ George Thurlow, of West Newbury, has a young orchard of beautiful young Baldwins, covering thirty-five acres!



POST SPOONS.

These are very convenient implements for digging post-holes. They save a great deal of labor, as in using them it is necessary to make but a small hole compared with the one which must be made with common implements. As "time is money" with the farmer, he should economize it by using labor-saving implements and machines, especially when they can be obtained at a very low or moderate price, and make a great saving of labor.

INSECT OPERATIONS.

Scarcely had the ink dried from our pen used in sketching an obituary notice of Mr. Flanders' *black bug*, when an innumerable company of others arrayed in *green* were brought to view, by Mr. Whipple, a neighbor of Mr. Flanders, both of them residents of a region of boundless production on the banks of the Merrimac. Mr. Whipple thinks the insects he has now found are the great destroyers of the potato.* He gives this information freely, without hope of reward—other than what is to be found by doing good to his fellowmen. It will be remembered that Mr. W., at the meeting of farmers in the State House in March last, announced that he had discovered the true cause of the decay of the potato—that it was *a bug*—but whether he then had in mind *a black or green bug*, we are not aware that he gave any information.

That the potato, as well as many other plants, is oftentimes destroyed by insects, no observing man can for a moment doubt. Within our view, from the window where we sit at this moment, there is a considerable patch of potatoes, giving unmistakeable indications of having faded, and fallen by the ravages of insects upon the leaves, punctured with innumerable small holes—have here and there a speck of black in many places, eaten as it were thread-bare—the leaves have turned yellow, and withered; and the probability is that the produce of these potatoes will be few and small. No one can doubt that insects have caused this condition. It has been gradually coming on for weeks. So much has been said, that we have watched them with interest. But we do not feel warranted in drawing a general inference of the operations of the potato disease, from this example. We presume like instances of decay have often been noticed.

If Mr. W. had given a *specific name* to his insect, or a description that would apply *to that*—and *that only*,—then there would have been the means of determining whether we had witnessed the operations of the same insect that he did. But when he describes it as "a green insect or fly, very small, and very numerous, found upon almost all kinds of tender plants, fastening upon the under side of the leaf, and at almost every season of the year,"—we presume there are scores of insects that have many, if not all these characteristics. In Dr. Harris' treatise, p. 187, *one* is mentioned which Reaumur is said to have proved to be the progenitor of six thousand millions of descendants, in five generations, in one season. Let each of these have the multiplying powers of their progenitor, and what is there that will not be covered, aye, destroyed, by their operations, be they ever so diminutive in size? Hence the imperative necessity of understanding the *name* and *true character of an insect*, before we undertake to draw any conclusions as to its operations.

July 26, 1851.

* See Salem Observer of this date, for a highly interesting letter from this distinguished practical farmer.

ACKNOWLEDGMENT.

A New and Valuable Cherry.—We received of James Hyde & Son, nurserymen, Newton Centre, a lot of fine cherries on the first day of August, which from its lateness and superior quality, we think will be a valuable acquisition. It originated in that neighborhood. The fruit is medial size; obtuse heart shaped; dark red and mottled, light amber in the shade; stem rather short and slim; flesh soft, tender, very juicy, sweet, rich, and delicious; stone small; ripe the first day of August.

A NEW INSECT DEPREDATOR.

We have received the insects forwarded by Dea. Fowler, and they are strangers to us. As he remarks, insects will increase with improved cultivation, and every cultivator in the country should attend to this subject, and endeavor to contribute something towards learning the habits of insects injurious to cultivation, and the best mode of destroying them. The following correspondence shows that we may have a new enemy in the field:

Danvers, July 17, 1851.

Mr. Cole:—I send you some insects which I noticed, for the first time, on the fifteenth of June last, by the side of the highway adjoining my garden, and feeding upon the leaves of the weeds and grasses there found growing. As these insects were unknown to my neighbors as well as myself, I was very desirous of knowing more of their habits; I therefore sought information from Dr. T. Wm. Harris, of Cambridge, concerning them. My attention was first called toward these insects by noticing large quantities of the leaves of the burdock, completely dead, and having the appearance of being scorched with fire. Upon examining them I found the under side of their leaves swarming with insects, having to a casual observer somewhat of the appearance of the cucumber bug, but larger. When I attempted to seize them, for the purpose of examination, I found them exceedingly active, using both their wings and legs to elude my grasp, and dodging from the under to the upper side of the leaf. They are still found where I first noticed them, but in less numbers, and they are now disappearing.

At the time I wrote to Dr. Harris I had fears that this insect would become troublesome to us. I have since found, upon examination, that it has appeared in my garden upon more than a dozen different kinds of plants, sucking their juices, some of them to their serious injury. I am now more strongly inclined to the belief, should the insects under consideration abound, that they will become general feeders. Those who have been cultivators for the last twenty-five or thirty years can probably well remember when the ravages of the rosebug was confined to the petals of the rose and a few other plants. It is only within a few years that it has attacked the grape vine, but when numerous, it can now be found feeding on many plants, apparently without much choice of food, it having become in a few years a most indiscriminate feeder. If you are acquainted with this insect, any remarks upon its habits, or manner of destroying it, would be acceptable. Yours &c., S. P. Fowler.

Danvers New Mills, June 8, 1851.

Dear Sir:—I have inclosed in this letter some insects, which I noticed a few days past, feeding upon the under side of the leaves of the common burdock, which I do not recollect ever before to have seen. With my limited knowledge of insects I am unable to make out what they are, but suppose they belong to the family of the leaf-eating beetles, perhaps to the Cryplocephalians. There is a group of insects of this genus figured in Say's American Entomology, in the second volume, that resembles these beetles somewhat. I could describe some of their habits, as they have appeared to me for a few days past, but I suppose the insect is well known to you. I must confess that I entertain great fears that it will not always confine its ravages to the leaves of the burdock, but attack other plants of more value; indeed it has already commenced eating the leaves of the clover, yellow dock, plantain, &c., coming within its range. As it is provided with wings, is very active and voracious, and when found is seen in great numbers, I have the most serious apprehensions that it may one day become a great pest to the cultivators of the soil, and add one more to the number of insects to be hereafter described by you as being found in Massachusetts injurious to vegetation.

My fears may be groundless, I hope they are, but after many years' experience and observation I have found almost invariably that new weeds, and newly discovered insects, increase and spread themselves over the country. And I think we shall find it to be a general rule, fully established in this country and in England, that the higher and more extensive the cultivation of the soil, the greater will be the number and variety of insects and weeds we shall have to contend with. I find these beetles, like most other insects, can be destroyed by the application of whale oil soap, those I send you having been so killed. It would be very pleasing and acceptable to me, as well as to some of my friends, to be informed of the habits of this insect, together with the best way of destroying it.

Yours with respect, S. P. Fowler.

Dr. T. W. Harris.

Cambridge, Mass., July 3, 1851.

S. P. Fowler, Esq.: — Dear Sir,—Your letter of the 28th June was duly received with its enclosure of insects for my examination. The insects are *bugs*, properly so called, and belong to the order Hemiptera. They are distinguished from beetles by having a kind of bill or sucker, proceeding from the head and bent backwards upon the breast, in which respect they agree with the common squash bug. I am not aware that this species has been described; but you will find it named *Capsus quadrivittatus* (the four striped Capsus) in my Catalogue of the Insects of Massachusetts, appended to the second edition of Prof. Hitchcock's "Report of the Geology &c. of Massachusetts," p. 578. An insect, belonging to the same group, is described in the work on destructive insects, p. 161 &c., under the name of *Phytocoris lineolaris*. Of the habits of your insect I had no particular infotmation before the receipt of your letter. Some of my specimens were taken in July, 1829, on grass, in Milton, Mass., and others were received from New Hampshire and from Maine. All the plant bugs are eminently injurious to vegetation. Some seem confined to particular kinds of plants, as the great squash bug, above named; others are more general feeders, as the little *Phytocoris*, and the species that you have sent to me. They exhaust plants by puncturing them with their bills and sucking out the sap.

I have found no remedy so useful to protect plants and to destroy the small kinds of bugs, aphides, &c., as the solution of oil soap, and am glad that you tried it upon the insects under consideration and found it effectual.

Respectfully yours, T. W. Harris.

For the New England Farmer.

SUMMER PRUNING OF GRAPES.

Mr. Cole: — Dear Sir,—My attention was drawn to an article in your last week's N. E. Farmer, upon the practice of trimming grape vines in the summer, and knowing that your columns are always open to fair discussion, and differing somewhat from the opinion there expressed, I will lay before you my idea of the subject.

You there make strenuous objection to cutting back to the fruit, and whilst you do not distinctly say so, still the reader would naturally infer that you disapprove entirely of all summer pruning. Having cultivated the grape, for several years, my own experience and observation incline me to advocate summer shortening for at least two reasons: first, to improve the fruit of the present year, and second, to make the vines capable of a better crop the season ensuing.

All must have observed that after the primary has run a few eyes, beyond the bunches of fruit, a tendency developes itself to burst into laterals. Now if we leave these laterals on, the length of the primary is much decreased and the cane much diminished in size. After these secondaries have grown three eyes, they should be shortened back to the second. First, in order not to divert the flow of sap from the main branch: and second, should we desire to leave a long runner, for shade or otherwise at the winter pruning, the wood may be thoroughly matured so as to bear a good crop without injury to the vine. Besides, the eyes becoming more matured the trouble and expense of training is much diminished.

The same holds good with regard to shortening back all fruit-bearing branches not desirable for shade, ornament, or to cover the espalier. Whilst I would most vehemently oppose the practice of cutting back to the fruit, I advocate very strongly cutting within 2 eyes of it, for in the interval, whilst the then terminal eye is getting underweigh for a fresh start, more sap is forced into the fruit, giving it thereby better size and shape, and second, the terminal alone starting, the second is more thoroughly matured for the next season, thus reducing the amount to be taken off in the winter. After the new shoot has grown a short distance, cut it back in the same manner, when it will give no more trouble that season, as before it gets well growing a second time the summer is so far advanced as to prevent its attaining any great size. The same course may be pursued with the main branches after they have attained the length desirable for the next year's start. One of the most prominent arguments for severe winter pruning is that during the summer the vines do not sufficiently ripen the whole of the wood, and therefore the upper buds, being more or less winter killed, grow but poorly, reducing at the same time the strength of the vine by a superabundance of leaves and wood.

If, however, after suffering them to attain a moderate length, about the middle of July, we stop their progress by snipping off their ends, and continue through the season cutting the lateral and terminal shoots within two eyes of the base, we shall have in the winter a greater number of healthy and fruit-bearing buds, well matured and better proportioned to the strength of the vine, than by any other system.

So far from considering judicious summer pruning injurious, my own experience leads me to prefer it to winter. No doubt you may have observed vines bleeding in the spring which were pruned in the winter, and have wondered accordingly, but without reason.

By cutting off the end of the shoot we leave exposed the sap vessels; no new formation of tissue going on at this season, they can only be covered by the death of the end of the branch, or by an application or exudation of gum, and therefore when strong vines are well trimmed in the winter, the spring flow of sap, finding no sufficient outlet in the growing buds, must escape somewhere, and finding less obstruction terminally than laterally, bursts out at the end, thus weakening the vine to a very great extent.

In the summer, on the contrary, the tissues ever forming and be cut smooth or rough, the wood heals readily and no bleeding follows. This view of the case is countenanced by analogy; all now prune their apple trees in the summer, and doubtless the same reasoning would apply to trees of all descriptions.

If the vines are cut back to the fruit then an injurious result will follow; the bud next below the branch will start, and appropriate a large portion of the sap intended for the fruit, leaving it to a miserable dwindling existence. No plant needs greater care or higher culture than the vine, and none will so surely or quickly show it; and unless, in the instance you mentioned, the vines were cut back to the fruit, I should be more inclined to attribute their miserable condition to lack of manure or water than to the summer pruning.

Hoping, if my views are erroneous, you will correct them, I remain in haste, Rusticus.

Pembroke.

Remarks.—We are pleased in having an opportunity to lay before our readers the interesting views of our correspondent, and am much obliged to him for the detailed manner in which he has given his mode of management. Our remarks refer to native vines and out-door culture, which differs materially from the management of foreign grapes in hot-houses.

For the New England Farmer.

CONCENTRATED MANURES.

Mr. Cole: — A great and increasing fondness for agricultural pursuits induced me to subscribe to your excellent journal, from which I continue to receive valuable hints and excellent practical information. As I observe that you very patiently attend to and cheerfully answer such queries as from time to time appear in your paper, I beg the favor of receiving through the same source answers to the following questions on farming matters.

Bone Dust.—I find the need of this rich fertilizer. I could procure horns (would they answer?) and bones, and suppose that my readier means will be to dissolve them in sulphuric acid. What quantity is necessary, and what is the ordinary cost?

Could you conveniently inform your readers whether the following is likely to be an economical receipt for artificial guano? I have seen it highly recommended as being one-fifth of the cost of guano.

Nitrate of Soda	20 lbs.	.00 per lb.
Sulphate of Soda	8 lbs.	.2 cts. per lb.
Sulphate of Magnesia	5 lbs.	.4 cts. per lb.

Sulphate of Lime	2 bushels	20 cts. per bush.
Carbonate of Iron	2 drachms	½ ct. per drachm.
Sal. Ammonia	10 lbs	16 cts. per lb.
Carbonate of Ammonia	5 lbs	25 cts. per lb.
Fine bones	60 lbs	½ ct. per lb.
Magnesia	2 drachms	1 ct. per drachm.
Salt	10 lbs	6 mills per lb.
Cart load of meadow mud		00

What would be the cost of these materials?

Winter Oats.—Where can they be purchated, and at what rate? Who knows any thing about them, and the tillage of them?

For fear of overdoing you with questions, I will conclude my rambling letter.

Yours truly, O.

Nova Scotia, June, 1851.

Remarks.—Horns reduced to a fine state are a valuable manure. Horn shavings from the comb manufactory are a powerful fertilizer. There are many modes of reducing bones to a fine state suitable for manure. The most common in England and in this country is by dissolving them in sulphuric acid. If the bones are well ground, or crushed tolerably fine, one-third of their weight in acid will be sufficient; if coarse, one-half of their weight will be necessary.

The acid is usually diluted by adding one, two, or three parts of water. No uniform quantity has been agreed on. One person made a clay bed, put in 100 bushels of half inch bones, damped them, then turned on 1,700 lbs. sulphuric acid, without dilution, stirred all up thoroughly till effervescence subsided, which was in about two hours. Then he let them remain about ten days, and added water to bring the mass to the consistency of porridge, then cinders, to bring it to a powdered state. In this case only 17 lbs. of acid was used to the bushel, which was probably less than one-fourth the weight of bones. The cost of sulphuric acid is about two and a half cents per pound. It is a good manure.

We do not know the value of artificial guano made by the above prescription. We have annexed prices but they vary much. Sometimes refuse salt may be had at 15 or 20 cents per bushel; while in some sections salt is 60 cents or a dollar per bushel. Ground plaster may be had at some mills at 20 cents per bushel, while it costs twice that sum in other places. We are not acquainted with winter oats. The wheat inquired for was distributed long since.

For the New England Farmer.

MANAGEMENT OF YOUNG DUCKS.

Farmers generally say there is a difficulty in raising "ducks." They require a place to bathe in, but they should not be suffered to run at large when it rains, as their plumage is very thin and of a downy nature, absorbing the water instead of shedding it, they thereby become chilled; this retards the growth and they become imbecile and weak. At a season of the year when rose-bugs are thick, they should be kept in a tight coop leaving just room enough at the ends for them to see to eat; rose-bugs fly in the direction the wind blows, and scarce ever against the wind—I find by experiment that rose-bugs in a few hours cause the death of young ducks. When my brood was six weeks old, I took one of them and put him into a tight box. I then caught some dozen or more rose-bugs and gave them to him—in an hour's time he began to sicken. I watched the progress, and as soon as he died, I opened to his crop, and found the bugs had eaten holes through the crod, nearly as large as the holes they eat in rose-leaves. I shut the living ones up in a close coop, and they are all doing well. Yours,

S. Eldridge.

Canton, Mass., July, 1851.

For the New England Farmer.

COLOR OF HOUSES.

Friend Cole:—

"Variety's the very spice of life,
That gives it all its flavor."

So thought the venerable Cowper. All, however, do not agree with him, and among the number is friend "J. W.," who in writing upon the color of houses, recommends white exclusively. Says he, "I consider pure white *the color* for our dwellings." Now as far as color is concerned, I consider it a matter of *taste* altogether. One may prefer *red*, another *yellow*, and so on through all the various shades of color; while some, like "J. W.," have a *purely white* taste, and white is an absence of *all* color. I find no fault with any man's taste, nor do I wish to prevent him from gratifying it, but a majority of farmers, especially in country towns, are under the necessity of studying economy.

This is a point which was discussed in an editorial article in No. 6 of the current volume of the "Farmer," but one to which "J. W." only incidentally refers, and then—without denying its truth—says, "I should still be decidedly opposed to the change." Even though white *is* less durable, and is also injurious to the eyes, he would have no colored paint on his dwelling! I fully concur with "J. B. D." in the opinion that only a small portion of the readers of the Farmer possess this *white taste*. For myself I will say that for common farm-houses I have a preference for *red* with white trimmings. Yellow is also a good color, especially for large houses. Each of these has two valuable qualities to recommend it,—*cheapness* and *durability*. Some other colors look well, and are, perhaps, as durable, but they are more costly.

In accordance with my *text*, my rule would be this,—the more compact the houses, the more would I vary the color. In a village I should prefer to see the various colors interspersed, and in front of those painted white I would have evergreen trees set out, in order to give the scene a more animated appearance. If trees are set along the streets and roads,—and they certainly should be,—I should prefer having deciduous and evergreen trees set promiscuously, always having the darker trees in front of the lighter colored houses, so as to give the greatest possible variety to the scene.

I agree with "J. B. D." in saying that "pure white will not harmonize with nature," and "J. W.'s" assumption that the argument is all on his side,—that this "is just the reason why our buildings look better white than colored,"—appears to me untenable; much less will a reference to "a *very weak* spot somewhere,—an entire want of self-con-

trol," be likely to weigh heavily in favor of *white paint*, with the reflecting portion of the community.

Arguments to be effective, must be supported by facts. We may give opinions, but they will almost always be coincident with preconceived notions. I am not prepared at present to show the comparative durability of white and of colored paints, and therefore I do not recommend any *particular* color, yet I am decided in the opinion that white is not "*the color.*" Perhaps some other person can give us some statistical information upon the subject; if so, I hope he will do it, for in this way he will assist enquirers in deciding which is the *best* paint.

L. Varney.

Sandwich, N. H., 7 Mo. 25th, 1851.

☞ By some mistake, *Mr. Editor* was prefixed to a former communication of friend Varney, which is contrary to the style of the Society of Friends.

For the New England Farmer.

COLOR OF COUNTRY HOUSES.

Mr. Cole:—Your correspondent J. W. takes it in high dudgeon, because everybody don't choose to endorse his absurd notions in regard to the color of country houses; and one would suppose from his manner that he thought his opinion was *law*. It strikes me that his sneering about *weak spots* is in quite as bad taste as his notions of color. This calling your opponent a fool, is often resorted to by those who have neither wit nor brains enough to back up by a sensible argument any statements they may make or have made—and this brings to my mind the parallel of the boy at school, who when at variance with his companion, said with a pout of the lip, "Well, I don't care, if I can't flog you, I'll make mouths at your sister."

In regard to Mr. Downing, I don't claim for him infallibility, but I do claim for him the *honor* of being, by common consent, the best writer on Rural Architecture extant. Doubtless he has made mistakes in his lifetime and who has not? indeed, it is *hardly possible* that the immaculate J. W. himself may be laboring under a slight mistake, at this moment—but be that as it may, whatever mistakes, if any, Mr. D. *may have made*, certain it is, he never made such an egregious blunder as to suppose that a very white house, with very green blinds, set down in the midst of a bare plain, was the acme of good taste in rural architecture.

Where are we to look for correct taste in painting, sculpture, architecture, or any of the fine arts, but among those who have spent a lifetime in their pursuit—and certainly when we find any one point in any art upon which professors of that art all agree—it would seem to any reasonable man tolerable good evidence of its correctness. So it is in regard to neutral tints for country houses—the arguments advanced in their favor never have been, nor can they be refuted, J. W. notwithstanding.

Boston, July, 1851. J. B. D.

A Genuine Irish Bull.—An Irishman dropped a letter into the Westfield Post Office, the other day, with the following memorandum on its corner for the benefit of all indolent postmasters into whose hands it might fall: "Please hasten the delay of this!"

WATER.

THE GRAND CONSTITUENT AND SOLVENT.

Of organic bodies, whether vegetable or animal, water is a large constituent during life, and a powerful solvent after death. Potatoes, for example, contain 75 per cent., (by weight,) and turnips no less than 90 per cent. of water, which explains, by the way, the small inclination of turnip-fed cattle and sheep for drink. A beef-steak strongly pressed between blotting-paper yields nearly four-fifths of its weight of water. Of the human frame (bones included) only about one-fourth is solid matter, (chiefly carbon and nitrogen) the rest is water. If a man weighing 10 stone were squeezed flat under a hydraulic press, 7 1-2 stones of water would run out, and only 2 1-2 stones of dry residue would remain. A man is, therefore, chemically speaking, 45 lbs. of carbon and nitrogen diffused through 5 1-2 pails full of water. Berzilius, indeed, in recording the fact, justly remarks, that the living organism is to be regarded merely as a mass diffused in water; and Dalton, by a number of experiments tried on his own person, found that of the food with which we daily repair this water-built fabric, five-sixths are also of water.

The sap of plants is a solution of material matters, saline and organic, in water, which distributes them so rapidly that its upward course through the minute vessels (as observed by Lindley in the stipules of the ficus elastica) looks like the rushing of a swift stream. A pail full of water, suitably impregnated with salt, is speedily sucked up by the root of a growing tree immersed in it; the salts are assimilated, as is also a part of the water, the remainder being evaporated from the leaves. Food or provisions may thus be artificially administered to plants; and timber is thus hardened in France, and even stained, whilst living, of divers brilliant hues. As for evaporation from foliage, it is so abundant that a sunflower perspires 1 1-4 pail per diem, and a cabbage nearly as much—nay, it appears from valuable experiments published by Mr. Lawes, of Rothamsted, that a wheat plant, during the period of its growth (170 days) exhales about 100,000 grains of water, so that, taking the ultimate weight of the mature plant at 100 grains, which is a full estimate, its mean daily perspiration actually exceeds ten times its own mean weight. At this rate an acre of growing wheat, (weighing, at least, two tons at maturity,) should exhale, on an average, fully ten tons of water per diem.

Of a plaster of Paris statue, weighing 5 lbs., more than 1 lb. is solidified water. Even the iridiscent opal is but a mass of flint and water combined in the proportion of nine grains of the earthly ingredient to one of the fluid. Of one acre of clay land, a foot deep, weighing about 1,200 tons, at least 400 tons are water; and even of the great mountain chains with which the globe is ribbed, many millions of tons are water solidified in earth.

Water, indeed, exists to an extent and under conditions which escape the notice of cursory observers. When the dyer buys of the drysalter 100 lbs. each of alum, carbonate of soda, and soap, he obtains in exchange, for his money, no less than 45 lbs. of water in the first, 64 lbs. in the second, and a variable quantity, sometimes amounting to 73 1-2 lbs., in the third.

Even the transparent air we breathe contains in ordinary weather about five grains of water diffused

through each cubic foot of its bulk; and this rarefied water no more wets the air than the solidified water wets the solid material on which it is absorbed.—*Daguerrian Journal.*

MANGE IN HORSES.

This is a pimpled or lumpy eruption. After a while the vesicle breaks, the cuticle and the hair fall off, and there is, as in obstinate surfeit, a bare spot left covered with scurf; but some fluid oozes from the skin beneath, and this scurfiness changes to a scab, which likewise soon peals off and leaves a wider spot; sometimes another scab succeeds to the first, but oftener a mere scaly, greasy-feeling, bare spot remains. This is attended with considerable itching and tenderness, and thickening of the skin, which soon becomes more or less folded or puckered. The mange generally first appears on the neck, at the root of the mane, and its existence may be pretty truly ascertained, even before the blotches appear, and when there is only considerable itchiness of the part, by the ease with which the short hair at the root of the mane is plucked out. From the neck it spreads upwards to the head or downwards to the withers and back, and occasionally extends over the whole carcase of the horse.

One cause of it is neglected or inveterate surfeit; the more common cause is contagion. No disease is more contagious than this. The same brush or curry comb used on all horses will propagate it.

The propriety of bleeding in cases of mange must depend on the condition of the patient. If it be the result of poverty and the animal is much debilitated, bleeding will be adding power to the cause of the disease. Physic, however, is indispensable. It is the first step in the progress towards cure. A mercurial ball will be preferable to a common aloetic one, as more certain and effectual in its operation. In this, however, mange in the horse resembles itch in the human being—that medicine alone will never effect a cure. There must be some local application. There is in it this further similarity, that that which is most effectual in curing itch, must form the basis of every local application as it regards the horse. Sulphur is indispensable in every unguent for mange.

In an early and very acute state of mange, one ounce of the flour of sulphur should be well rubbed down with an equal quantity of train oil, and half an ounce of common turpentine. A tolerably stout brush or even a curry comb, lightly applied, should be used whenever there is any appearance of mange, to remove the dandriff or scurf. After that, the horse should be washed with strong soap and water as far as the disease has extended; and when he has been thoroughly dried, the ointment should be well rubbed in with the naked hand or with a piece of flannel. More good will be done by a little of the ointment being rubbed in, than by a great deal being merely smeared over the part. The rubbing should be daily repeated. During the application of the ointment, and as soon as the physic has set, an alterative ball or powder similar to those recommended for the other affections of the skin, should be daily given. If after some days have passed and no progress should appear to have been made, half a pound of sulphur may be well mixed with a pint of oil of tar, or, if that is not to be obtained, a pint of Barbadoes tar, and the affected parts rubbed as before. On every fifth and sixth day, the ointment should be washed out with warm soap and water. The progress towards cure will will be ascertained; the skin will be cleaned, and its pores opened for the more effectual application of the ointment.

The horse should be well supplied with nourishing, but not stimulating food.

FARMING IN INDIANA.

Henry L. Ellsworth, Esq., Indiana, (formerly of Hartford,) recently delivered a lecture in that city, on "Agriculture at the West," which shows the surprising fertility of the soil in Indiana.

He spoke of the large amount of agricultural products raised in Indiana, and the low prices of produce. Butter there sells for 4 and 6 cents per pound, such as would bring 25 in New York city; chickens 75 cents per dozen; turkies 25 cents each. He spoke of the various kinds of fences used, and showed a model of one which he considered best, which cost but $110 per mile, and it could be taken up and easily moved at pleasure. Houses two stories high 18 by 20 feet, were put up there on contract for $110 each, and painted with a cheap paint made of tallow, lime, &c., for 22 dollars. He could raise corn in Indiana for five cents a bushel, and a smart young man could cultivate and take care of 40 acres alone. In ploughing, they do not hold the plough, but set it in the soil and draw it along from two wheels. Farms are rented out for one-third of their produce. No manure is used on the soil—it would not pay the trouble of carting it. He said that cows were worked there as well as oxen, to good advantage; although they would not give quite as large a quantity of milk, when worked. He raised hay and pressed it for exportation for $1,75 per ton. He spoke of the railroads and canals that were in progress in the western country, which would be of great advantage in getting their produce to the eastern cities. Plank roads were much used, and built for $1500 per mile—paying 30 to 40 per cent. interest.

SUGGESTIONS.

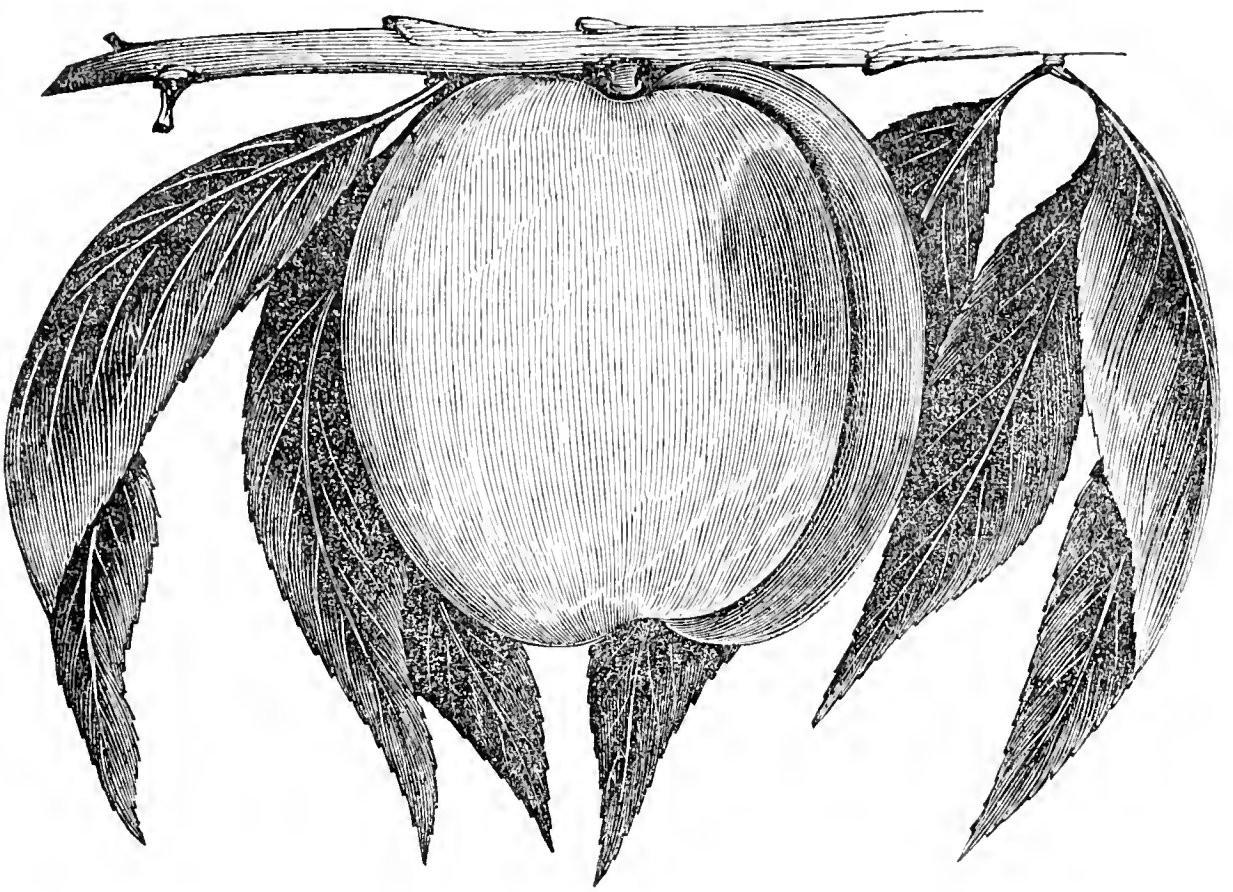
When I see ploughing done, year after year, in the same track, beside a fence or a gully, till a dyke of considerable height is thrown up, and of course a corresponding leanness in the interior, thinks I to myself there is a want of good husbandry.

When I see a stone wall topped out with a single tier of round stone, thinks I to myself the upper foot in the height of such walls ought never to have been put on, and look out for dull sythes and loss of hay.

When I see a fruit tree loaded with twice the top necessary for bearing well; and this perhaps partly dead, thereby keeping the rays of the sun from the under crop, thinks I to myself, there is an indication of bad husbandry.

When I see a total failure of a crop of Indian corn, thinks I to myself, if that man had bestowed all the manure and perhaps two-thirds the labor on half the ground, he would have had a fair crop of ruta baga the following year.

When I see a farmer selling his ashes for ten cents per bushel, thinks I to myself, that farmer had better given his purchaser ten cents to leave them to his corn and grain.—*Maine Farmer.*



HALE'S MELOCOTON PEACH.

This peach has been raised by Col. Elisha Hale, of Rock Bottom, (Stow,) from the seed, for more than twenty years, and it invariably produces the same fruit. This fruit is remarkably rich and sweet and uniformly good. It is also noted for its long keeping in excellent condition. We received a quantity of these peaches from Col. Hale one season; we took no unusual pains to preserve them, and used them daily for one week, and they continued good until the last. We regard this as a very important advantage. Another great advantage attending this variety, is the production of precisely the same fruit from seed, saving the trouble and uncertainty of budding. We have raised hundreds of these trees in the nursery, which were perfectly uniform in their appearance; as much so as Baldwins, or any other variety that have been budded. As this peach is not very large, nor very beautiful, it may not be so saleable in market as large and showy peaches. It may not sell for what it is really worth, while peaches of more show may sell beyond their intrinsic value. Yet a moderate proportion of them may be profitable for market, and for one's own use it is a very valuable variety. There are other peaches raised from seed, and propagated also by budding, that very nearly resemble this, and some are doubtless identical with it. This peach resembles the English Melocoton, so called, raised in Maine some forty years ago. The fruit is of medial size; oblong, flat at the base, slight suture on one side; bright yellow; flesh yellow, of a very rich, sweet, and excellent flavor, freestone. The tree is of moderate growth and very hardy. It is a good bearer, and bears early. Reniform glands; ripe from the 5th to the 15th of September.

WHITE BLACKBERRIES.

A few weeks since, when passing through the cultivated grounds of the Messrs. Needhams, in West Danvers, which have yielded such an abundance of delicious strawberries the present season, our attention was attracted to some luxuriant bushes, about four feet in height, which we were told yielded a berry—called the *white blackberry*. To-day we have been kindly favored by the gentlemanly proprietors with a box of this fruit matured. It is not exactly white, but more *white* than *black*, resembling in appearance and taste the fruit of the mulberry quite as much as the blackberry. The luxuriant growth and abundant produce of this shrub make it desirable to be cultivated by those who are ambitious of supplying a variety of the best fruits of the season.

July 23, 1851.

Grafting the Grape.—Mr. John Washburn, of Plymouth, informs us that he set in April some scions of the Diana grape, which we sent him by cleft grafting, and that they have grown six or seven feet. He also states that they will have a

good show of pears in that region, but the crop of apples will be light.

NEWLAND'S STRAWBERRY HUMBUG.

A few years since, George Newland, from Palmyra, N. Y., was in this region, and sold plants of what he called a new seedling strawberry, under the pompous name of "*Newland's Celebrated Mammoth Alpine Strawberry.*" A large number of cultivators purchased plants, gave them a fair trial, and condemned them as worthless. They were the old wood strawberry, or something very nearly resembling it. So the whole affair proved to be a great humbug. This being known, Newland left this region, and has been operating in parts where he and his strawberry were not so well known.

We see by a late number of the Pennsylvania Farm Journal, the editor has received a present of some vines from Newland's agent, and before waiting to give them a trial he is commending them to the public; thus aiding this impostor in deceiving the farming community. We think notice should be given of this imposition throughout the country, in order to put a stop to the operations of this great impostor. Editors should check rather than aid him.

For the New England Farmer.

MR. WHIPPLE'S DEEP PLOUGHING.

A striking instance of the benefits resulting from continued deep ploughing was brought to our notice yesterday, on viewing the cultivated grounds of A. M. Whipple, Esq., on the banks of the Concord river, near Lowell. This land was naturally a sandy and light soil. His men were engaged in gathering in the crop of hay from an extensive field, which had yielded more than two tons to the acre. The inquiry arose, by what means was the crop made so abundant, on land so shallow? His answer was, *deep ploughing, mainly.* That for eight or ten years past, he usually ploughed *twelve inches* deep. That he put on his grounds but a light dressing of stable manure,—made no compost whatever—but relied almost entirely on the improvement of the soil, by turning the furrows deep. His crops were quite equal to those we have been accustomed to see on strong land, highly manured. He has literally made more than two blades of grass to grow, where but one grew before, and this with no other expense, except the labor of his teams. Similar benefits were apparent in the growing crops of corn and oats, in the lots adjoining.

As we were looking at the luxuriant fields of oats, on which will probably be cut more than two tons of fodder to the acre, Mr. Whipple explained how he saved his potatoes on this field, in the summer of 1850, when in most other fields in the neighborhood they decayed. He planted his corn and potatoes in alternate rows, so that the potatoes were constantly shaded, after the first of July, by the corn. Whether this shading was beneficial or not he could not say. Here he had sound potatoes, and where his potatoes were not shaded, they rotted. Mr. W. has also been very successful in bringing his adjoining swamps and wet meadows into good English mowing. He first cleared off the surplus water by ditches properly arranged, and then applied to them his system of *deep ploughing.* In no one case does he presume to have his ground ploughed less than *twelve inches deep.* He was first led to adopt this mode of ploughing, by seeing the explanation made by the late Elias Phinney, Esq., of the vast quantity of vegetable matter to be found on an acre of grass land, within *one foot* of the surface—*twelve tons.* I think he proved by analyzing a single cubic foot of earth. Hence he reasoned, if all this vegetable matter could be decomposed and brought into active operation, crops would be in need of no other manure. Mr. W.'s abundant crops are a striking illustration of the soundness of his reasoning. We, who have been accustomed to value highly the products of the compost heap, should have thought some of this mode, which could also have been beneficially applied; for when we can find a full crop of two tons to the acre without them, there seems to be no need of such application. P.

August 1st, 1851.

For the New England Farmer.

CRANBERRIES.

S. W. Cole, Esq.:—Dear Sir,—You will pardon me for making a simple request. I observed in an article on the cranberry in the "American Fruit Book," that this fruit is found growing in some cases spontaneously on high lands, &c., &c.

You will favor by informing me by mail at your earliest convenience, where I could examine them, and the nearest place to Albany that I would be likely to find them. I have been quite successful in cultivating the cranberry on upland, and think I have a variety perfectly adapted to upland cultivation. In my researches I have found several varieties of the cranberry, and know of but one worthy of cultivation in upland.

I should be happy to send you a specimen of the fruit in the fall, and I think that you will acknowledge that it is ahead of anything of the kind that you have met with.

My method is to plough deep or remove the top soil or sod previous to setting the plants, and the poorest kind of soil is the best, provided it will stand a drought tolerable fair, and mulch the first year, stirring the soil well with the cultivator, or hoe between the drills.

By returning an answer to the above you will oblige a friend to all worthy improvements in fruit culture, and I will favor by using my influence in circulating your (to me) valuable works, which are well adapted to the wants of many in this vicinity. Yours truly,

F. B. Fancher, Horticulturist.

Lansinburg, N. Y., Aug. 1, 1851.

Remarks.—Although the preceding communication was not intended for publication, we give it to the public, as it contains some valuable hints on the cultivation of the cranberry. We shall be happy to receive in the fall a specimen of fruit as proposed. We know of no cranberry of spontaneous growth in the region of Albany.

We have seen a patch in Lincoln, some 16 miles from Boston, on the farm of Major Daniel Weston, on a very dry, poor, gravelly knoll. They

bore well, and the fruit was large and fine, and kept much better than that raised on low lands.

We have seen some fine cranberries of spontaneous growth on high land in Reading, about 12 miles from this city. The land was in a wild state, very poor, hard and dry, but the cranberries large and bearing well. In Cape Elizabeth, Me., we saw a good crop of cranberries in a grass field by the side of a fine piece of barley, which the owner was then reaping. We dug down among the cranberries, and examined the soil, and found it mostly a poor sand, and very dry. As this was on flat land, it might be well watered in winter and early spring.

There are numerous instances, throughout the country, of the spontaneous growth of cranberries on high land, bearing abundantly, and in some cases flourishing well, under, apparently, the greatest disadvantages. This seems to be conclusive evidence that they will do well on high land under good management.—Ed.

For the New England Farmer.

REMEDY FOR THE POTATO ROT.

Mr. Editor:—I beg leave to say with regard to the potato rot, that I discovered the small black bug that Mr. Flanders speaks of five years ago, and that I expressed to a neighbor of mine that this was probably the first cause of the decay in the potato. If I mistake not, the leaves were intended as lungs to the plant, and after being so completely perforated in such a manner as to destroy the health of the vine, I think it is in vain to expect sound potatoes.

I would state that I have found common hard wood ashes a complete remedy; my method is to apply a small portion in each hill on planting the seed, and after they come up dust the ashes thoroughly both upon the upper and under sides of the vines during their growth. This bug is about the size of a flea, and upon approaching the vines and disturbing them they will hop similar to one; they are also furnished with wings and can fly swiftly.

Yours, respectfully,

William F. White.

Framingham, July 28, 1851.

Remarks.—This black bug is no new thing; and in thousands of cases the potato rots extensively, when this bug has not been seen. If insects cause the potato rot, those who advocate this hypothesis ought to prove it, for what they consider the cause is something tangible, and admits of demonstration.

For the New England Farmer.

WHITE BLACKBERRIES.

Mr. Cole:—Having several times adverted to the *berries* raised by Mr. J. S. Needham, called the *white blackberry*, I beg leave to state that my attention was yesterday called to a box of these berries, fully ripe, and in condition for use. They are a fine fruit, equal to any berry of the field—unless the raspberry may be considered superior. Its productive qualities surpass all others. I learn from Mr. N. that one bush has yielded the present season *eleven quarts*. The plant is hardy and well calculated to endure our climate. The original of his plants came from the woods of Maine. Those who would know more of this plant, had better call at Mr. Needham's, where upon his grounds is to be seen much that is instructive in cultivation. His patch of highland cranberries are in very fine condition. P.

Danvers, Aug. 5, 1851.

For the New England Farmer.

A QUESTION FOR THE BELIEVERS IN THE INSECT THEORY.

Mr. Cole:—If, for example, the aphides on the tender shoots of the apple-tree, although large enough to be seen, and closely covering the surface of the shoots, are still unable during a single season to destroy them, "*it is required to know*" the number and size of the potato insect which in the same time destroys almost simultaneously an infinitely greater number of stocks of a more fibrous and less succulent plant, digging also down into the earth, "destroying them root and branch," to the amount of some thousands of bushels in every neighborhood? A general solution to this question is solicited.

W. Newbury. R. F. T. G.

For the New England Farmer.

CULTIVATION OF THE SEBA BEAN.

Mr. Editor:—The scrawl which I am about *to do*, will be, I am well aware, rather out of season; but as all the subscribers to the "N. E. Farmer" preserve their papers from month to month, and then, at the end of the year, have them bound in a tasteful and durable manner, it will make but little difference, as they can readily refer to it when spring time shall again return. I say *all* your subscribers preserve their papers, but perhaps I speak unadvisedly; there may be those who are so indifferent to their *lasting* worth as to destroy them. If there are any of this class among your patrons, I would say to them, "Sin no more."

The Seba bean yields very largely when rightly managed, and generally commands a high price in the market; and when these important facts are taken into consideration, I think I shall be justified in saying that it is a *profitable* bean for our farmers to cultivate. And if it is profitable, the reader will pay some little attention to raising it, of course; therefore he must have all things ready "in time." Take two cords of light, well-rotted horse manure, and pitch it up so as to form a sort of basin. Intothis basin run a load of good night-soil, not very thick, and then cover it over by throwing up the edges of the heap, just enough to prevent the escape of its rich qualities. This being done, let it remain a few days, and then overhaul it and mix the horse manure and night-soil well together. Thus much should be done some three or four weeks before the time for planting the beans. Just before you want to use the manure, overhaul it again; it will then be in excellent order; and if the beans that grow out of it ain't "some pumpkins," why, then I'll guess again, that's all! If all the heap is not wanted for the beans, the remainder will be first-rate for almost any other crop. After preparing the manure (or *before* perhaps would be better) select a piece of ground

suitable for your purpose—for the Seba. A cold soil and situation is not adapted to it at all. You must accordingly select a warm, deep and fertile soil, with a southern or south-western exposure, where they may be protected as much as possible from the cold storms and winds of spring so common and severe in this region.

Plough the ground deep and thorough, harrow well, then plough and harrow again, and thus the soil becomes a fine tilth. Furrow the rows four feet apart. Manure in the hill, liberally. Put the hills three feet apart. Run no risk in regard to the seed, but plant such as you can rely upon as being new and good, if it can be obtained at any price. If possible, plant that which was raised the previous year, as this bean is rather difficult about coming up well at the best, especially if planted rather early. Old, poor seed of any kind, for planting, is a dear article, even as a gift. Though seemingly cheap at first, in the end it costs much time and labor, and often detracts much from the value of the crop, as the necessity of planting over when it should be up and growing causes a late and diminutive yield even if it comes to maturity at all. Cover the manure thinly with dirt before dropping the seed. Seed liberally, as it is much better to have too many come up than not enough, as they can be easily thinned out. Care should be taken not to cover the seed too deep. Four beans are enough to remain in a hill, but there is no need of being in a hurry about thinning them out, as the cut-worm is apt to destroy them while they are young and tender. This worm should be looked after. He commits his depredations in the night, and in the morning his own works of devastation mark the spot where he may be found. Dig him out and punish him according to his deserts.

As to the time of planting the Seba, very much depends on the season. I should not recommend planting, in this section, before the first of May, even in the most favorable season. As a general thing the middle of the month is about as early as is advisable. If suffered to remain long in the cold earth the seed will not germinate. Oftentimes I should plant as late as the 20th of May, in preference to the 1st. After the Seba is well up, and hoed, it should be poled; if this has not been attended to before. I have observed that some farmers use long poles for this bean—say twenty feet in length. What *reasons* they can give for this, I know not; probably they have some very plausible ones, but I very much doubt whether they are really sound and practical. The extra trouble and expense necessary in obtaining poles of this length is no very small item. I must enter my protest against the practice, as I believe it lessens the productiveness of the vines. A pole that stands seven feet out of the ground when stuck is long enough, and far preferable to a twenty-footer, for "good and sufficient reasons." On long poles the vines continue climbing up through the season, and the blossoms are not sufficiently protected by the leaves, but are too much exposed both to the hot sun and the cold east winds, and the consequence is a great many of the pods are not matured. Where short poles are used the vines soon reach the tops, and then turn and grow downwards, forming a thick and luxuriant covering for the tender pods and blossoms, which serve as an ample protection to them under all circumstances, and even saves many of the green beans from being injured by the early autumn frosts. Therefore it is much better policy to use short poles for the Seba than long ones.

As this bean is rather disinclined to take to the poles of its own accord, it usually becomes necessary to tie it up. Do this as soon as the runners are of sufficient length. Handle them very carefully. The best article for this purpose is rhubarb skin. It is soft and pliable, and does not chafe the vines. J. W.

For the New England Farmer.

BLUE STEM WINTER WHEAT.

S. W. Cole, Esq.:—We wish to call the attention of your farmers to the subject of *Winter Wheat*. The kind most favorable to our climate is that known as "Banner" or "Kloss" Wheat—which has been raised with great success for a few years past, till it now promises to furnish bread for our whole State. The average yield last year was 30 bushels per acre, and the prospect is for a larger yield the present, as more pains have been taken in the selection and preparing of ground. It is better to sow during this month, as it gives a better *fall feed* for young cattle, though it will *do well* if sown any time in September.

We acted as agents for the sale of the wheat last year, and sent it into every county in the State, from all of which we hear favorable reports.

The harvesting has just commenced, and we shall probably be able to fill any orders from your section, if applied for in season.

The price here will probably be two dollars.

Very respectfully, John Means & Son.

Augusta, Me., Aug. 1, 1851.

Remarks.—Mr. Kloss, as has been lately ascertained, did not originate this wheat, therefore it should not bear his name. And the name Banner was given to it, as Mr. Drew, editor of the Gospel Banner, raised some from seed sent him from the Patent Office, which he distributed. This was improper, to add a local name, which makes confusion.

For the New England Farmer.

MULTICOLE RYE.

Mr. Editor:—I would like to have the New England Farmer give some information respecting a new variety of rye called the "*Multicole*," which is mentioned in the Patent Office Report on Agriculture for 1849—50. A writer from Cumberland Co., Virginia says, "A new variety of this grain called the *Multicole*, issued originally from the Patent Office, has lately reached my neighborhood from Lynchburg. The crops from which it came were extraordinary. It had been sown by a gentleman near me on trial—as horse feed. Common rye, from what cause I know not, never prospered in this region, and its culture has rarely been attempted."

Another writer from Mississippi, in the same Report, page 153, says: "I have grown the *Multicole*, and the St. Johns-day rye, or '*Seigle de St. Jean*,' imported from England and France; neither of these were superior to the common 'up country rye,'" &c. I understand the *Multicole rye* has been grown with success in Vermont. Can you,

or some of your readers, give the desired information; and if the kind is superior to the old, state where the seed can be obtained in season to sow this fall! Yours, &c., T. Stearns.

Mansfield, July 21st, 1851.

For the New England Farmer.

THE SUMMER CATERPILLAR OR WEB-WORM.

Mr. Editor:—This insect has commenced his ravages on fruit and forest trees; and it should be attended to in season. It works longer than the common caterpillar, and now that they have become numerous, they make trees look quite as badly as their namesake. They may be easily taken and destroyed by examining the branches where they are at work. They will be found in the cool parts of the day collected upon the under side of a single leaf, in some cases. Our way is to cut off these leaves with the pruning shears, and then kill the insects.

GERMAN AGRICULTURE.

Each German has his house, his orchard, his road-side trees, so laden with fruit, that if he did not carefully prop up and tie together, and in many places hold the boughs together with wooden clamps, they would be torn asunder by their own weight. He has his corn plot, his plot of mangold wurtzel, or hay, for potatoes, for hemp, &c. He is his own master, and he, therefore, and every branch of his family, have the strongest motive for constant exertion. You see the effect of this in his industry and his economy.

In Germany nothing is lost. The produce of the trees and the cows is carried to market; much fruit is dried for winter use. You see it lying in the sun to dry. You see strings of them hanging from their chamber windows in the sun. The cows are kept up for the greater part of the year, and every green thing is collected for them. Every little nook, where the grass grows by road-side and river, and brook, is carefully cut with the sickle, and carried home on the heads of the women and children in baskets, or tied in large cloths. Nothing of any kind that can possibly be made of any use is lost; weeds, nettles, nay, the very goose grass which covers waste places, is cut and taken for the cows. You see the little children standing in the streets of the villages, in the streams which generally run down them, busy washing these weeds before they are given to the cattle.

They carefully collect the leaves of the marsh grass, carefully cut their potato tops for them, and even if other things fail, gather green leaves from the woodlands. One cannot help thinking continually of the enormous waste of such things in England—of the vast quantities of grass on banks, by road-sides, in the openings of plantations, in lanes, in church-yards, where grass from year to year springs and dies, but which, if carefully cut, would maintain many thousand cows for the poor.

To pursue still further this subject of German economy. The very cuttings of the vines are dried and preserved for winter fodder. The tops and refuse of hemp serve as bedding for the cows; nay, even the rough stalks of the poppies, after the heads have been gathered for oil, are saved, and all these are converted into manure for the land. When these are not sufficient, the children are sent into the woods to gather moss, and all our readers familiar with Germany will remember to have seen them coming homeward with large bundles of this on their heads. In autumn, the falling leaves are gathered and stacked for the same purpose. The fir cones, which with us lie and rot in the woods, are carefully collected and sold for lighting fires.

In short, the economy and care of the German peasants are an example to all Europe. They have for years, nay ages, been doing that, as it regards agricultural management, to which the British public is but just now beginning to open its eyes. Time, also, is as carefully economised as everything else. They are early risers, as may well be conceived, when the children, many of whom come from a considerable distance, are in school at six in the morning. As they tend their cattle or their swine, the knitting never ceases, and hence the quantities of stockings and other household things which they accumulate are astonishing.—*Howitt.*

REMEDY FOR A COW WHO SUCKS HERSELF.

Mr. Editor:—Hearing recently an effectual cure for this inveterate habit, and at the same time a very simple one, which has been tried in this vicinity and found to answer completely, I send it for insertion in the Farm Journal.

Draw the cow up by a halter to a fence corner, or stall in the stable, and insert in the same manner as a ring is put into a bull's nose, a round stick through the cartilage which divides the nostril, (and which is quickly done by a single blow with a mallet,) say about six inches long, and let it remain. It will occasion no inconvenience to the cow, and whenever she attempts to suck herself, it will cause such a strain on the nose as to make her desist instantly. The proper length for the stick to extend each side of the nose, can better be told upon trial, as it may be lengthened or shortened, as may be found necessary. To make it still more effectual it might be pointed at each end.

The habit of sucking herself in the cow, is one almost impossible to break by any contrivance of yokes or muzzles, and it is not dissimilar to intemperance in the human subject. Total abstinence being the only safety, a taste being once had, self-control is gone. I once had a valuable heifer, (I raised from the celebrated McEloy cow,) who made 16 lbs. of butter in a week, and which I was obliged almost to give away on account of this habit. She promised to be equal to her dam in butter qualities, and many expedients were tried to break her, but ineffectually. A stiff muzzle was put on her, well supplied with sharp spikes. Her udder, so violent was her fondness for her own milk, would often be scored with deep cuts, and drops of blood, but she would still get it. A stiff yoke on the neck was also tried, which looked as if it would entirely prevent her turning her head round. This also hurt her and was ineffectual.

Had this cow been cured of this habit, she would now have been worth $100. Her mother was a most remarkable animal for deep milking, and her former owner, before I purchased her, was said to have sent to market from her, 17 lbs. of butter per week. She made with me nearly 15 lbs. of butter a week, on grass alone. Edge Cope, residing about two miles from this place, and whose

statement can be entirely relied upon, now owns a heifer from her, who made last season, when she was on trial and milked three times a day, 17 lbs. of butter in a week. The milk was weighed each time, instead of being measured, and reached about 75 lbs. per day. He weighed it himself to avoid mistakes.

The simple recipe here given, and also one by James Gowen in the first number of the Farm Journal, of the hay rope in cases of hoven, (and which I also tried and thereby saved the life of a Durham bull which cost me $550,) are strong illustrations of the value of agricultural journals, and are worth the price of many years' subscription. PASCHALL MORRIS.

West Chester, June 20, 1851.

AGRICULTURE IN FRANCE.

A letter writer for the Republic says:—"A trip of six hundred and fifty miles, from the northern to the southern extremity of France, justifies me in the expression of my opinion that God's sun does not shed its rays on so fair a land, or one so thoroughly cultivated. The whole country is literally a garden. Every square foot, from the mountain-top down to the lowest ravine, is made to produce *something*, if it be susceptible of it. Their mode of planting or sowing their crops, whether on plain or hill-side, produces the finest effect on the appearance of the landscape; the space allotted for each crop is laid out in squares or parallelograms with mathematical precision, and, whether large or small, the best garden could not be divided with greater accuracy. As there are no fences or hedges, and as the different crops are in various stages of maturity, you can imagine the variety of hues that meets the eye, and the magnificence of the panorama that stretches out in every direction as far as the vision can penetrate. I am sorry to add in this connection, that seven-eighths of the agricultural labor is performed by females, while two or three hundred thousand stalwart men in uniform are idling away their time in the barracks of the cities and villages. In the absence of fences, cattle, secured by ropes, are driven about their pasturage by females; and sheep are confined within the required limits by boys, assisted by a shepherd's dog. Speaking of cattle, reminds me that, notwithstanding fresh pork is abundant enough in market, both in England and France, I have not seen a live porker in either country."

DECOMPOSITION OF BONES BY FERMENTATION.

If fresh bones are thrown into compact heaps and mixed with moist sandy loam and ashes, they will gradually become heated and decomposed. The result will be materially hastened, by occasionally sprinkling with urine, and especially by mixing with horse manure. If the bones have been deprived of their animal matter they will not ferment. The presence of nitrogen is essential to induce and carry forward fermentation, and this is only found in the animalized matter of the bones. During the decomposition of bones, putrefactive odors are given off, which occasion a loss to the manure heap, while they are an insufferable annoyance to the olfactories. This objection, however, may, in a good degree, be remedied, by covering the heap with rich decayed turf, peat, plaster, charcoal, or any other absorbents.

The value of bones for agriculture may be inferred from the fact that nearly 33,000 tons were imported into England in 1848. The value of bones used for agricultural purposes in that country, annually, is estimated at about $4,400,000. In the United States they are fast becoming appreciated, and it will not be long before every bone in this country will be carefully husbanded, and applied to the augmentation of our crops.—*American Agriculturist.*

☞ "Scientific farming" is the ascertaining of what substances the plants you wish to raise are made—which of these substances are wanting in your land—and what manures will supply them.

Mechanics' Department, Arts, &c.

OUR NAVIGATION.

The following statement shows the number and tonnage of the vessels built in each State and Territory of the United States, for the year ending on the 30th of June, 1850. It is taken from the report of the Registry of the Treasury of the commerce and navigation of the United States for the fiscal year.

Of the vessels comprised in the table, there were two hundred and forty-seven ships, one hundred and seventeen brigs, five hundred and forty-seven schooners, two hundred and ninety sloops and canal boats, and one hundred and fifty-nine steamers. The largest number built in any State was one hundred and twenty-seven, in Maine; and the largest number of steamers, thirty-four, in Kentucky. The largest tonnage set afloat during the year is that of Maine, and the next largest of New York. Of the one hundred and fifty vessels built in Maryland, one hundred and twenty-five were schooners.

RECAPITULATION.

States.	Vessels built.	Total tonnage.
Maine,	326	91,211 73
New Hampshire,	10	6,914 32
Vermont,	1	77 41
Massachusetts,	121	35,836 14
Rhode Island,	14	3,587 15
Connecticut,	47	4,819 79
New York,	224	58,342 73
New Jersey,	57	6,201 68
Pennsylvania,	185	21,409 93
Delaware,	16	1,848 82
Maryland,	150	15,064 80
District of Columbia,	8	288 17
Virginia,	31	3,584 04
North Carolina,	33	2,651 59
Georgia,	5	683 82
Florida,	2	79 75
Alabama,	3	113 66
Louisana,	24	1,592 38
Kentucky,	34	6,460 69
Missouri,	5	1,352 82
Illinois,	13	1,691 21
Ohio,	31	5,214 62
Michigan,	14	2,061 62
Texas,	1	105 54
Oregon,	2	122 42
Total,	1,360	272,218 54

MARBLE STAINING.

This art, which is practiced to some considerable extent, in rendering more rich and beautiful many of the harder kinds of marble, appears to have been known at an early date, even as far back as 1666—

it was practiced by a Mr. Bird, a stone cutter, at Oxford, although his method is not recorded. More subsequently Mr. Robert Chambers, of Minchinhampton, in Gloucestershire, (Eng.) discovered and practiced a method of staining marble of various colors, which he called a secret. The colors were so well and intimately combined with the marble, that Da Costa, who tried many experiments on several specimens of marble stained by this artist, found it impossible to remove them even by boiling in a strong alkaline solution. Since then the art has been known and practiced by many as a secret, which has proved to those engaged in it a very lucrative employment. Kircher, we believe, was the first writer that has given publicity to any thing practicable in regard to the operation. Meeting with stones in some cabinets supposed to be natural, but with figures so peculiar and nice as to lead him to wonder at their beauty and form, he was led to examine them more particularly, and found that not only the surface, but the whole thickness was perforated by the colors. He at once suspected the truth, and sought out the person who executed the work, and endeavored to learn from him the secret. This he could not obtain on any terms, as the artist considered the secret too valuable to part with on any conditions. Foiled in this attempt, he at once, with a Saxon named Gunter, by numerous experiments, succeeded in producing the same results. They used aqua-fortis and aqua-regia and sal ammoniac, two ounces of each of the two former, and one ounce of the latter, together with two drams spirits of wine, twenty-six grains of gold and two drams of pure silver. They calcined the silver, put it in a glass vessel and poured the aquafortis upon it, and the mixture left to evaporate. The gold was put into another vessel, aqua-regia poured upon it, and when dissolved this mixture was also evaporated. Next, the spirits of wine was put upon the sal ammoniac and evaporated in the same manner. After evaporation the remainder or coloring matter of the several mixtures, which was about the consistence of paint, was applied without the consistence of heat, by tracing the figures with a pencil on the marble, the several parts being touched over with the proper colors. This operation was renewed daily until they had penetrated to the desired depth into the stone. The block or mass, after being thus prepared, may be cut into thin slabs or plates, all of which will have the perfect representation of the figure or form delineated on the surface, as the colors do not spread as they penetrate the block. The most beautiful method of staining by this procress is to apply the colors to each slab separately, on the back, and not permit them to penetrate entirely through the stone, but just deep enough to be seen through the surface on the front after being polished, which process, if skilfully performed, is exceedingly beautiful, and most perfectly resembles veins of delicate color in the natural stone.

The most common method now practiced, however, is by means of heat to open the pores of the marble so as to render it better fitted to receive the colors. Marble of the hardest kind is to be selected, perfectly free from seams or veins, and very finely polished. This is heated to a degree just sufficient to make the staining color boil on its surface. The solvents used to strike in the colors must be varied according to the color to be used. For a blue, stone blue is dissolved in spirits of wine, for a bright red, vermillion dissolved in the same, for a darker shade still finely powdered cochineal may be used; also dragon's blood and a tincture of logwood for the darkest shades. A fine color is also obtained from alkanet root used with oil of turpentine, as alcohol will not mix with this substance.

The staining of marble to any degree of red or yellow may be produced by dragon's blood or gamboge, reduced to powder and ground with spirits of wine in a glass mortar, and the tincture applied to the stone with a pencil. These tracings will, on heating the marble, penetrate very deep and remain perfectly distinct. A slight tincture of dragon's blood alone, without heat, will be sufficient to produce a pale flesh color, which for some purposes is very desirable. If a very deep or intense color is required a little pitch added to the tincture gives it the desired effect. This art is one of peculiar nicety, and when properly executed is exceedingly beautiful, and may be varied or extended to almost any degree by those who become adepts in the business.—*Farmer and Mechanic.*

IMPROVEMENT IN THE MANUFACTURE OF STEEL.

The London Mechanic's Magazine records an improvement of Ewald Riepe, of Finsbury Square, in refining steel. For this purpose he takes bars or lumps of raw or crude steel (particularly puddle steel,) and in order to the refining of them, places them in a furnace or other heating chamber, out of the reach of any injurious action upon them by the atmospheric air, and there subjects them for a time to a temperature not exceeding the melting point of steel. I use for the purpose a welding furnace, such as is ordinarily employed in puddling iron, only that the bed is lowered and the grate brought from two to four feet below the level of the fire-bridge, and the ash-pit is provided with an iron door, by which it may be entirely closed when required. When the furnace is in full heat, I place the bars or lumps of raw or crude steel on the bed of the furnace, but at distances apart, so that they may nowhere touch each other; and during the whole of the refining process, the fire-place is kept fully charged with coals or other fuel. Then, in order to exclude as much as may be the access of oxygen, I carefully lute any crevices there may be, in the working door or elsewhere, with wet clay, and so regulate the draught of the furnace by means of the ash-pit door and flue-damper—closing them more or less, or altogether, as may be requisite—that the heat shall never attain to the melting point of steel. A sufficient practical test of this is furnished by the color of the flame, which is, with this view, carefully watched through an eyehole in the working door. As long as it keeps of a dull or hardly red color, the heat will not be in excess of what is required. I usually put from 600 lbs. to 3,000 lbs. of raw or crude steel, in bars of 3 inches by 1 1-2 inches, into a furnace of the ordinary size, and continue the operation for about four hours. By this method of operation, carburetted hydrogen and oxide of carbon are developed in the furnace in abundance, while the oxygen of the atmospheric air is entirely prevented from acting on the steel; and the product is steel of a very fine uniform grain.

Ladies' Department.

TREATMENT OF CHILDREN.

Some people do not govern and manage their children well because they have not the ability; some because they do not know how; and others because they are not willing to use the requisite thoughtfulness, and submit to the necessary self-denial, for such self-control as is necessary. For some of these difficulties there is no outward and applicable remedy; others may be aided by a few simple reflections.

Do not lay useless commands upon children and allow them to be violated. If a command is fit to be made it ought to be obeyed, and if it is not proper to be obeyed it ought not to be made. Many parents deem it incumbent on them, in order to vindicate their authority over their children, to give a great many useless or absurd commands, without reflecting on their absurdity till they are carried out; when they must stand before their children committed to a false position to which they must adhere for the sake of authority or consistency, or recede from it for the sake of common sense with the loss of their respect, or must suffer a silent disobedience for the same reasons with the loss of their authority.

Do not threaten punishment unsuited to the case, or which from the nature of the case cannot be inflicted. Children soon learn what the real import of such threatening is; and thus acquire contempt for the authority of their parents, and learn the habit of falsehood at the same time.

Do not attach a threat of penalty to every command Children ought to obey their parents and teachers because they command them. A habit of obedience merely to avoid punishment is one of the worst that can possibly be acquired. A child should learn to do what is right, *because it is right*. This will be a correct rule for him now and always.

Do not contract a habit of talking in a scolding or objugatory manner to children. It discourages them from trying to please you, at the same time, that they will themselves contract a similar habit, to be exhibited whenever their occasion shall come. —*Prairie Farmer*.

THE TIES OF FRIENDSHIP.

Are you a brother? In what manner do you treat this relation? Have the voices that were once pleasant to you lost their tone? Have the cold and pitiless storms of the world frozen the current of your kindred feelings within you; or have they lost their power, and wasted in selfish cares, and hollow, heartless formalities? * * * O! cherish, at home or abroad, the dear ties of kindred, and amid all the turmoil, and all the change of earthly pilgrimage, never, never, forget the obligations which they entail upon you. Summon back the bright visions of boyhood. Call up the stream, the hill-side, and the woodland—call him up whose face so often reflected the joyousness of your own, and whose hand at night warmly clapsed in yours—call up her whose voice, like every sister's voice, was around your sunny path like music—call up those who with you

> ——"played
> Beneath the same green tree.
> And every evening knelt and prayed
> Around one parent knee."

And though they may be far or near, though the ocean may separate, or the grassy grave hide the from you—never in all the rush and shifting lights and shadows of existence, never forget that you are a brother.

How to Keep Worms out of Dried Fruit.—Have a pot full of scalding water over the fire, then put the fruit into sacks of a suitable size, and dip them into the boiling water, which will kill the worm or what causes it. After scalding, spread the fruit out to dry—the scalding does the fruit no injury. Whatever it is that causes the worm, is deposited on the fruit during the process of drying.

☞ Spare minutes are the gold dust of time; and Young was writing a true as well as a striking line, when he affirmed that "sands make the mountain, moments make the year." Of all the portions of our life, the spare minutes are the most fruitful in good or evil. They are gaps through which temptation finds the easiest access to the garden.

☞ The stately dames of Edward the Fourth's court rose with the lark, despatched their dinner at eleven o'clock, and shortly after eight were wrapped in slumber. In the "Northumberland-house Book for 1512," we were told that the family rose at six, breakfasted at seven, dined at ten, and supped at four.

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

☞ Kindness, like the gentle breath of spring, melts the icy heart.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

☞ Also published at the same office *every* Saturday, on a large handsome folio sheet, the New England Farmer and Boston Rambler, an independent Journal, devoted to Agriculture, Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and the usual variety of Literary and Miscellaneous matter, adapted to family reading. Letters from Home and Foreign Correspondents will appear from week to week, together with a variety of contributed and selected articles of a Literary, Scientific, Historical, Biographical, Humorous and Juvenile character, short Moral Tales, &c.; containing more reading matter than any other Agricultural Family Newspaper published in New England. Every thing of a hurtful or even doubtful tendency will be carefully excluded from our columns.

Terms, $2,00 per annum in advance. At the close of the year, the publishers will bind the semi-monthly Farmer gratis for any person who subscribes for both publications, paying one year in advance for each.

☞ The Semi-Monthly Farmer contains nearly the same matter as the Agricultural department of the weekly.

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☞ All papers will be forwarded, until an explicit order for discontinuance is received; and whether taken by the subscriber or not from the place where they are ordered to be sent, he will be held accountable until he orders a discontinuance, and pays up all arrearages.

☞ When subscribers wish to change the direction of their papers, or when they return a copy to this office, they will please be *particular* to name the Post Office, and State, to which it has been sent, as well as the one to which they wish it directed; as it often happens that two or more of our subscribers are of the same name, and annoying mistakes have occurred in consequence.

☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, AUGUST 30, 1851. NO. 18.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

WORK FOR THE SEASON.

SEPTEMBER.—The beauty of summer has departed; the fields are no more adorned with rich crops of grass and golden grain; yet September is one of the most delightful months in the year; the weather becomes cool and bracing, giving additional strength to the system and vigor to the mind. September is a peculiar month for fruits; apples, pears, peaches and plums abound in this month; and in perfection.

Threshing Grain should be attended to as soon as possible, after it is harvested and sufficiently dry for this operation; for a large number of depredators will be destroying it. Besides what they eat and carry away, they make great havoc by waste. The quantity of grain is constantly growing less from the time of harvest till it is secured in the granary. After the farmer has been to the trouble of raising good crops, it is of the greatest importance to secure them in good season.

Cleaning Granaries.—Those farmers who are troubled with weevil in their grain, should be careful and cleanse their granaries thoroughly, before putting their grain into them. Wash them well in strong lye, and when sufficiently dry, whitewash them.

Winter Wheat.—Those farmers who have not sown their winter wheat, should endeavor to do it early in September, as it is much less liable to winter kill than when sowed later. This subject is now attracting considerable attention; in New England, many farmers are cultivating it with success. The land should be in good condition for this grain and very finely pulverized; the Blue Stem is doubtless the best winter wheat for New England. Mr. Henry Poor, of Andover, in this State, who has been very successful in raising White Flint Winter Wheat, has recently tried the Blue Stem, and he thinks it rather superior to the other kind. As these two varieties resemble each other in appearance, we think the Blue Stem originated from the White Flint.

Sowing Grass Seed.—The latter part of August is a favorable time for sowing grass seed, but if it has not been attended to, the sooner it is done in September the better; though it often succeeds very well when sown as late as the latter part of the month.

Grass is much less liable to winter-kill than winter wheat; therefore it will bear sowing a little later. Half a bushel of herds-grass and a bushel of red-top are a suitable quantity to the acre. By seeding liberally, the grass will be fine; but if the quantity be stinted, it will be coarse and unpalatable. Clover may be added in March.

Clearing Lands of Stone and Building Walls.—This is the best month in the whole year for these operations. Teams and men are stronger than in the hot summer months, and the days are sufficiently long. And as this is usually a dry season in the year, it is generally convenient to work on lands that are frequently too wet for the purpose.

Top Dressing Wet Lands.—The manure for wet lands should be hauled on, while the season continues dry, and laid in heaps, which should remain till late in the fall before it is spread. To prevent waste by laying in small heaps, the manure should be mixed with two or three times its bulk, with gravel, gravelly loam or sand; these substances are much better than mud or clay for wet lands. Compost manure with but little gravel or sand, may be dropt in heaps on wet land, and the heaps covered with gravel or loam to prevent any waste of manure till the time of spreading. This is a more effectual mode for preventing the waste of the manure, and sometimes it is the most economical as to labor.

Fattening Hogs.—Commence fattening hogs early in this month, as they will gain far more than when the weather becomes cool. During this month a great many materials on the farm may be used that would otherwise be wasted. Luxuriant and tender weeds, particularly such as purslain, afford considerable nutriment to swine, and weeds of

every description, potato tops, pumpkins and squash vines, various other materials, serve to swell the manure heap, and the hog is an excellent manufacturer to prepare them for the land. Small potatoes, refuse apples, pumpkins and squashes, boiled, with the addition of bran or meal, are good food for fattening hogs, and is usually very cheap. Allow hogs fresh earth, and give them charcoal and rotten wood occasionally. Give them no more food than they will eat up clean, lest they become cloyed and lose their appetite. When the hog is fed three times a day and he leaves a part of his meal, omit the next meal that he may regain his relish for food.

Manure.—During this month, a farmer should keep his team at work all the time that is convenient in collecting materials for manure. Besides peat, mud and muck from the low lands, as we named in our hints for last month, he should collect tufts, washings from roads and streets, rich loam, leaves from the forests, where they can be spared without injury to the growth of the trees, and every material that can be obtained conveniently that will contribute to the growth of vegetation.

Budded Trees should be examined, and the bands removed where the buds have taken well, or if they have been recently budded, loosen and retie those bands that bind too closely. Stalks in which the buds have not taken may be rebudded very early in September, if the stocks are thrifty so that the bark runs well and the weather is warm.

Peach Trees should be budded from the first to the fifteenth of September, according to age and thriftiness. The older trees should be budded early in September, those of this year's growth about the middle of this month.

CLEAR UP THE BUSHES.

In our remarks on work for the month, we alluded to this subject. A great many farmers, in clearing new lands, cut and destroy a heavy forest growth, take off a few crops, and then let a large extent of their farms grow up to bushes, brambles and weeds. Frequently the bushes never form a valuable second growth, so that the land is unproductive entirely. We have known cases in which the second growth was of scarcely any value after 20 years, and if the original forest had been standing, the wood and timber would have been worth four or five times as much as the land.

In some cases, a single tree, for instance, a majestic oak, or a large straight and tall white ash, would have been worth as much as an acre of good land. But the sturdy stroke of the inconsiderate axeman had levelled them, and the fire had consumed them. We hope that the inconsiderate waste of forests, as has been the case to a vast extent in our country, will be a caution to those who are now beginning in the wilderness.

In numerous cases, there are scrubby bushes in pastures, that shade a great deal of land, that will be of no value for growth, and they should be cut up as cumberers of the ground.

When bushes are very thick, they should be cut close to the ground, put in piles, and burned when dry. By the heat from the heaps, and the leaves on the land between them, the fire will generally run over the whole surface, and nearly all the bushes will be destroyed.

Elders and other bushes very liable to sprout, should be pulled up by the roots. A bush puller is a very valuable implement for this purpose, as it may be fastened to roots or a bunch of them much more readily than a chain. In fields bunches should be cut close to the ground, so that the scythe may pass over the stumps, and cut down any sprouts that may have started. Or, the better way is, to grub them up, as it is called in Pennsylvania, which is done with a mattox, an implement used extensively in clearing new lands, having one blade in the way of an axe, and another in the same manner as an adze, but narrow. The operator, with his blade like an axe, cuts off the roots each side the bush, a short distance from it in the ground, and then, with the other blade, he cuts off the roots on the farther side, and then he draws out the bush. This makes smooth work, and sprouts seldom follow.

MOVING A PEAR TREE.

Z. B. Porter, Esq., proprietor of the Cambridge Market Hotel, has furnished us with a statement of a novel experiment tried by him last week,—that of transplanting a large pear tree laden with fruit. The tree is of the Leperne variety, 18 inches in diameter a few feet from the ground, 34 feet in height, and the distance through the branches in any direction is upwards of 30 feet. The quantity of fruit now upon the tree, is estimated at two barrels.

The tree was moved a distance of 32 feet, in the following manner:—A trench in the form of a square, 12 feet on each side, was dug around the tree, to the depth of 3 1-2 feet. A box of plank was built around the earth thus left adhering to the roots, and, by working in planks at the sides, a bottom was formed to the box, which thus completely encased the roots of the tree. A canal was dug from the tree to the place to which it was to be moved, of sufficient width and depth to admit of the passage of this mass of earth, and the tree,—with the body of more than 500 cubic feet of earth, and estimated by good judges to weigh 25 tons,—was safely deposited in its new location.

No roots were found in digging around or under the tree. The time occupied in moving it was 40 minutes,—expense $50. The tree stood upon the spot selected for the location of the Cambridge Market Bank, and was moved by Mr. James Mel-

len of Cambridge, at Mr. Porter's request, to preserve the tree, and make room for the erection of that building.

ACKNOWLEDGMENTS.

Of James Hyde & Son, some very fine specimens of Williams' Favorite Apple. Also Curtis's Early or Striped Shopshirevine. This apple is hardly equal to the Red Shopshirevine as a desert fruit; but it is of a more lively flavor, slightly acid, and much superior for cooking. The tree is more hardy than that of the Red Shopshirevine.

Of Mr. John Barnes, of Cambridge, Cherry Plums. This fruit is very beautiful indeed, being in shape and color like a round red cherry, but far larger than any cherry. The quality is good, and from its singular and beautiful appearance, and being very early, it is very saleable in the market; but the tree is a poor grower and shy bearer. Yet there are some exceptions, as we hear of some trees that bear well.

From Andrew Lackey, Marblehead, beautiful specimens of the Summer Rose Apple. This is very handsome and excellent fruit, well adapted to garden culture.

From Mr. McIntosh, stall 105 in Faneuil Hall Market, a very singular fruit. It looks every way like a pear, regular pyriform shape, with rather a narrow neck; the color green, striped with brown. But on cutting this fruit, it proved to be, as we had been informed, a Shopshirevine Apple. This is not the first freak which nature has played with this fruit.

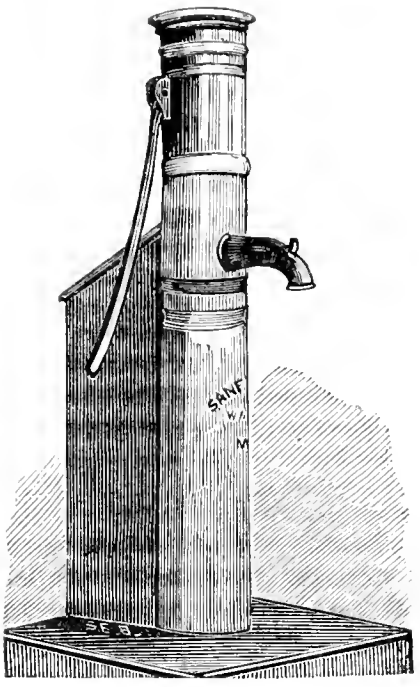
From Leonard Cheney, Southbridge, Early Stirbridge Peach, which we received early last week. This peach is of medial size, good appearance, and of excellent quality. As it is remarkably early, it will be a great acquisition. In some warm seasons, it has been completely ripe by the middle of August.

In answer to A. Pinney's inquiry, we would observe we have a few of those trees growing from the bud this year.

From John Washburn, Plymouth, Sac Tuidifl de Mons Cherry. The fruit is small and not of very good quality. It owes its importance to its lateness.

From Edward Grover, Chelsea, Summer Pearmain Apples. This fruit is not yet fully ripe; when in perfection, it is one of the finest apples. But it does not generally succeed well in this climate. It grows slowly, is uncertain about bearing; and the fruit is liable to burst and crack. It has long been known to the public, yet it is cultivated very little in New England. Better adapted to the Middle States

We have received a specimen of pears of middling quality without a note, or the note has been misplaced.



WOODEN PUMPS.

Notwithstanding all the contrivances that have been invented for drawing water, within the last quarter of a century, in the shape of iron, copper and endless chain pumps, we incline to the opinion that where a pump is to be placed directly over the well, none will be found better or cheaper than a first-rate wooden pump, well sapped and cleansed; and these are free from the poisonous substances contained in the metals.

With regard to the endless chain pump we cannot speak from experience, but we have, among others, heard this objection made to them, (and we think that it looks reasonable,) that the chain, by passing rapidly through the well, when there is not great depth of water, necessarily produces such a current as to disturb the water, and render it unfi for use.

The cut at the head of this article represents one of Sanford Adams' *latest style* wooden pumps, with a ventilating box attached. This box opens by a lid on top, and is not only used as a ventilator, but serves very well as a refrigerator for those who cannot conveniently obtain ice. The pump may be used with or without the ventilating box.

We have a wooden pump in perfect order that Mr. Adams set some twelve or fifteen years ago, which we would not now exchange for any one that we have seen. We advise those interested to examine and select the best.

Wind Spavin.—Jonas M. Ladd, of Unity, N. H., inquires for a cure of this disease.

☞ Previous to the reign of Charles VIII., the Queens of France wore white upon the death of their husbands, and were thus called "*Reines blanches.*" On the death of that monarch the mourning was changed to black.

For the New England Farmer.

DANGERS OF THE CITY.

Mr. Editor:—I again avail myself of the opportunity which your useful publication affords, to express some views upon a subject which strongly interests many of your subscribers. It is this:—The desertion of their homes, by farmers' sons and daughters. Youths resident distant from cities, are, for the most part, ignorant of the snares and toils which are set for them, by numbers of depraved and unprincipled men and women, who stand ready to make the unwary youths their prey.

The young man departs from his father's house to seek his fortune in the city. With his father's sage advice yet sounding in his ears, and to him seemingly impossible to be forgotten; with his mother's warnings and affectionate admonitions still fresh in his memory, and the picture of his mother's streaming eyes yet before him, he arrives at his journey's end. There is generally some one anxious to make the unsuspecting youth his victim. As the young man stands undecided, doubtful whither to turn his steps, this tempter advances to him, and is, in a few moments, on the footing of an old acquaintance. He inquires if the young gentleman wishes a quiet boarding place, and is answered, yes. The stranger disinterestedly volunteers to conduct him to one; his offer is thankfully accepted. They arrive at the *boarding-house*, which is kept by some one of the decoy's associates; he is smilingly received by the obsequious landlord, and treated with the greatest respect. Leaving his baggage at the hotel, he goes out under charge of his protector to see the sights. His friend is very assiduous in showing him every thing that can be seen; the innocent youth willingly paying all expenses, as the other had unfortunately left his change at home, but will make it all right. Thus two or three weeks, both days and nights, are spent, begetting a distaste for honest industry. His money is now all squandered; weakened and enervated by dissipation, away beyond reach of his father's counsel, far distant from his mother's watchful eye, can any marvel that he falls into the pit prepared for him? By degrees he becomes a thief or burglar or highwayman, or, it may be, takes the last degree, and becomes a —murderer!

But, it may be asked, does he never sigh for the innocent days of his boyhood? Yes, full often, does his not yet entirely insensible conscience awakes him to see the path down which he is rushing headlong. Then he madly flies to the intoxicating bowl, and seeks to drown all remorseful thoughts; he smothers them for the time, only to make them burn yet fiercer when he shall revive from his stupor.

Should he attempt reformation, who is there to employ him? Who will give him a helping hand to assist him from his low position? It is much to be regretted that there are so few who stand eager to assist and encourage those among the downfallen who may attempt to regain their former position in society, while there are numbers who freely give both time and money in aid of some foreign cause. The result is, the man who would willingly change his mode of life is compelled to continue in his abandoned course, because there are none to whom he can apply; or, if there are any, they are so few, that he knows not where to seek them.

A young man was recently brought before one of our courts, charged with breaking open a store. He was convicted, and sentenced to two years in the State prison. His story was a melancholy one, though by no means uncommon. He stated that he came to the city within a year ago, fell into dissipated habits, working occasionally as the opportunity presented itself, and his necessities urged him. At last, finding himself moneyless, and with such a character as prevented his getting any employment whatever, he was induced to commit the offence for which he was to be sent to prison, to pass two long and gloomy years. Such are some of the dangers which beset the incautious youth.

What must have been the anguish of the parents of the above unfortunate youth, upon the receipt of these, perhaps the first tidings from that son? This deed of his son's will surely bring old age prematurely upon the sire; his step will lose its vigor; grief and shame will scatter the snows of age thickly among his locks; no more can he meet and speak to his neighbors as an equal; no, he can never again walk erect with the steady eye of an honest man. He reads his shame in every eye, and thinks that he carries the record of his son's guilt impressed upon his countenance. No man would wish to endure such a life.

But the *mother*, who can tell her grief? What can equal the poignancy of her sorrow? It may be that the first intelligence is conveyed to her through the newspaper. All can think what the shock of such unexpected news would be. Better would it have been, for her and for her child, if she had not bore him.

When his sentence has expired, if his parents have not sunk under the burden of his ignominy, he can return to his birth-place and live an honest man. But, should they have fought the battle of life, and sought rest in the quiet grave, what will he do? Will any help him? Alas! I fear there will be none.

Though the danger to young men is imminent, it by no means equals that of young women. I think I do not go beyond the truth when I say, that it is almost sure destruction for a country girl, an utter stranger to the city, to enter it unprotected. There are wretches, male and female, always on the lookout for them. People in the employ of fashionable young men; young men, too, of good standing and respectability, as the world goes. These young men, and also keepers of brothels, are in league with the proprietors of low dens of infamy, called "intelligence offices," who, upon the pretence of procuring the young girl a place, put them in the possession of these fiends, from whom there is no escape undefiled. The common end of those who are thus entrapped may be seen by the following fact:—A body was found recently in one of the docks, which was recognized to be that of a young woman of the town, who had been missing several weeks. She was from the country, and was supposed to have jumped overboard during a fit of insanity.

How very few girls who come to the city with the intention of learning trades, and when learnt, of retiring to their homes, to prosecute them, realize their hopes! Young woman, would you be advised? Stay at home, live unmolested, do for your parents in their old days what they did for you in your young years, and you will be happy,

and fulfil your part in life creditably. To young men who come to the city to escape hard work at home, let me say,—if you learn a trade, you will work as hard as at home; you can judge whether toiling day after day in a close shop is more laborious than the season of toil and the season of pleasure of a farmer's life. But if you have a strong inclination for a mechanic's life, gratify it by all means, and, with industry and economy, you must succeed. But perhaps you do not covet so high a position as a mechanic's,—your highest aspirations being, to stand behind a counter measuring off tape, and retailing needles! Such being the case, I would say, go do it; procure a tall dickey—fancy pantaloons—an outrageous vest—a mammoth neck-cloth and washed pin to match—and so on, until dressed to your entire satisfaction. Pilfer from your employer to pay for it, as many do, though I am happy to say by no means all; take the money due your landlady, to spend upon some flaunting shop-girl, or, it may be, one worse; defraud the poor washerwoman, to purchase cigars and oysters, and cap the whole, by cutting the acquaintance of some honest shop-boy, or some mechanic's apprentice from the same town as yourself, because he will not, dishonestly, dress himself suitably to walk the streets in your company. Time, however, will show which of the two will receives the most respect from his fellow-men. I hope I shall not be understood as saying that the above is a true picture of all and every boy, who may go into a retail dry-goods store; but it is so with too many of them; and their final bringing up is not difficult to imagine. S. S. P.

Remarks.—Our correspondent has not exaggerated the dangers of the city, to unwary youth, and the subject is one of deep interest to the farmers in the interior, whose well-bred and honest children, (till brought within the influence of the snares of a city life,) are a blessing to their parents, a fond and lofty hope to themselves, and a fair promise of being a blessing to society.

There is one great evil which besets youth in the city, in a most insiduous manner, to which our correspondent has not particularly alluded, and of which farmers generally think but little; and that is the vast amount of deception in trade, as it is generally done in cities, by which young men are trained to deceive and take advantage of customers, and after awhile they become so practised in iniquity, that they are hardened against all compunctions of conscience, that they rob their employers, and this is regarded as crime, and then they are exposed, punished and ruined.

For the New England Farmer.

CATTLE EATING BRICKS.

Mr. Editor: — Sir,—I wish to be informed by you, or some of your numerous readers, the cause of cattle eating bricks, and whether it is injurious or not. I have a pasture in which is the ruins of an old chimney, and for a month past I have noticed that my cattle are in the habit of going there about every day. I went to see what was the cause of their being there so much, and I found that they were eating bricks. Some had pieces as large as a sixth part of a common brick. Any information concerning the above case will be gratefully received. W. T. Tainter.

South Carthage, Me., Aug. 2, 1851.

Remarks.—We are not certain as to the cause of cattle eating bricks, but we suppose that they are confined to an old pasture where the feed is deficient in some important ingredients that they need, and that they seek to supply the deficiency by eating bricks, which may contain the ingredients they want. Cows afflicted with the bone disorder attempt to supply bone earth, or phosphate of lime, which is deficient in their food, by eating bones; and ground bones are given them as a remedy.

As to the eating of bricks being injurious to cattle, we think they may attempt to eat large hard pieces, and thereby injure their teeth, or choke themselves; but if the bricks were reduced to a fine powder, perhaps they might eat them with advantage. There are instances of sheep frequenting old chimneys that are falling to ruins, and eating the clay in which the bricks were laid; which is probably owing to some deficiency in their food, which the clay supplies.—Ed.

For the New England Farmer.

INDIAN CORN.

Mr. Cole:—I herewith send you a corn root taken from amongst several others on one side of a single stalk, all, from appearance, extending nearly directly downward to the pan. This when taken out measured 27 inches in length, and was broken off by the removal of a stone. You perceive that the main root has lateral roots extending from the stalk and nearly to the lower end, and probably would have had the whole length, had they not been interrupted, by the stone removed in taking it out.

This root was obtained, and the examination of the other roots made, by digging a hole some 18 inches or two feet from the stalk, to the pan, and then carefully removing the earth by a sharp pointed stick, exposing the roots and examining them, until the excavation was perpendicular with the stalk. The conclusion to which I came from this examination was, that when the soil will admit of it, the principal roots, or at least the main part of them, tend nearly downward, and that the most of those near the surface are the laterals from the main roots.

The question may be asked, what advantage can be gained by this examination? What matter whether corn roots run near the surface or extend deep into the soil and subsoil? I answer, it settles a very important point, viz: whether deep or shallow tillage should be practiced. It is true, that corn will stand the drought better than many other crops which we cultivate, yet in very dry seasons it suffers on the largest portion of farms in Massachusetts, and sometimes the crop is entirely destroyed. The only reasons why it stands dry weather better than many other plants, is from its formation, to take in the dew, and extending its roots deep into the earth.

There may be locations where by shallow tillage good, and in some cases even large crops, are

obtained, yet the safe and sure method is to have a deep rich soil, the deeper the better. Therefore no farmer need fear turning under, with a deep furrow, long manure, provided he will prevent excess of moisture, have the surface soil rich, or put something in the hills to give the corn a start, for he will certainly find the advantage of it. Hence, too, the advantage of the sub-soil plough. The editor of the Massachusetts Ploughman published several articles, last spring, on the cultivation of Indian corn, and in all of them he based his management on the assumption that corn roots do not run deep, but are near the surface; should he see this article, I hope he will take his spade in hand, and examine, as I have; I think he will then see a reason for changing his operations, and will undeceive his readers in relation to the roots of corn.

Yours respectfully,

S. M. Stanley.

West Attleborough, Aug. 4, 1851.

Remarks.—We are much obliged to Mr. Stanley for giving to the public this ocular demonstration of the importance of not only deep, but fine tillage; for the numerous fine lateral roots on the main root he has sent us show the great importance of fine tilth, that is permeable to these rootlets. Many persons finding a large number of corn roots near the surface, making a long and rapid growth, take a shallow view of the subject, and with this are content without ever making that deep examination which is necessary in order to have a profound and thorough knowledge of the subject.—Ed.

For the New England Farmer.

GRAFTING IMPOSITION.

There are many persons in the various portions of New England who have devoted a portion of each year to grafting apple trees, for such individuals as may favor them with a call for service. The chief recommendation that such men need, in order to secure favor with many of those who have orchards to graft, is, that they are "successful grafters;" which means, that a good share of their scions live.

Most of farmers, if they hire a man to graft for them, require him to furnish his own scions. They take his word for it, that all his kinds are "first rate." They admit the grafter to be a man of knowledge and judgment—that he knows the peculiarities of his various kinds of apples, and that his judgment of fruits and trees is every thing needed.

Some men have spent a handsome sum of money in this way; but when their trees had come to bearing, they were sadly disappointed. Much of their fruit was neither very good for eating nor at all fit for cooking. Then again, some kinds were very poor growers and perhaps poor bearers also. Some kinds would break and rot on the tree before time for harvesting. Another kind is a sickly kind of tree, and never hardy.

If our country farmers do not wish to be imposed upon in this way by the ill judgment, the ignorance or dishonesty of grafters, they must pursue a different course of action. Never trust such an important matter as selecting your kinds of fruit to any man who has not studied into all the peculiarities of fruits and fruit trees, and one who is possessed of a capacity to discriminate.

I know of trees which have been grafted, (for the purpose, I suppose, of getting "grafted fruit,") which are large enough to pay an average amount of several dollars clear profit yearly; while the average worth of what they produce yearly is not more that twenty-five cents. They may be manured, they may be dug around; but it is all to no profit. "Grafted fruit" is not the thing desired; but *good* fruit, and enough of it.

Grafters will, many of them, be seen going here and there gathering scions, preparatory to the grafting season. Pick up here and pick up there, wherever they can pick up a few; and what do they know about them all? It is sometimes the case that men who do not want their trees cut will send such men on to worthless trees to cut scions. The evil falls upon the man who employs them to graft for him.

Now if any of the readers of the Farmer have been "taken in" in this way, my advice is to them not to conclude that "all the world's a cheat;" but correct their own errors, and having learned wisdom by what they suffer, next year make an effort to get such fruit as will be most profitable and most satisfactory to their purse and palate.

He who rests on the judgment of an ignorant man will suffer evil.

Mason, N. H., Aug., 1851. C.

For the New England Farmer.

GREEN CROPS---FLOWING GRASS LANDS IN WINTER.

Mr. Cole:—It is with a great deal of pleasure that I have perused the few last numbers of your paper, and find that in subscribing to it I have subscribed to a valuable paper. It is three years since I have been confined to the house by sickness, and now that I begin to exercise on my farm, I need an agricultural paper. I have chosen yours, and I would like your advice on several points on farming. Firstly, then, I have a good field of level land some distance from home, too good in my opinion to give up for a pasture, and too far to cultivate by manuring. I thought of your idea of turning under a green crop of manure. Will you inform me of the best and cheapest article to sow to produce the green crop, also the best way to manage the same? Is winter rye ever used? and with what results.—I have a piece of low land which I might reclaim, and produce an abundance of English grass, if waters did not flow it every winter. Will that injure the grass? And I would like to know if apple trees may be budded as late as the first of September.

I remain yours, with respect,

S. Walpole. John N. Smith.

Remarks.—By beginning early in the season, two crops of buckwheat may be raised in one summer to plough in for manure, but it is now too late to raise one crop this season. Sow winter rye the latter part of this month, or the first of September, and it would form a good crop to plough in early in June, in season to raise a crop of corn, potatoes, beans, beets, rutabagas, &c., if the land is sufficiently fertile—or let the crop grow till about the middle of June, then plough in, and sow buck-

wheat, plough this in, and sow rye again, and clover in March, and take off a crop of rye the next season, and plough in the clover and stubble for manure. If this land is light, it might be greatly improved at a small expense, if the materials are convenient, by a compost mostly of peat, mud or muck, that has been dug and exposed one year, with eight or ten bushels of ashes, and one or two bushels of fresh slacked lime to the cord, to remain a month or two after the ashes and lime are added, and it should be shoveled over meanwhile, and the lumps finely pulverized.

We think the flowing of grass land late in November would not injure grass, if the water was let off as soon as warm weather comes on.

When the weather is wet and very warm, apple stocks that are very thrifty may be budded the first of September; but generally it is necessary to bud them from the 10th to the 20th of August. Much depends on the season.—Ed.

For the New England Farmer.

TIME FOR CUTTING ASPARAGUS IN THE FALL.

Mr. Cole: —Dear Sir,—I would inquire of you what is the best time of the year for mowing asparagus that is left to grow when done cutting it in June? The farmers in this vicinity usually follow the practice of mowing it late in autumn, about the last thing before the snow falls. I think I have somewhere seen it stated that it should be cut early, before the seed has had time to mature, as it draws much strength from the soil while bringing the seed to perfection, which by early cutting would be saved for future years. Would the adoption of this method prove injurious to the roots of the asparagus? By giving the desired information, you will oblige,

Yours truly, I. W.

Winchester, Mass., Aug. 7, 1851.

Remarks.—We suppose that cultivators generally cut their asparagus when it is most convenient after it is fully grown; but we think it would be much better to cut earlier, as suggested by our correspondent; say when the plants are fully grown, and the seed is forming.

For the New England Farmer.

THE POTATO DISEASE NOT CAUSED BY INSECTS.

Mr. Cole:—I have just received from Dr. Harris a carefully prepared communication dated Aug. 6th, on the *potato disease*, which I have handed to the editors of the Observer,—concluding as follows: "If the question be in regard to the agency of insects in the production of this wide-spread pestilence, there are altogether too many that are implicated in the charge. One adequate cause is quite enough, and all that the case requires, and this cause must be universal or coextensive with the disease. It must be the same in Europe as in America, and alike under all circumstances, and at all times. It will not do to say, that a cause which has always existed, which has been in operation to a greater or less extent every year, has all at once acquired a power to produce a pestilence, before wholly unknown. The ravages of insects upon potato plants, with here and there a solitary exception perhaps, as in the case of Mr. Flanders, have been as great before the occurrence of the potato disease as at any time since its appearance. For these and other reasons already given, I still retain the opinion that the disease is not produced by insects." I think this opinion should be conclusive on this point.

Very truly yours, J. W. Proctor.

Danvers, Aug. 9, 1851.

PRESERVING AND RIPENING FRUITS.

Mr. Daniel T. Curtis, at the Horticultural Store, Boston, has for several years past given particular attention to the preservation and ripening of fruits, and in these respects he has shown more intelligence and skill than any other man in the circle of our knowledge. He has frequently shown to us specimens of pears ripened up to perfection, plump and excellent, whilst others of the same lot, kept in the ordinary way, were shrivelled and worthless. We are pleased to learn that Mr. Curtis is disposed to give his valuable discovery to the public, and that the Massachusetts Horticultural Society have encouraged him to this commendable course. We have often remarked that it requires more skill to ripen pears well than to raise them, and we hope that the discovery of Mr. Curtis will obviate this great difficulty. The following document is from the transactions of the Massachusetts Horticultural Society, on this interesting subject.

At a meeting of the Society, May 31, the following report from the Fruit Committee was read by the chairman, accepted and ordered to be printed:

The Fruit Committee, to whom a communication from Daniel T. Curtis, in respect to a method discovered by him for ripening and preserving fruits, has been referred, ask leave to report at this time, but in part, upon the subject committed to them. Specimens of fruit, consisting mainly of pears, have repeatedly, during the past year, been placed upon the tables of the society by Mr. Curtis, that had been preserved by him for a long time after their usual period of maturity, that were found on examination to be perfectly sound, and, in some instances, to have retained unimpaired their juice and flavor. Among these pears were specimens of the Seckel, Bonne Louise de Jersey, Duchess d'Angouleme, and Easter Beurre. The Seckels, though a kind peculiarly subject to early decay, were perfectly sound, and retained in perfection the peculiar flavor of that variety. Of the other varieties, the specimens exhibited were generally, though sound, insipid and tasteless, arising from the circumstance, as Mr. Curtis stated, and as their appearance indicated, that they were when packed, and subjected to his process, immature and imperfect. These pears were exhibited by Mr. C. as late as January and February, months after their usual season of ripening, thus proving, as no signs of decay were visible, that their season could be almost indefinitely prolonged.

Mr. Curtis has sent pears, preserved and packed in his peculiar method, to Havana, to London,

and San Francisco, thus subjecting his method to the most severe trials. The following extract from a letter from his correspondent at Havana shows the result of the experiment, so far as the shipment to that city is concerned: "The pears arrived in perfect order; they were delicious. I never thought they could be eaten in so perfect a state, except in the country where they grow."

The Gardeners' Chronicle of April 5th states that at the exhibition of the London Horticultural Society, April 1st, a box of 15 Easter Beurre pears, received from Mr. Curtis, of Boston, were exhibited; that cases containing seven of these pears were opened, and of them four were found to be decayed and three good; and then states, "These pears were stated to have been ripened by a method peculiar to Mr. Curtis; the nature of which was not explained. They were, for the most part, melting, sweet, and perfectly ripe, a condition which this fruit with difficulty attains with us in England." The society awarded Mr. Curtis its Knightian medal.

The California Daily Courier of April 8th acknowledges the receipt, through Mr. D. H. Haskell, of Adams's Express, of a magnificent pear, as sound as when packed at Boston. The Pacific News, Alta California and other San Francisco papers, make similar acknowledgments, and all concur in stating that the pears were perfectly sound, and that as they were sent for the purpose of testing the practicability of sending fruit to California, across the Isthmus, speak of the experiment as successful. These pears were shipped at Boston, January 27, and after a detention of 70 days, arrived in California in April. These papers referred to state that the pears, though sound, were deficient in flavor, a circumstance to be imputed, as with those exhibited to the society, perhaps to the immature and imperfect state of the fruit when shipped, and not to the effect of the passage, or a difference of climate. From the facts now detailed, as well as from their own observation, your committee feel justified in expressing a confident opinion, that after many unsuccessful trials of various processes and different methods, Mr. Curtis has succeeded in discovering a method of preserving fruit for a very long, if not for any desired period, and that this method is capable of a practical application.

Although Mr. Curtis has, as he states, preserved other varieties of fruit besides pears, yet so far as the personal knowledge of the committee extends, the fruit subjected to his process has thus far been mainly of the latter description, and they feel, before arriving at a conclusive opinion respecting the value of this discovery to the society, experiments with other species of fruit, as peaches, plums, &c., &c., should be made, and opportunity be offered for their examination, after being subjected to the process. With a view to the gratification of the committee in this particular, Mr. Curtis is about commencing, under their inspection, some experiments with the early and soft fruits, to be continued with other kinds, as they come into season. In addition to the discovery of a mode of preserving fruit, Mr. Curtis seems also to have succeeded in finding out a process by which such varieties as are difficult to ripen, may be brought to perfection, —a discovery of almost as much interest to cultivators, as that by which the season of all varieties is so greatly prolonged and their safe transmission to distant places secured.

That the discoveries of Mr. Curtis are important, and that he is justly entitled to an honorary and pecuniary recompense at the hands of the society, as well as that a knowledge of the process should be, if possible, procured for the use of its members, your committee entertain no doubt, and they believe that it will be but fulfilling some of the objects for which it was instituted, in testifying by such recompense a proper appreciation of the merits and discoveries of Mr. Curtis, and in procuring for the public the means of availing itself of the advantages to be derived therefrom.

Under the existing circumstances, however, while they wish now to place on record such evidence of the claims of Mr. Curtis as is afforded by this expression of their own opinions and statement of facts, your committee are of opinion that the final action of the society, in relation to this matter, should yet be delayed until the result of the experiments referred to are ascertained, and such further information with respect to the expense attending the process and mode of practicing it procured, as will enable them, in view of the beneficial results of which it is capable, the better to recommend, and the society to adopt, such measures in relation to these discoveries, as Mr. Curtis seems to deserve and its own interest to demand. With these views, your committee ask that the whole subject may be left in their hands, and that further time be allowed to them to consider what action it is proper that the society should take in reference thereto.

JOSEPH S. CABOT, *Chairman.*

For the New England Farmer.

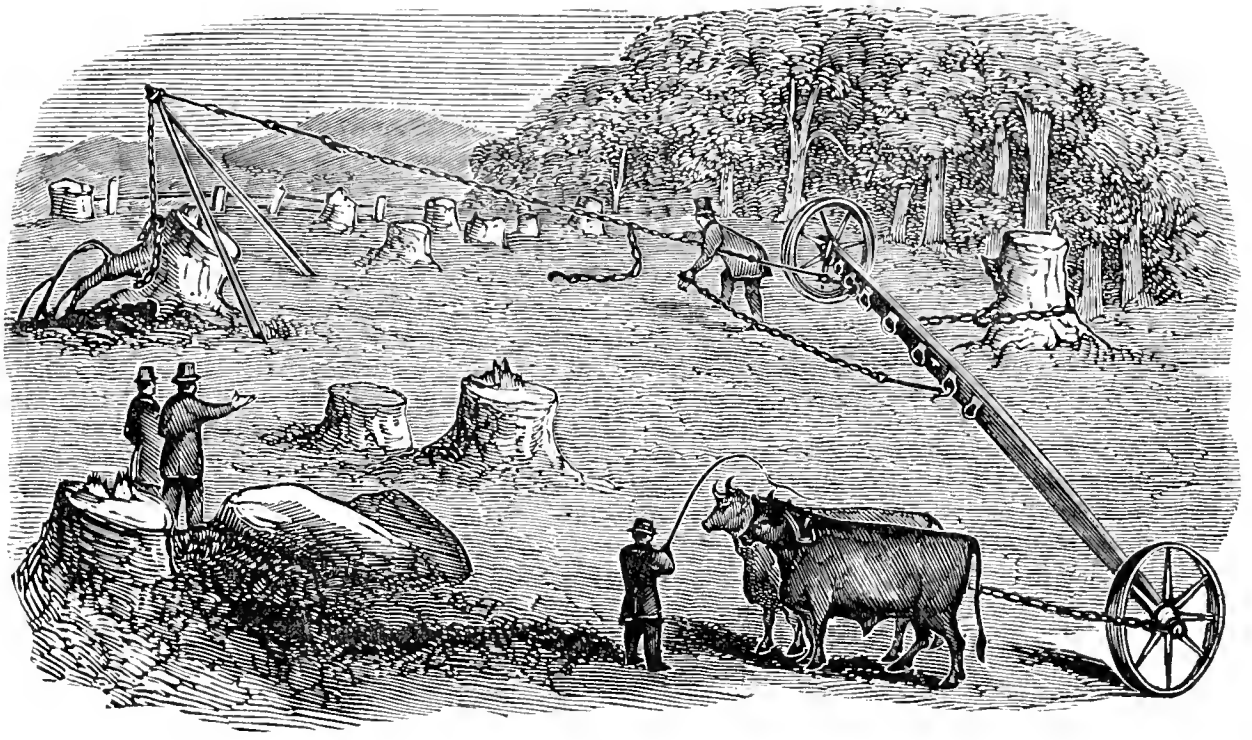
DEEP PLOUGHING.

MR. EDITOR:—On perusing the paragraph upon "Mr. Whipple's deep ploughing," in your paper of this date, I perceive that either the printer or myself made the last sentence singularly unintelligible. The idea intended to be expressed was this:

"We who have been accustomed to value highly the benefits of the compost heap, should have thought, that some application of this kind could also have been beneficially made. Not that we would undervalue the utility of *deep ploughing*, but would have it combined with liberal manuring." It may possibly happen, that lands may be kept in productive condition, for a few successive seasons, by deep stirring and fine pulverization of the soil; but that any modifications of the soil will supercede the necessity of feeding it with a supply of those elements that are consumed by the growing plants, we do not believe.

Mr. Whipple's culture is a fine exemplification of the making of productive fields, where for years there has been only barren plains. We remember a few years since to have seen that the same thing had been done by Mr. Clark, of Northampton. Gentlemen who can do this successfully, at a reasonable expense, are worthy to be classed among public benefactors. It is one, among many, of the beneficial applications of science to agriculture. And whether those who make it *know* it to be *science*, or not, it is none the less *science*.

August 16th, 1851. P.



STEWART'S PATENT STUMP MACHINE.

By invitation of Mr. Wm. W. Willis, proprietor of Stewart's patent Stump Machine, we were present at an exhibition made by him in Orange, Mass., on Tuesday, the 19th inst. We took the morning train, and arrived at the depot a few minutes past 11 o'clock, where a carriage was in readiness to convey us to the field of operations, which was about half a mile south of the village. On arriving there we found the field selected pretty well covered with stumps, varying in size from one to three feet in diameter. Quite a number of the citizens and several strangers from a distance were on the ground. One gentleman informed us that he had come some 50 miles over the hills in his carriage to witness the operation of this machine.

There were two machines on the ground, (one with a 10 foot, and the other with a 30 foot lever,) both of which were soon put in operation, each requiring three men and one yoke of oxen to man them, or two men, and a boy for driver.

It was there shown that with a 10 foot lever, stumps varying from 1 to 2 1-2 feet in diameter could be extracted in one and a half minutes after the machine was brought to bear, and Mr. Willis informed us that he could, with a narrow spade, (a very convenient tool which he uses for digging under the roots) dig the holes, hitch the chain and take out such stumps in less than four minutes, on an average, in a good field. The machine was also applied to large rocks, estimated to weigh from 10 to 20 tons, and they were taken out of their beds with all possible ease. The larger machine was applied to several stumps with the same results, one in particular we noticed measuring 3 feet in diameter, with roots extending some 12 feet each way from the centre. This stump was taken out in a very few minutes, and it was really *beautiful* to witness the regularity, certainty, and apparent ease with which the work was performed.

We were on the ground about an hour and a half, during which time some twenty-five or thirty stumps were taken out.

A gentleman present, thinking that a stump speech would not be inappropriate on such an occasion, mounted the largest upturned stump, and edified the assemblage, numbering some two hundred, (including several ladies,) with a short and spirited address.

The occasion was enlivened by the presence of the Orange Band, who did themselves honor.

Mr. Willis, after satisfying all that no stump could be produced that his machine was not capable of removing, invited us to the hotel, where we found a dinner served up in Mr. Gibbs' best style. After doing justice to the viands, we took the three o'clock train for Boston.

The day was fine, and every thing passed off in a pleasant and satisfactory manner to all. As incredible as it may seem, we were informed that by actual experiment it had been ascertained that one yoke of oxen attached to the end of the 30 foot lever, were capable of producing a power upon the object to be removed equal to 400 tons.

We deem it unnecessary in this article to go into a minute description of the machine, or its mode of operation, as full particulars have been published in previous numbers of our paper.

We are happy to say that our highest anticipations were more than realized, and that all the reports and descriptions that we have seen published

in relation to the workings of this machine, we believe *not* to be exaggerated statements, as many have supposed. Persons wishing for a more minute description of the above machine and its mode of operating, are referred to an article published in our paper on the first day of February last; also to another article published June 21st.

CATTLE SHOWS AND EXHIBITIONS.

New York State, 16th, 17th, 18th and 19th Sept., at Rochester.

American Institute, at Castle Garden, New York, Oct. 1st, and will continue nearly through the month.

Ohio State Exhibition, Sept. 24th, 25th, 26th.

Maryland State Exhibition, in Baltimore, Sept. 23d, 24th, 25th and 26th.

Rhode Island State Agricultural, Horticultural and Mechanical Exhibition, at Providence, Sept. 10th, 11th and 12th.

Vermont State Exhibition, at Middlebury.

New Hampshire State Exhibition, at Manchester, early in Oct., and will continue three days.

Massachusetts Horticultural Society, Sept. 16th, 17th and 18th.

Worcester Horticultural Society, Sept. 17th, 18th and 19th.

Worcester Cattle Show, Sept. 18th.

Middlesex, Conn., Middletown, Oct. 1st, 2d and 3d.

Bristol, at Taunton, Oct. 19th and 20th. The exhibition of Stock on the 19th, and the Ploughing Match and Dinner on the 20th.

Cattle Show and Ploughing Match, at Fitchburg, Sept. 25th.

Hillsborough, at Amherst, Oct. 1st and 2d.

Essex, at Salem, Sept. 25th.

The annual Exhibition of the Middlesex Co. Agricultural Society will be holden at Lowell, Sept. 24th. Simon Brown, Esq., Concord, Secretary.

☞ The Secretaries of the several Agricultural Societies are requested to forward us notice of their time and place of meeting, for publication.

BLUE STEM WINTER WHEAT.

We have already published that Mr. G. F. Chandler, of Lancaster, raised, last year, eighty-eight quarts of Blue Stem Wheat from one quart of seed. He brought us a specimen of the grain, in the head with straw. Its appearance was very fine indeed. He now informs us that his crop of this wheat is very fine this season. This crop on one acre of rather light land was estimated at thirty bushels. On a quarter of an acre of better land he expects more than ten bushels. He remarks that the grain is very plump and white, and he considers it admirably adapted to this climate.

For the New England Farmer.

THE CITY AND THE COUNTRY.

Mr. Editor:—A late article in your paper is full of sympathizing pity for the unfortunate resident of the city. It is entitled, "The Season, the City and the Country." It says—"Summer beauty is around us—warm winds, cool dews, refreshing streams, rich foliage, &c., all conspire to enjoyment." Now, sir, I would ask, have we none of these? Have we not, in the delightful sea-breeze, a substitute for warm winds? Suppose you do catch cold now and then, what of that? It's nothing to those who are used to it. Cool dews, we have sometimes, too. As to refreshing streams, they abound in this city; if "J. B." doubts this, let him walk up Washington Street, some morning when the clerks are "playing" with the pure Cochituate, and he will change his opinion. To be sure we have no shady woods, but a man may get on the shady side of the street, and if he is a man of strong imagination, he can fancy himself walking in some gloomy forest. Let "J. B." visit our magnificent "Public Garden," and then speak of the verdant flowers of the country.

Further, he says—"The whispering insects on the ground, the hum of bees among clover,—the soft moon far above, awaken feelings which nothing but poetry can express; nay, reader, have not poets ever been trying to give expression to what is inexpressible?" Whispering insects, yes, and those insects, who, not content with whispering, must "bore" you with their not angelic tongues. Talk of the hum of bees among clover, —have we not the majestic growl of the bears and the deep bass of the bulls of State Street? As the merchants in the city do not deal in poetry, of course they must look upon the moon, if they wish to express their feelings. The tailors of this city can give expression to what is inexpressible, if poets can't.

Now hear him a little further. "But alas! the resident of the city hears little of rural sounds, sees little of its beauty and feels less of its enjoyment; what he hears he heeds not, and what he imagines must come through the pages of the novel, the stage scene," &c. How he weeps for us! Can anything be more agonizing than that "alas!" If we have no rural sounds, no songs of birds, we have their equivalent, our nocturnal concerts, the cat operas, with their pitcher-sending and boot-stirring music. I do not know how much others see of rural beauty, but I have growing in my attic window two luxuriant potato vines, and, as yet, unmolested by that black bug. I think it will be news to many of the dwellers of this city, that they cannot exercise their imagination, unless stimulated by the perusal of a yellow covered novel, or by a visit to the theatre.

Again! "Can the city soothe the woe-worn spirit," &c. Can the country do it? Think you the young mother, who has just placed her child in the cold grave, would find her grief sooner assauged in the country than in the city? He who is eaten up with disease, can the country cure him? Neither town nor country can promise hope for the future, for no man knoweth of the morrow.

And I think I am not the only one, among those who visit our suburbs, who, judging from the numerous gingerbread-work houses which have

sprouted lately, is of the opinion that *man* has had some hand in building the country.

Yours, JOTHAM POTTLE, JR.

REMARKS.—Let our correspondent extol the pleasures of the city; in the summer season, they bear no more comparison to those of the country, than the size of the hillock on which the State House stands on in Boston, to that of the splendid White Mountains or the lofty Alleghanies. And why those streams of water of which our correspondent speaks? Are they not to lay the dust and filth in the streets? And what is this boasted Cochituate water? It is from a pond with its broad expanse to the sun, abounding with decayed vegetable matter, as indicated by the dingy appearance and insipid taste of the water; and finally received warm into the dwellings through leaden pipes. What is this water compared with the pure crystal fountain that gushes from the hill and mountain side, or the emblem of truth drawn from a well with "a white-pebbled bottom, in a moss-covered bucket."

In the city you have the sea-breeze; but instead of a delightful breeze, you often have an "east wind," which, if it does not bring a pestilence, like the east wind of olden time, it brings disease and death to thousands, and terrible sufferings to the poor invalid. What is the shade of a little public garden, which is to be shared by a hundred thousand inhabitants? Is it a place of retirement or enjoyment amidst a constant stir and bustle? And what is the atmosphere of the city, with its hundreds of stables sending forth their emanations in the air; and thousands and thousands of privies, with their foul odor through the atmosphere. How soon all the inhabitants would go to destruction were it not for the breezes from the country, rendered pure by the operation of vegetable life, evolving vital air to support the animal kingdom.

For the New England Farmer.

THE POTATO DISEASE.

MR. COLE :—I have read with much interest the various communications which have appeared in your excellent paper concerning the cause of the potato rot. And as the bug theory seems to be very essentially used up by the remarks of Dr. Harris, I thought I would offer my opinion on the subject; feeling confident, that whether I can claim the reward offered by government or not, it will be a great benefit to the whole country, if people will investigate the subject and act prudently.

I think it is a common practice among good managers, who wish to propagate either animals or vegetables, to select good seed; but I am confident that many who are good managers in this respect with regard to other vegetables, have sadly neglected this important point in the culture of the potato. I have thought for some time that the great trouble may be safely attributed to planting unripe potatoes, and those that are too small, and cutting off what is commonly called the seed end for planting; also planting too late in the season, with a few other things of nearly the same character. And I am satisfied that there is no other vegetable that needs seeding every year that would have stood the same test as long as the potato has.

I am aware there are many seeming objections that can be brought against this theory, and I also feel sure that they cannot be successfully refuted.

If you should take any interest in this idea, I shall be pleased to write more particularly on the subject at some future time.

Yours truly, B. R.

Clinton, Aug. 11, 1851.

REMARKS.—We give our friend a hearing, though we have no confidence in his hypotheses. We have found that unripe potatoes, beets and carrots grow with more vigor, on being planted the next season, than those that are well ripened. We have planted potatoes as late as July 22nd, that produced a superior crop for seed; as they grew with greater vigor than those that were well ripened. And as long ago as we can remember, fine potatoes were raised from small ones, good crops of a good quality and free from disease. As to cutting potatoes, it has been practised more than fifty years with success; and potatoes now are no more liable to rot from being cut, according to our experience and that of many others. The English, who have examined very nicely into this subject, dig their potatoes for seed before they are ripe.

The potato disease has come too suddenly and too extensively upon us to be attributed to any cause which produces a gradual decline in the species, and if these things here named have produced a decline in the potato, that decline must have operated very slowly, for some of these things were in operation a hundred years ago.

For the New England Farmer.

POTATO DISEASE.

MR. COLE:—Allow me to say that I did not represent a black bug in my remarks at the Farmers' meeting last March. I distinctly stated that it was a green insect, such as is found on the house plants. It will be perceived by reference to the Boston Cultivator of Dec. 12th, 1846, that I at first supposed it was the black bug, but soon observed that the green insect was quite as destructive or more so than the black bug, as will appear by a communication made to Gov. Hill, and published in the Monthly Visitor of October, 1848.

Since my communication to Mr. Proctor as published in the Salem Observer July 26, I have discovered, through the aid of my gardener, that the insects not only feed upon the leaves but upon the small fibre of the root as well as upon the potato itself, as will appear by a copy of the enclosed letter addressed to John W. Proctor, Esq., of Danvers, extracts of which also appeared in the Salem Observer of the 9th inst.

Yours very respectively,

OLIVER M. WHIPPLE.

Lowell, Aug. 20, 1851.

Lowell, Aug. 2, 1851.

DEAR SIR:—I hasten to inform you of a new discovery which has been made this morning by my

gardener, Mr. Crawford, and which I think will establish fully and finally the cause of the potato disease. The discovery is as follows: Mr. Crawford discovered, in removing pig or hog weeds this morning, that they were in a wilted condition: not being able to discover the cause, he finally examined the roots, and found them covered with apparently the same insect that I showed you when at my place. I at once proceeded with him to examine some squash vines, which, if you remember, were on the western avenue of the garden, and which were much wilted. Much to our astonishment, we found the roots covered with the same insect, and which I find are also upon the potato root as well as the leaf. I also on examining the small nursery of apple trees, found upon the root the same insect which I showed you upon the leaf. I therefore am of opinion that the insects which I described in my communication to you, feed both upon the root and leaf, and will finally settle the question of the potato disease.

Yours very respectfully,

OLIVER M. WHIPPLE.

To J. M. Proctor, Esq., Danvers.

For the New England Farmer.

HORSE RAKES---HARROWS---SETTING FRUIT TREES.

MR. COLE:—I see an inquiry of one of your subscribers as to horse rakes, and in your answer you say, "for rough land the Spring Tooth is the best, but hard to manage." Now that depends on the manner in which it is held, as also the dust you say it gathers; they do not require to be held down hard so as to gather dust, but should be run light; and as to their being hard to manage, there are as many in this section that have used both that say they can hold the Spring Tooth the easiest. One of my neighbors has taken his rake, and with a very trifling expense has rigged it on wheels, so that he can ride and rake. It is done by making a long axletree, so that the wheels will run outside the rake. The thills are about 12 feet long, but run back of the axletree a foot, and bolted on to the top; then board over a space on the thills before and behind the axletree sufficient to stand on; first a cross-piece on the thills forward sufficiently far to fasten the whiffletree to; he has then what are called clip bands around the axle, and they pass through a stick two and a half feet long, which is on top of the axletree, and on to the hind end of these sticks he bolts the head of his rake, and forward there is a mortice and piece framed in that should come up about breast high, and a cross-piece from one to the other. When raking, he stands on his platform and takes hold of the cross-piece, and when it is necessary to raise the rake, pushes forward, which lifts his rake.

Your correspondent also asks what kind of harrows are best for smooth land. I made one for myself this season, that for cheapness and doing the work well is preferable to any I have seen; it is square, and drawn by the corner, made of three-inch oak scantling, with four cross-pieces one inch by two, put through; the teeth are made of one-inch rolled iron, and in sharpening should not be made any larger; bore your holes and drive the teeth in, and you have a harrow.

I wish to inquire of you what advantage there is to be gained by setting out fruit trees in the spring more than in the fall. I have more time to attend to such work in the fall than the spring, and presume most farmers have. I this season procured some five or six hundred scions, and had them set by a man who said he understood the business, but do not think there are fifty live ones in all. Will the same limbs answer to saw off next spring and graft again?

Yours, H. O. WALKER.

Swanton Centre, Vt., Aug. 7, 1851.

REMARKS.—There is no advantage, in our opinion, in setting trees in the spring instead of the fall. We prefer setting in the fall decidedly, provided they are set in season, and the work well done.—Trees set in the fall are more likely to live the next summer; and they make a much better growth than those set in the spring. Every farmer who has time to attend to it should learn to graft, which he can do very readily, by having a little instruction from one well skilled in the business. It will answer to saw off the limbs again, and graft next spring.

For the New England Farmer.

NEWLAND'S STRAWBERRIES.

Right glad was I to see in your paper of this date a just notice of the *imposition* practised on the public, by those who have put forward this variety as having extraordinary claims for cultivation. It is certainly, at best, not more than *a third-rate fruit*. To be sure, it may yield in numbers, as many as most other kinds, but their size is small, and their quality inferior. In no respect is it to be compared with the Early Virginia, or with Hovey's Seedling, both of which have succeeded admirably, so far as our observation has extended. As an illustration of the ease with which a supply of the strawberry may be obtained, I will state a fact, within my observation, on the grounds of an intelligent *farmer*, not *gardener*, the present season. In the Spring of 1850, he appropriated a patch of ground, about 30 by 50 feet, to the growth of the strawberry, and set out rows of plants, three of the Virginia to one of the Hovey. He took care to keep them clear of weeds and grass. The present season, this place yielded 150 boxes of fruit, which sold at an average of 25 cents a box, besides affording a liberal supply for a family of ten persons, and a numerous retinue of friends,—the proprietor having taken home *a new wife* about the time of maturing of the strawberry. To say nothing of the *profits* of this cultivation (the produce being worth more than *five dollars* the square rod) who is there that has once enjoyed, for a fortnight, the luxuries of strawberries and cream, under the superintending care of a neat and agreeable housewife, that would willingly relinquish such a privilege?

O, too happy farmers, did you but realize the comforts at your command! *

Aug. 16, 1851.

MAKING CANDLES.—Experience of Mrs. T——, of Ohio. Prepare small wicks of the best wick yarn, and, after being prepared, completely saturate them in clear spirits of turpentine; then dry them thoroughly, before the tallow is applied. Candles made in this way will burn much clearer and last much longer, than without the spirits of turpentine.

A NEW TREE WORM.

The Lowell Courier describes a new worm, which has been discovered by Daniel P. Coburn, of Tyngsboro', which conceals itself in the grass in the day time, and devours the leaves and buds of the fruit trees at night. Mr. Coburn went into the colony with lanterns, for several nights, and by the assistance of his men, made an indiscriminate slaughter of the vermin. Of one caught and exhibited, we take a description—

The worm is as large round as a common pipe stem, over an inch long, composed of some ten or twelve joints, with horny head. He is of a brown color, and has a longitudinal stripe on his back and each side of a lighter color, and when young, each joint is covered with little black spots. He has some twelve or fourteen short legs or feelers. It was caught some nine days ago, and has been kept in a box since that time without food, and is still quite smart and spiteful. Not one was ever found on the trees in the day time. They commence going up the tree at dark, and continue till ten o'clock, and all return before morning! They move pretty fast. This is the third year their ravages have been noticed, and this year they have been worse than ever. They commence their ravages very early in the spring, eating the buds before the leaves start, and they depart about the 10th of June.

This worm has been found destroying all kinds of trees, and has been found even eating the leaves of the blackberry. Mr. Coburn has an extensive lot of trees, and he has found them everywhere throughout his farm, with one exception; he has one field of fine trees, which he has ploughed and planted for the three past years, and he has never found a worm among those trees, although they infest all the trees about the field. This may suggest the means of protecting orchards.

DRYING FRUIT.

A correspondent inquires for a description of the best mode of drying fruit. While so much attention is given to the cultivation of fruit, there still exists a great deficiency in good, cheap and expeditious methods of drying—which by converting perishable property into a condition for long keeping and easy transportation, may greatly increase, both in extent and profit, the culture of the highest flavored sorts.

Dried apples and dried peaches already constitute a considerable article of commerce. But their quality is immeasurably inferior to that which might be attained. The same difference in flavor exists between unpalatable seedlings and the most highly improved grafted variety, whether they be fresh or dried. Yet the poorest apples are usually selected, simply because the dried fruit is bought by the pound, and not for its excellence. Late or inferior peaches are chosen, because their owners have no other use for them; when, besides the inferior flavor of the late seedlings so largely used, the cool damp weather to which they are exposed while drying does the work in a very imperfect manner, and a half decayed flavor is often mingled with that of the fruit itself. If dried at all in the open air, it is of much consequence that early sorts, both of apple and peach, be selected, that the benefit of a hot sun may be secured. Why is it not as easy to plant and raise early prolific sorts, that will ripen at a time when two days of hot sun will dry them, as later sorts, which will scarcely get dry at all in the open air!

A good and faultless mode of using artificial heat appears not to have been yet practiced. The great and existing deficiency is a want of a free circulation of the heated air. Hence the reason that the use of flat boards and shelves is usually attended with greater or less decay. Light wooden lattice work is better, but imperfectly admits a free circulation, without making the slits too wide to prevent the dried fruit from falling through. Cheap netting or light twine is a still further improvement. An easy mode of making it is thus described by a correspondent of the Michigan Farmer:—"Take common carpet yarn, warp it for two or three yards length, just as you choose; use a five or six quarters reed; in drawing through the reed, use every third or fourth space between the teeth of it; to ensure strength, double your thread occasionally, and in weaving beat two or three threads loosely together, and then more open, alternately; when taken from the loom, fasten it to a light frame, and it is ready for use." Frames covered with millinet would probably be found well adapted for drying the smaller fruits.

Rooms or buildings made for drying by artificial heat, must admit a very free ventilation. We have found that when fruit on lattice shelves is placed near a fire or under a stove, where there is no current of air, and where heat is imparted solely by radiation, it becomes heated without drying, for there is no current to sweep off the moisture about it. But when suspended immediately over the stove, where the heated air is constantly ascending, the progress goes on rapidly and perfectly. When thus dried, it is nearly white in color, and retains its flavor unimpaired, and is incomparably better than a great deal that we often see, which is brown with age, and spoiled with incipient decay, before the moisture is all expelled by the tardy process to which it is subjected.

The following would probably be a well arranged drying room for this purpose. Let the shelves made of netting, stretched on frames, occupy the interior or central portion of the room, one above another, at free intervals, and leaving sufficient space for the person in attendance to pass freely round on every side, next to the wall. This would not only be more convenient, but admit a better circulation of air, than if the shelves were placed against the wall. The room might be heated with a small stove, the pipe of which should at first pass horizontally as near the floor as possible, and afterwards ascend to cause sufficient draught. This arrangement would heat the room far better than to place the pipe overhead, as is too often the case; the heat will rise through the whole height of the room, thus causing a circulation of air. The room must be well ventilated at each end near the top, to let off the vapor constantly arising; for even fresh cool air is better than a hot air charged with moisture. The ventilators may be covered with wire gauze when it may become desirable to exclude flies, wasps, &c.—*Albany Cultivator.*

☞ Dr. D. Lee says:—"It is very rare, if ever, that a soil is so sterile that when three inches deep, it may not be made twelve."

CHEMISTRY APPLIED TO AGRICULTURE.

The true principles of farming are just beginning to be understood. It is but a few years, at least in this country, since the farmer has sought assistance in his important vocation from the safe and sure guide of science. The processes of the culture of the soil have been handed down from father to son, for a long period of time, without any attempt at improvement. The time has already passed when the tiller of the soil was content to produce just a sufficiency for the support of animal life, and that too of an indifferent kind. He has already begun to reap the advantages of calling in scientific principles to his assistance.

Within a few years much has been done to improve in a high degree the choice and delicious fruits of our climate. Our markets are now loaded with fruits of the most tempting kind, which by their abundance are brought within the reach of all classes of society. Who can estimate the amount of happiness and substantial comfort thus bestowed upon mankind?

For the last fifty years the energies of science have been in an unparalelled degree bestowed upon inventions and discoveries in the principles of mechanics and the multifarious modifications in machinery, growing out of the motive power of steam. Let the same amount of scientific energy be applied to the investigation of the laws which govern organized bodies, both vegetable and animal, and the result of such investigation will no doubt be the knowledge of organized matter astounding as those remarkable physical laws which we are daily witnessing.

The whole community are beginning to be waked up to the importance of this matter. Our schools, especially in this State, are introducing the study of the principles of chemistry, as applied to agriculture. The guardians of the State Normal School are doing very much towards disseminating a knowledge of these principles, by preparing its pupils for teaching the same in the schools which they may hereafter be called to take charge of. When the teachers of our schools can be made to feel the importance of this new branch of education, we may expect rapid and permanent improvement in farming. It is in our common schools alone that a large portion of our farming population are educated, and for this reason it would seem very proper that considerable attention should be given to this branch of education in these schools. Let all who are entrusted with the supervision of schools see that encouragement is given to this study.—*Albany Jour.*

Mechanics' Department, Arts, &c.

TO OUR MECHANICS.

"COME, LET US REASON TOGETHER."

It is an undeniable fact, that the great majority of our mechanics are not reading men, that is, they do not read useful and instructive works. We do not mean to say that our mechanics cannot, and do not read at all; far from it, for there are but few among us who have not received the elements of a common education; but we do say that the majority do not make a practice of reading works which expand the intellect and improve the mind. The works which they make a practice of reading, tend to grossify and puddle the mind. This is one reason why there are so few among our mechanics capable of taking charge of and managing the business they have learned as trades. It is also a reason why so many of them are rough in speech, and uncourteous in manner. There are many, very many men in our country who were once journeymen mechanics, but who now occupy high and important positions in the republic. We rejoice at this, but we are not a little sorry to add that the majority of them had to leave their trades, and become lawyers; they at least did not move out from the workshop direct to the House of Representatives, or the Senate Chamber. Fillmore, our President, and Douglass, Senator from Illinois, were once tradesmen, but they arose to their present positions, not through the tailor's or cloth-dresser's bench, but the lawyer's bench. There is not a solitary individual in our country, who has, from a lowly, elevated himself to a high position in society, but has been and is a reading man, one who has read and does read books that are books.

Those mechanics who rise to foremen and employers are the reading men of the mass; they aspired to be something, and adopted the best means to secure the desired ends. Worth and intelligence always command respect from those whose respect is worth striving for. We are not pleading for a gross struggle for wealth, although a reasonable amount of it—as a provision for sickness or old age, is a laudable and proper desire; but we plead first of all for an elevation of character as a means to a social elevation among men of *real worth.* Wealth without worth will never make a man pass among gentlemen as a current coin, but the man who is industrious, intelligent, trusty, and courteous, will always pass for the genuine metal.

Industry, honesty and intelligence are qualities of character more valuable than gold seven times purified. A talented, first-rate handy mechanic, without such qualities, will never rise, for he cannot be trusted. It is not the *smartest* man who is always selected to be a superintendent among his fellow workmen; it is he who combines the greatest amount of abilities with those qualities which give his employers confidence in his *moral* worth. We have often been solicited to furnish competent mechanics to take charge of new establishments, and have found it very difficult to secure, at any time, the *proper man;* and no further back than last week a gentleman writing to us from the south, uses the following language: "Last summer, I visited the North and purchased machinery for the manufacture of chairs, and after considerable trouble hired a man alleged to be competent to superintend the whole business. I have not yet been able to commence operations, owing to the incompetency, in every respect, of the man in whom I trusted to superintend my business; can you send me a man with the requisite qualifications, and above all, let him be a gentleman?" We cannot send him the kind of man he wants and requires. Our real good men are scarce; they soon find situations, and we believe there would be more good situations for men (manufacturing establishments would increase) if we had more men capable of filling them honorably and well.

We have now preached a sermon long enough for a week's calm reflection, and next week we will point out the way whereby young mechanics are sure to rise.—*Scientific American.*

IMPROVEMENTS IN COATING METALLIC SUBSTANCES.

A patent has recently been issued in England to Messrs. E. Morewood and G. Rogers, of Enfield, for improvements in coating or covering metals with lead, tin, copper, &c., which is described in the Mechanics' Magazine as follows, viz:

In coating zinc with lead by casting, a quantity of lead is first melted in a shallow vessel, and when it has been raised above the melting point of zinc, pieces of that metal are placed on the surfaces of the lead, or molten zinc is poured on; and after standing some time to allow the metals to separate, in the event of their having become mixed, the vessel is removed, and the slab cooled down altogether, or to about 300 deg. Fahr., when it may be rolled in the customary manner. In order to coat the zinc on the opposite side, when both sides are required to be so coated, the slab is heated to a little above the melting point of lead and sprinkled with sal-ammoniac, and a stick of lead rubbed on until a sufficiently thick coating is obtained. In coating zinc with copper, a slab of copper is prepared by melting in a shallow vessel and allowed to cool down to a little above the melting point of zinc: or a plate of copper is heated to the requisite temperature and sprinkled with sal-ammoniac, or other suitable flux, and the coating is effected in either case by rubbing the surface of the copper with a stick of zinc, till a sufficient quantity has been deposited on it; or two slabs of copper are placed in a mould, and molten metal poured in between them. To coat zinc with tin or solder, the zinc is sprinkled with sal-ammoniac, and heated, and a stick of solder rubbed on until a sufficient quantity is melted to obtain the requisite depth of coating. Lead may be coated in a similar manner, and these prepared sheets may be attached to sheet tinned or zinced iron, by sprinkled the surfaces to be united with weak muriatic acid or salammoniac, and laying the tinned lead or zinc on the tinned surface of the plate of iron, which is to be previously heated to above the melting point of the tin or solder. A heated roller is then passed over the two surfaces, to maintain them in contact and prevent buckling or warping, after which a colder surface is applied, to aid in causing the solder to set rapidly.

NATIVE ARTISTS.

The reputation of Powers as an artist of the highest order is firmly established wherever the noble specimens of his genius and art have been exhibited. But he is not alone, or rather it is discovered that another young and gifted mind is destined to future distinction as one of our most eminent sculptors. This individual is Mr. Clark Mills, who has been for some time engaged on the work of a colossal statue of General Jackson. The Washington Union remarks: Mr. Mills is a man of decided genius. If God spares his life and Mr. Mills exerts his talents with that devoted enthusiasm without which no man can attain to lofty eminence, we risk nothing in predicting that he is destined to attain a brilliant distinction amongst the finest artists of this glorious country. We have never seen a man more struck with the genius of another than Tupper was with that of Mr. Mills. He told us that he had spent two agreeable hours in his studio; that he had found in him a genius of high order—an inventive power of the greatest resources. "And this man, who was a common plasterer a few years ago in Charleston, has already struck out some of the boldest conceptions. He has made a cast of his equestrian statue, and he has dispensed with the use of the clay mould. He has made an equestrian statue in which he has dispensed with any other support to the horse except his own two feet. And he has invented a furnace for casting it, which economises and preserves the caloric in a wonderful degree." Yet so it is. Such is another fruit of our free and glorious institutions. In a country where every man can be anything—where official honors and popular applause are thrown open to every man who deserves them—where many of the most distinguished men in the republic have won their way to the highest distinction by the force of their own merits and vigor of their own will—where the poor man is able to pass the rich man in the career of excellence, because the hereditary worth of the latter only paralyzes his motive for improving himself—it is not astonishing that such men as Powers and Mills should write their names high on the column of fame.

☞ In England, Scotland and Wales, there is but one voter to every 17 inhabitants; in Ireland only one in eighty.

☞ The zeal which begins with hypocrisy must conclude in treachery: at first it deceives, at last it betrays.

Ladies' Department.

LETTER FROM A FARMER'S WIFE.

Mr. Editor:—Will you allow a farmer's wife to say a few words to her sisterhood, through the columns of your excellent paper. We are aware that a farmer's calling does not reflect as much honor on his companion as that of many other professions, but I trust the time is not far distant when a "farmer's wife" will no more give one an idea of a coarse, red-faced woman, with no intelligence above her butter and cheese, than a "lawyer's lady" will fill one's mind with a vision of loveliness and grace.

But the most serious objection we hear girls urge against this life, is that there is always so much to do in a farm house, that no time is left for mental improvement. Now, we beg leave to say, —this need not be so. Any woman, in good health, can do the housework and plain sewing for four or five, and have at least one hour each day for study besides all the little odds and ends of time, for books and newspapers; and surely a mind need not starve upon that. Any woman who cannot secure this amount of time to herself, and will still do without help, is doing what is not her duty, either to herself or family.

It is a mistaken idea that a woman can discharge her household duties properly, without any education, or that doing housework tends to deaden the sensibilities, or produce a disrelish for books. No such distaste is ever formed but by needless neglect, and any one who has ever tried it, knows that the mind must be ever on the alert, and that caring for and contributing to the comfort and happiness of those around us so continually, cultivates the most active benevolence. Thus, too, we are in a

measure responsible for the health of our family.—If we do not know that poor bread, hot buns, rich pastry, hearty and late suppers, and meals at irregular intervals, are unhealthy; or that a sufficient supply of clean bed-linen, or fresh air in the bed-rooms, is as necessary to health as to comfort, then our ignorance is responsible for the dyspepsy and other diseases that may ensue.

A little forethought often facilitates matters wonderfully;—as with bread—if it be set to sponge at night it may be baked by the morning fire, thus saving the trouble of keeping a fire in the afternoon and getting up from one's reading or sewing to attend to it. There is another thing that takes a great deal of our time, and that is visiting. Not that I would discourage visiting in the least, but the parade attending it. We should visit our friends much oftener, could we "drop in"—spend the afternoon, and take tea with the family, without giving the good mistress the trouble of preparing two or three extra dishes for our particular benefit, besides having an extra room to set to right next morning.

There is another fashion coming among us, which I suppose has travelled up from some city; that we shall not work when we visit,—as if we could not as well do some plain sewing and knitting, as do nothing but talk. But no, our grandmothers took work—it looks so old fashioned, and that is enough to shut the door of society against anything.

Finally, if any of our sister readers, that shall happen to glance upon this, can give us any hints to improve us in our art, we shall be most devoutly thankful, for we are young, as will doubtless be conjectured, and need all the information we can get. We are, meanwhile,

Most earnestly yours,

—*Rural New-Yorker.* LUCY.

THE CHARMS OF LIFE.

There are a thousand things in this world to afflict and sadden, but O! how many that are beautiful and good! The world teems with beauty—with objects that gladden the eye and warm the heart. We might be happy if we would. There are ills we cannot escape; the approach of disease and death; of misfortune; the sundering of early ties; and the canker-worm of grief; but a vast majority of the evils that beset us might be avoided. The course of intemperance, interwoven as it is with all the ligaments of society, is one which never strikes but to destroy. There is not one bright page upon the record of its progress; nothing to shield it from the heartiest execration of the human race. It should not exist; it must not. Do away with all this—let wars come to an end; and let friendship, love, charity, purity and kindness, mark the intercourse between man and man. We are too selfish, as if the world was made for us alone. How much happier would we be were we to labor more earnestly to promote each other's good. God has blessed us with a home which is not all dark. There is sunshine everywhere—in the sky, upon the earth—there would be in most hearts if we would look around us. The storms die away and a bright sun shines out. Summer drops her tinted curtain upon the earth, which is very beautiful, even when autumn breathes her changing breath upon it. God reigns in heaven. Murmur not at a Being so bountiful, and we can live happier than we do.

KEEP YOUR BACK WARM.

About 20 years ago, I read a medical treatise which stated "that the back is the most valuable part of the human system through which most of the colds enter."

Recollecting that when I took cold suddenly, I noticed that my back was generally cold, I had my waistcoat cushioned along the back, six or eight inches wide, since which time I have not taken cold one-quarter as often as before. Several who have tried the experiment at my suggestion, have informed me that in their opinion they have been materially benefited thereby.

The philosophy of it is, that by putting more clothing along the spine than elsewhere, other parts become chilly first, and warn to guard against taking cold, while the increased clothing at the same time prevents such a sudden change of temperature. Take care—coming from the back is generally too late, the cold has already become seated.

I hold that cold and damp feet cause many colds, because they induce to chill the back more than because they cool the extremities.

None of all the lower animals the Lord has clothed has less clothing on the back than upon other parts of the body. To me it looks frightful to see so many delicate persons go with their backs and feet half clothed. But while hosts are cracking up for agricultural societies and bureaus to improve the breed of our domestic animals, the favored of the people are worshipping the great Moloch of fashion, and sacrificing upon his shrine multitudes of the choicest portions of our race. C. RICH

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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

MANAGEMENT OF THE CORN CROP.

There are two modes of managing the corn crop. One is the old mode of cutting the top stalks and securing them, and when the corn is well ripened, gathering the ears or cutting up the but stalks with the corn. The other mode is a modern practice, which is to cut the whole up at the ground and stook it, or set it up against a wall or fence. Some farmers are so well pleased with the new mode that they practice it invariably. We prefer the new mode, as we think it affords several important advantages, unless the crop is extremely heavy and difficult to manage in this way. If the corn is planted thick, and there is fifty or sixty bushels to the acre, it may be conveniently secured the new way. This new method affords the following advantages. The whole fodder, buts, tops and husks, are secured in season. The corn may be conveniently moved from the land if necessary, affording the opportunity for the growth of turnips, sowing grass, or preparing the land for future crops. The corn may be moved from one field to another when it becomes necessary to turn in cattle; it may also be moved to a place of safety, to secure it from depredators. This new mode costs much less labor than the old, which is a great advantage, as economy in farming is an important point. We contend that when the corn is sufficiently forward to cut the top stalks without injury, it may be cut up at the ground without injury. When a plant can be mutilated without detriment to the grain, it may be cut up at the root without injury; therefore corn may be cut up at the ground as early as the top stalks may be cut.

In numerous cases the top stalks are cut too early, which causes a reduction in grain; and we have no doubt that some farmers who follow the new mode of harvesting cut their corn too early. We advise farmers to make experiments when they cut their top stalks by leaving a few rows uncut, and compare the crop on those rows with that of the same number of contiguous rows which the tops have been cut at the usual time.—We also advise those who follow the new mode to leave some rows uncut for comparison. These experiments will be very important, as they will show the proper time for cutting the top stalks or cutting up the whole crop. Some farmers who have made experiments have found a loss of ten or fifteen per cent. in the crop of corn, by cutting the top stalks at the time they usually practice. This loss in the grain was greater than the value of the top stalks, and there may be losses equally great by the new mode in cutting too early.

DIGGING POTATOES.

The sooner potatoes are dug, after they are ripe, when the weather is fair, and the ground dry, the less liable they are to rot. After digging, let them lie on the surface till thoroughly dry, then secure them in cellars, sheds or barns, as may be deemed best; put them in broad shallow bins that they may be exposed to the air to prevent heating, and convenient for inspection. When potatoes are inclined to rot after being put in the cellar, the rot may be checked, in some measure, by strewing lime or plaster among them. Dr. Hayes's plan of fumagating with brimstone does not succeed well. The potato rot prevails to a considerable extent in some sections, and to a moderate or small extent in others; and we have no doubt that if we have abundance of rain and warm weather, which has a tendency to develope the disease, that it will prevail to a great extent, as in previous years. Therefore farmers should take every possible precaution to guard against it. Numerous cases have occurred where potatoes have been dug while the ground and the weather were dry, previous to heavy rains, and they have kept well; while others in the same piece dug later in the season after wet weather, have nearly all rotted, either in the ground or after being put in the cellar. And we have had several instances of this kind in our own experience.

CATTLE SHOWS AND EXHIBITIONS.

Within a few years, throughout the most enterprising part of our country, many new agricultural, horticultural and mechanical societies have been formed, and their exhibitions have been of a beautiful and splendid character, affording much interest and instruction to the spectator. In many cases these associations have started up suddenly, and their large and well managed exhibitions have been such as would do credit to old societies. We trust that these associations will continue to increase, and that every reflecting cultivator and mechanic, and all others who are engaged in promoting the public welfare, will give them their hearty support. Men should not only attend exhibitions as a matter of information, but their wives, their daughters and their sons should also attend, and share in the pleasure and the profit.

We give a list of shows, and the time and places they hold them in, so far as they have come within our notice, and we shall be pleased to add others on receiving notice:

New York State, 16th, 17th, 18th and 19th Sept., at Rochester.

American Institute, at Castle Garden, New York, Oct. 1st, and will continue nearly through the month.

Ohio State Exhibition, Sept. 24th, 25th, 26th.

Maryland State Exhibition, in Baltimore, Sept. 23d, 24th, 25th and 26th.

Rhode Island State Agricultural, Horticultural and Mechanical Exhibition, at Providence, Sept. 10th, 11th and 12th.

Vermont State Exhibition, at Middlebury, Sept. 10th and 11th.

New Hampshire State Exhibition, at Manchester, early in Oct., and will continue three days.

Massachusetts Horticultural Society, Sept. 16th, 17th and 18th.

Worcester Horticultural Society, Sept. 17th, 18th and 19th.

Worcester Cattle Show, Sept. 18th.

Middlesex, Conn., Middletown, Oct. 1st, 2d and 3d.

Bristol, at Taunton, Oct. 19th and 20th. The exhibition of Stock on the 19th, and the Ploughing Match and Dinner on the 20th.

Cattle Show and Ploughing Match, at Fitchburg, Sept. 25th.

Hillsborough, at Amherst, N.H., Oct. 1st and 2d.

Essex, at Salem, Sept. 25th.

Middlesex, at Lowell, Sept. 24th.

Michigan State Show, Sept. 24th, 25th and 26th.

Ohio State Exhibition at Columbus, Sept. 24th, 25th and 26th.

Pennsylvania State, at Harrisburg, Oct. 29th, 30th and 31st.

Fairfield, (Conn.,) at Bridgeport, Oct. 8th, 9th and 10th. In addition to the usual premiums for ploughing, P. T. Barnum, Esq., president of the society, with great liberality, offers additional premiums, amounting to $200, the highest of which is $50, open to ploughs and teams from every State in the Union. This will be a capital time for the plough-makers to show their hands.

Hampshire, Franklin and Hampden, at Northampton, Oct. 8th and 9th.

HARVESTING WINTER APPLES.

In harvesting apples, especially those intended for winter, they should be carefully picked by hand in bright clear weather. All bruises are not only injurious as tending to decay, but they render the fruit partially worthless. Some fruit growers pick their fruit the last of September, before completely ripe, and allow it to shrivel a little before packed in barrels, as it will keep well under this treatment. Such fruit is not equal in quality to that well ripened on the tree. In very warm locations, winter fruit is frequently ripe by the last of September. Most fruit-growers allow their winter apples to remain on the trees until October, and become thoroughly ripe.

After picking the fruit, pack carefully in barrels, and head up closely. The following is the mode of management in this section. The barrels are piled up horizontally in cool, open sheds, or in the shade of trees or buildings, and sometimes in open space, covered with boards laid over the barrels, to keep off the sun and rain, and allowed to remain out till November, till there is no danger of their freezing. Apples thus managed will escape a severe frost. The thermometer may be ten or twelve degrees below freezing, or the weather cold enough to freeze ice half an inch thick. We have known apples to escape when the thermometer was twenty degrees below freezing; but there is a risk in leaving them out in so cold weather. When the weather becomes too cold for them to be safe out of doors, put them in a cool cellar. Some fruit-growers put them into the cellar immediately after harvesting. Whether apples are put into the cellar early or late, the cellar should be well ventilated in clear weather, when the wind is north or west; but kept shut up closely when the wind is in other directions. This should be practised even in winter, when there is no danger of apples freezing.

THE CRANBERRY.

The cultivation of the cranberry is attracting much attention in different parts of the country. Numerous experiments are making in cultivating this fruit on high land or moist tillage, with various success; from these experiments important facts are brought before the public, which will, after a while, enable the cultivator to have a regular system in cultivating this fruit.

We hope those engaged in the culture of this fruit on high land will communicate to the public the results of their experience, that others may gain information from them to aid them in their experiments. The cranberry is a very superior fruit, and the demand for it in the market is increasing; and we want some mode of raising it to a greater extent than it is now produced by spontaneous growth. As the crops now are nearly all produced on low lands, they are very liable to be cut

off by a frost; but if high land culture succeed, the loss in this way will be in a great measure prevented.

ACKNOWLEDGMENTS.

About four weeks ago we received from Leonard Cheney, Southbridge, some early Sturbridge peaches. This peach is medium size and of excellent quality. Mr. Cheney has kindly given us a history of this fruit, and its time of ripening in different years. It usually ripens about the middle of August, and is probably ten days earlier than any other valuable peach cultivated in this country. We think it will be a valuable acquisition, as it considerably extends the period of using this most delicious fruit.

From Isaac Southgate, Leicester, a box of very fine plums. This plum appears to be a new variety; it is of medial size; almost round; slightly flattened at the end; yellow, when fully ripe; flesh very tender, juicy, rich and delicious, it is an excellent grower and early bearer. It ripens a few days earlier than the Green Gage.

From G. J. Hayward, Hancock, N. H., some apples of medial size, very fine flavor. We do not know the name.

From S. Fletcher, Winchester, some cranberries of fine appearance, with some vines. He makes the following remarks upon the subject: "I send you vines and the fruit of the cranberry, found on a gravelly dry spot on side of a railroad; ground appears not to have been disturbed in building the road; some ten feet higher is a wet meadow. Vines run, as you will see, like blackberry vines, crossing and interlacing each other. Fruit was very wormy year before last. Soil appears poor and mossy, gravelly and dry."

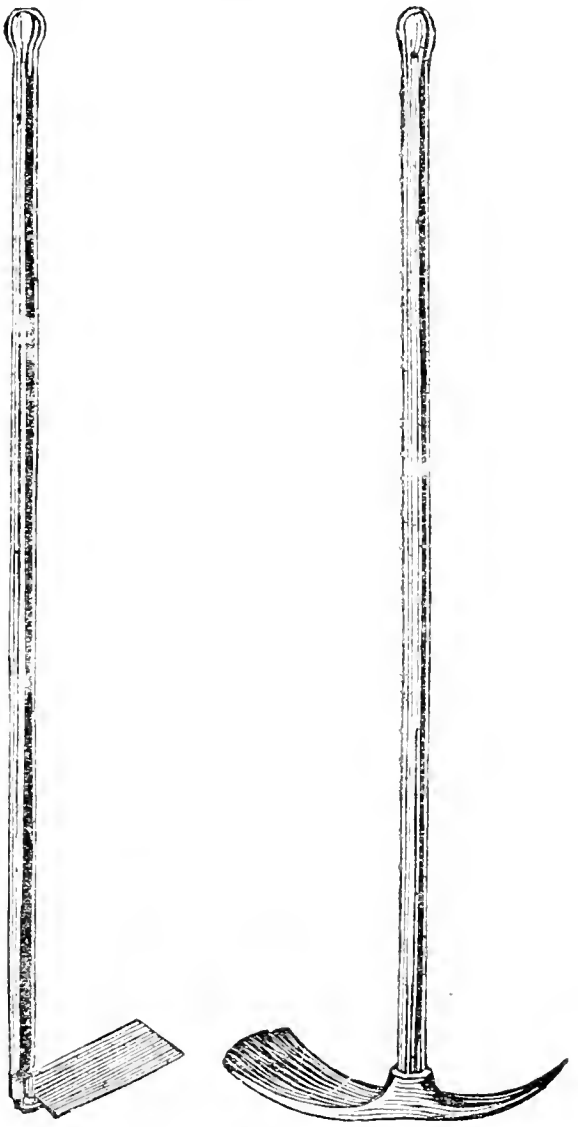
From James Hyde & Son, Newton Centre, some fair looking apples of medial size, with the following remarks, though the fruit is not more than second or third rate.

Mr. Cole:—We send you some of the "Metcalf Sweet;" you will soon perceive that they are not first rate, a slight bitter is perceptible, yet many like it for an eating apple. The tree is a good grower and *great* bearer, fruit generally being fair; the tree is completely loaded this year. Though not more than second or third rate for eating, yet it may be valuable for stock; we have never tried it for baking. The trees bear young.

NOTICES OF PUBLICATIONS.

The American Veterinary Journal.—This work has just made its appearance. It is edited by Dr. George H. Dadd, veterinary surgeon, and published by him at No. 1 and 2 Haymarket Square It is a neat octavo monthly of 32 pages, at one dollar a year. A work of this kind is very much needed in our country, and we are pleased to see it started under the care of one who is so well qualified to conduct it with ability. We know of no one so well qualified as Dr. Dadd for this important undertaking. We trust that this work will be liberally patronized throughout the country.

Muck Manual.—This is a new and third edition of Dr. Dana's popular work on manure; the whole matter has been revised, and numerous pages of new matter have been added. We are pleased to see this valuable work revised and improved, and published and bound in neat form. Lowell: by James P. Walker, 61 Merrimac St. Boston: Little & Brown.



BOG HOES.

These implements are very convenient for cutting up hassock, roots, bushes, &c., in wet meadows; also for grubbing up bushes, digging out small stones by the sides of walls and fences; they save much hard wear and breakage of a common hoe, and are far more effectual for rough and coarse operations. One of these implements has a pick at one end, which is very handy in digging out small stones and in digging in hard ground.

To take ink out of linen.—Editors' and clerks' wives will learn with pleasure that to take a piece of tallow, melt it, and dip the spotted part of the linen into the melted tallow, the linen may be washed, and the spots will disappear, without injuring the linen.

For the New England Farmer.

THE HONEY BEE.

Mr. Cole:—I have been waiting to obtain through the medium of the "Farmer," some new information as regards the honey bee, and to hear how others succeeded the past season, as to what kind of management proved the most successful. There seems to be little interest felt as regards this subject, while others are fully discussed, as they should be. Bee culture should occupy a more prominent position than it now does, in the domestic relation of the farmer, as well as the mechanic, for when properly managed, they become quite a source of profit to the owner.

But few of my bees swarmed the past season, owing to the cold weather in May and fore part of June, after which we had warm weather, but they did not swarm, as probably they had been confined to their hives until the young queens had issued and were destroyed. Notwithstanding they made considerable honey, and my stock were never in better condition, as to honey and bee, than they are now.

Should the present be a good year for honey, I shall expect to give you a good report of my bees and the way I manage them, and the way I make my hives. Bees, if the Spring be backward, should always be fed with honey. But I am not giving instruction in bee keeping at present, but wait to hear from your more experienced contributors, as I hope soon to do.

Yours truly, B. F. Conant.

Lyme, N. H., Aug. 9th, 1851.

Remarks.—We should be pleased to hear again from our correspondent, on his successful mode of managing bees, and on the construction of his hives.

For the New England Farmer.

THE POTATO DISEASE.

Mr. Cole:—In my peregrinations in New England for the last few years, my attention has been called to the prevailing disease among potatoes.—Of the numerous articles written on the cause of the "rot," I have read liberally, and examined with intense interest the remedies proposed. But, as yet, I am satisfied that all have failed in assigning the true cause; though partial remedies, at very great annual expense, have been proposed.

Having bestowed much thought and experimental labor on this subject for four years past, I think I have ascertained the *cause;* if so, a radical cure may be effected, and the potato restored to its primal pure state and healthy condition; the cause being removed, the effect will cease.

The present is the third year of my experiments, and by the fifth, *I shall be prepared to claim the premium.*

Some say that a peculiar miasma exists in the dew, or in the atmosphere, which causes this fearful evil; others, that the top is punctured by a poisonous insect, and the new bulb infected through the recurrent roots. These theories, I grant, are entitled to respect; but, in my opinion, it still requires proof and chemical investigation to fix the fact that the same miasmatic influence exists in different latitudes, and that the same poisonous insect ravages in different climates; and if the new bulb can be infected by vines introduced through the stock or top, in one case, it would be in others. But I have known the potato to ripen fully, the tops die, as usual, and the crop be harvested and put into the cellar in a sound state, yet afterwards become one mass of rot, and be thrown out upon the manure heap. I have tried lime, ashes and charcoal as remedial agents, and found them good fertilizers, yet they all failed to cure the "rot."

Now, with your leave, I will give my views of this vegetable epidemic, or contagion, and the results, thus far, of my experiments.

I hold that the potato crop has degenerated in consequence of amalgamation. Northern, southern, eastern and western, early and late varieties, have run together, and produced a kind of hybrid germ. This I hold to be the *fons et origo* of the rot. It is a well-known fact, that within the last half century potatoes of every variety, from the delicious old Irish down to the lowest grade of this plant, have been introduced among us, and all mixed together; and hence the rot. For instance, there are in my neighborhood a very few old farmers, with stiff notions and strong prejudices against innovation, who have always grown the same kind of potato, and have entirely escaped this disease.

Three years ago I saved the balls from the tops of the Nova Scotia potato, and the following year planted them, and obtained potatoes, which I planted last spring, and I have the past week examined them, and from *one seed, one potato*, I have what I call the *pure Nova Scotia*, differing somewhat from the one from which I obtained the balls three years ago; and I also have a perfect specimen of the *Early Blue*, the *Lady-Finger*, and one other kind. I claim that these are the original, obtained by analysis. They could not have mixed; for they have never blossomed.

But I have already taken too much of your time, though you may hear from me again, if this proves worthy of notice.

Yours, &c., R. Davis,
A native of Plymouth, Co , Mass.

Mr. Cole:—I saw Mr. Davis' specimen of potatoes which he gathered from one seed. It was really a curiosity; and if his communication is not beyond the range of your notice in the Farmer, I hope you will insert it. M. C. Sawyer.

Bristol, N. H., Aug. 20, 1851.

Remarks. — If our correspondent be correct in attributing the potato rot to the mixing or amalgamation of the seed, how comes it that the disease ever got into Ireland, where, like "the few old farmers" in Mr. D.'s "neighborhood," the people always grow the same kind.

The Long Red potato has been cultivated in this country about forty years; of course it was not produced from so great a variety of potatoes from north, south, east and west, early and late, as Mr. Davis has mentioned, yet it has rotted to a great extent, but it did not rot until within a few years, when potatoes generally rotted. Now if this potato had within it inherent principles of decay, why did it flourish well for more than thirty years? And why did it rot so suddenly and extensively? This does not appear like a decline from inherent imperfections; but it appears to be the result of a powerful

and external cause. The same may be said of some other varieties.

For the New England Farmer.

SEPTEMBER WORK.

The season of growth upon the farm has nearly passed; and now as the fruits of the earth are putting on the ripening tints of autumn, the cultivator, obeying the intimation of the season, should carefully carry out his plans and be especially watchful "that nothing be lost." IMPROVE THE MIND AND IMPROVE THE FARM, would be a good motto for farmers. And at no season of the year can more be done in both respects than in the approaching.

The Argricultural Exhibitions will soon occur, and these furnish valuable aid to the farmer. By these he may learn better modes of husbandry, correct himself wherein he has misjudged, and by actual comparison, select the best kinds of animals, fruits and vegetables. In order that the public should have fair opportunities at these shows, everything should be *fully labelled*, giving the true name of the fruit or article, and the name of the person who offers it, with his *post-office address.* Visitors could then make a memorandum of such articles as they might wish to obtain, and would thus have afforded them every facility for procuring the articles desired. We could wish that arrangements might be made on these occasions by which the farmers could be accommodated with an undisturbed opportunity to examine the various articles offered without the annoyance of a crowd, or that greater and growing evil of our times,—rowdyism. Railroad companies should promote attendance at these exhibitions by reducing the fare as low certainly as on any other occasion. The rule adopted by some companies of allowing the officers and committees to pass free, and demanding of others full rates, is, we think, very objectionable. All should be treated alike in this matter. The fare should be put as low as possible, and then farmers and their families can afford to enjoy their peculiar "holiday."

Now is a good time to make sidewalks. If your farm is under good cultivation,—walls and fences in good order, and meadows reclaimed—you can ornament or beautify the whole estate in no way more surely than by making a sidewalk in the road-side against your whole farm. We never pass through a certain town in Essex county without a feeling of respect towards the venerable clergyman of the place, who some years ago prompted his people to unite on the "voluntary principle" in making tasteful sidewalks, extending in various directions through his parish. To the passer-by, these convey an impression of the industry, sobriety and taste of the people, which could not be obtained in any other way. Besides, there is a little more dignity and comfort afforded to all classes of pedestrians—upon the raised sidewalk, shaded by the graceful rock-maple, than they could hope for, if left to take their chance with the mud, sand, horses and carriages of the travelled highway. Where the land is low or wet, take the small, waste stones that are encumbering the farm, and place them along, and then cover them with sand, gravel or gravelly loam.

Corn Stalks should be taken off about the middle of the month, probably; although some farmers let them remain on. It is said that the corn will be a trifle heavier when the top-stalks are not removed. But the grain in weight would hardly compensate, we think, for the loss on fodder and for the extra labor in harvesting. If the stalks remain on until the corn is ripe, they lose all their sweet juices, and are no better than rye straw; and it is slow work to husk the corn when gathered in this way. We think the old way the best. We know one farmer who lets all grow together, and then pulls it up, instead of cutting it!

Winter Wheat should be sown early this month. The success which has attended the raising of this grain in this State and in Maine should encourage farmers to enter upon its cultivation. From experiments which we have had with manures for this grain, we are fully satisfied that ashes are the best applied at the time of sowing, or early in the spring.

In gathering Beans, it is better when practicable to cut them than to pull them, as they will be more free from dirt, and the vines will dry more readily. The common grass hook or corn cutter is a suitable instrument with which to do the work.

Cut or pull the weeds, and put them in the hog pen, and not allow them to go to seed. It rains so frequently that the hogs need all the weeds and litter that can be afforded them.

Plums.—There will be a good crop of this fruit the present season. In most sections the curculio has done less injury than usual. The canker worms have their turn.

Corn that ripens first should be selected for seed. Weed and thin out turnips. They should not be nearer than four or five inches of each other. If wasps infest your ripening grapes, hang phials containing sweetened water near the vine, in which they will be caught and destroyed.

For the New England Farmer.

THE POTATO PRIZE.

MR. COLE:—We know of many sensible men who regard that resolve of the last Legislature, offering a reward of ten thousand dollars "to any person within this commonwealth who shall satisfy the Governor and Council that, by a test of at least five successive years, he has *discovered* a sure and practical remedy for the potato rot"—as very poor legislation. For ourselves, we thought at the time it was very harmless, and therefore well enough. But as the season has advanced, we have in some degree changed views on the subject; and now fear it will be positively mischievous. There is danger that it may raise expectations and hopes as destructive to the better interests of the community as would be the discovery of a gold mine in our midst, or the creation of a magnificent lottery with a most eligible "scheme." Under the circumstances, it may be safely presumed that while but one fortune can be made under this act, many may be lost or impaired. Above we have quoted the essential part of the resolve, and italicized one word in it to which it would be well for the competitors to direct their attention. It says in the terms that to secure the $10,000 he must "*discover the remedy.*" To test or apply a remedy for five years, or five hundred, which he did not *discover*, will not give a claim to the reward. Now, so far as we have read, nothing that amounts to a new *discovery* has been made. Everything which has come under our notice is but the reiteration of what was recommended and applied in France and

Germany, eight, and even ten years ago, as may be seen by referring to a valuable paper upon this subject in the Patent Office Report of 1848, pp. 563—574. On looking over that paper and noticing carefully the theories given and authors cited, we were agreeably surprised that but some three or four out of several scores attribute the cause of the disease to insects. There is room for that party to grow.

The present type of rot made its appearance in Germany in 1841 or '42. And nowhere could it have appeared under circumstances so favorable to its speedy arrest. There, if any where, we should expect the cause to be ascertained and the remedy applied. Her men of science attempted to do this, but failed. Liebig, the most distinguished analyst and vegetable physiologist, tried the crucible and microscope with but partial success.

The cure for the rot, if ever found, will most likely be the result of scientific investigation and experiment. Harvey discovered the circulation of the blood, and Sir Humphery Davy invented the safety lamp; and if the cause and cure of the potato rot are ever ascertained by the living men of New England, we venture to predict it will be by such men as Dr. C. T. Jackson, Dr. Harris and Mr. Teschmaker. *

For the New England Farmer.

A LITTLE MORE EXPERIENCE IN FARMING.

Mr. Editor:—It is strange what a controling influence established habits have over mankind; they obstruct the free exercise of the minds of most people; as others do, so do we, often without thinking, right or wrong. When I commenced farming I was influenced by the examples of others around me. When I purchased the farm I now live on, there were about 25 acres of land enclosed to go over with scythe and rake to gather 5 or 6 tons of second quality English hay. I made every effort in my power to sustain my number of acres and increase my crops by collecting street dirt, composting and purchasing what manure I conveniently could, but the time was so long, and my manure so scanty, that in making a rotation over so large a surface, the larger portion of my fields would continue hide-bound in defiance of all my labor, and I found my manure entirely disproportionate to the requirements of my number of acres. This practice I continued a number of years, paying double for labor which would have been requirted to harvest the same quantity of hay on a quarter the number of acres supplied with the manure wasted on the 25 acres.

After I abandoned the old custom of seeding down my land in the spring with grain as well as grass seed, and substituted August and September for that purpose, I have found the advantage decidedly in favor of the latter practice. When I seeded in the spring with grass and oats, if the grass seed took it was almost certain to die soon after harvesting the oats, and if it did not it would be so feeble as to require two or three seasons to gain firmness of root enough to produce an indifferent crop; here was a loss that I thought unavoidable, until I tried the late seeding, which I have practiced for several years with unexpected success. In August, 1850, we ploughed one-half an acre of moist black soil which had been mowed for half a century every year; we gave it a top dressing of compost, harrowed it well, sowed herds-grass and red-top seed the last day of August; the grass immediately came up thick enough. In July, 1851, we took from the lot two loads, for one yoke of oxen, of excellent herds-grass hay, 10 1-2 months after seeding.

Another piece of land about the same size which was planted with corn in 1849, and potatoes in 1850, was seeded in the same manner, without top dressing, about the 21st of September; 10 months after, we took off as good a load of hay as ever grew anywhere. Here we see one acre of land less than a year from seeding down, produce two tons or more of hay, as much as 6 acres formerly produced under the old spring seeding, scanty manuring and oat-raising system. I have no doubt but spring seeding will succeed much better on some kinds of soil than it will on our porous land, where evaporation is more speedy; the roots of incipient grass are very superficially inserted in the soil, which soon feel the deadly effects of a scorching sun. I make no pretension to any new discovery; my design is only to add another fragment of testimony to the statements of your experienced correspondents, who have written on these subjects already. I am fully convinced that we had better abandon all our indifferent and worn-out lots of land and select such pieces as are best fitted for our several crops intended to be raised, and manure thoroughly, and we shall find that our produce will cost us less, and we shall have it more abundantly. Labor is too high and manure too scarce to have them wasted on land that will yield us but sorry returns.

I believe we can select small lots of land in Wilmington, or any other town in the State, by making a proper application of manure, that will produce large crops and of good quality. I have found low moist land, or reclaimed swamps, the best to raise hay upon with manure applied near the surface; but at any rate I would advise every farmer, in our old towns where land is cheap, to treat his hungry quicksands and gravelly knolls civilly, but let them rest in a state of quietude until they will produce him or his successors a crop of wood.

Silas Brown.

Wilmington, Mass., Aug. 18, 1851.

For the New England Farmer.

PROFITABLE COWS.

Mr. Cole: —I saw a piece in your paper, the other day, by a man in Marlboro', telling a great story about making butter from his cow, and her heifer three years old. Now I wish to tell a story about my cow and heifer; whether it will beat his or not, I do not say. I have a middling sized cow, twelve years old, a full blood Yankee, no John Bull nor Durham. She has had ten calves; the one I now milk is three years old, and has had two calves. They go in a pasture of swamps, raspberry bushes and brakes, and have no extra feed whatever, and I milk only twice a day. I weighed the butter made from the two cows for eleven days in June, which was almost thirty-one pounds.

Daniel Ritter.

Weston, Vt., Aug., 1851.

☞ Our doctrines are—feed the earth and it will feed you—feed the apple tree, and it will yield fair fruit.

For the New England Farmer.

LEGISLATION ON AGRICULTURE.

Mr. Cole:—The House of Representatives of our little State of New Hampshire, at its late session, resolved by a very decided majority to appropriate a few hundred dollars to aid the State and County Agricultural Societies, in promoting improvements in agriculture. The Senate, composed of *twelve* very consequential men, negatived the whole matter. This raises a question, if not more questions than one, on what is the proper business for a legislative body to act upon, or what should be considered the proper objects of popular governments like our own. Upon this point a few remarks are intended.

The first and most important object of governmental action, should be to develope the resources or means of a State for self-support. This being secured, the next object is the protection of a State from external evils and internal difficulties. These being secured, the third object is to carry forward such improvements as shall be for the public benefit.

We put the development of the means of self-support as the first proper object in the government of a State, because *subsistence* is more important than all other circumstances combined. And how is it in the State of New Hampshire? Has the State the means of subsistence within itself? Its agricultural productions are not equal to the wants of the people, by at least five dollars to each individual, in this part of the State. In some towns, where more than half of the people are farmers, the expenditure for bread-stuffs is equal to seven and a half dollars for each individual, over and above all that is produced in the town. Then in our large towns, the sum paid out for flour and grain is equal to fifteen if not to twenty dollars for each inhabitant, over all that is produced by agriculture. Suppose the average expenditure for flour and grain brought into the State to be four dollars for each individual, per year; with a population of three hundred and twenty thousand, it would amount to the nice little sum of one million two hundred and eighty thousand dollars, for the little State of New Hampshire, to pay away for the means of subsistence, besides all that is paid out for other provisions, and grocery articles, such as sugar, tea, salt, &c. &c.

With the evidence we have before us, we are led to the conclusion that New Hampshire is taxed not less than two or three millions of dollars annually for the means of subsistence. While this is the case, what is the condition of farms and farmers?

Take the State through, and a large portion of the farms, if carried on by hired labor, would no more than pay for the labor (of man and beast,) and pay the taxes assessed upon them. They would not give one per cent. profit on their valuation. As a means of profit in the present state of agriculture, though they may be variously valued or estimated, they are not properly worth a single cent.

Under such a state of agriculture, a small portion only of farmers are improving their property. They toil hard and live short, and then have a hard struggle to make the income sufficient to meet the outgoes of the year. A great majority of our honest, hard-working farmers are as poor at the close of the year as they were at the beginning of it. And such are the very men whose votes have elected such Senators as refuse every encouragement to farmers. But if some proposition is brought forward for a new privilege to city and village capitalists to grow richer without labor, those Senators are ready to act.

Our Senate is made up almost entirely of Democrats. A very large majority of the votes given for those Democrats are cast by the very class of men whose interests they set at nought from year to year. A great majority of the New Hampshire farmers are Democrats. Whether Whigs would do any better in this respect, is not our purpose to inquire. The writer of this is a Democrat, but not one born blind.

Now if the development of the means of subsistence should be the first care and first object of a State, it is time that we put away such rulers and legislators as legislate continually for party or pockets, and who would consent that famishing millions might lift up a hopeless cry for bread, and the barren and desolate earth frown coldly back upon them, refusing their call.

The soil is the great gift of God to man, as enabling him to obtain the means of life. The study of its proper use and management is the most necessary and important study, for the subsistence and the happiness of man.

But it is answered, that we have a forbidding soil. We must devote our hilly home-land to manufactures and to mechanical pursuits. And depend on the means of subsistence from abroad? Yes.

When agriculture is given up in New England, the home of virtue will no longer be among us. An intelligent farming community is the very stay and life of virtue and liberty. C.

Mason, N. H., July, 1851.

For the New England Farmer.

FARMING IN RAYMOND, N. H.

Mr. Cole:—Last January an unknown friend sent me two copies of the "New England Farmer." I was so interested in them that I subscribed for it, and I have got my dollar's worth already. As you have no correspondents in this vicinity, I will furnish you with a few articles of my experience in farming, &c.

My residence is in a small country town, in the western part of Rockingham Co., and on a farm "cleared up" by my grandfather, about ninety years ago, and was the residence of my father, (who was a practical farmer) during his life, which closed a few years since.

The crops in this vicinity mostly promise well; the hay crop especially is abundant. The season has been very wet and rather cold, consequently corn is backward, but "it is on the ground," and there will be a good harvest, if the fall is favorable. The potato disease has made its appearance, and we fear that it will be very destructive.

I am fully satisfied that we cultivate too much land. I do not mow over so much by ten acres as I did eight years ago, and I get more hay than then. There is far greater satisfaction in swinging the scythe where there is a heavy burden, say two tons to the acre, than it is where there is not enough to shade the grasshoppers.

Most farms are so situated that a portion can be "turned out to pasture" without much extra fence.

Try it, and put your manure on a smaller space, and my word for it, in five years you will get more hay than now, besides the saving of much labor.

JERE. FULLERTON.

Raymond, N. H., Aug., 1851.

For the New England Farmer.

CROPS IN WESTERN MASSACHUSETTS.

MR. COLE:—Thinking a short paragraph in regard to the prospects of the potato crop in Western Massachusetts might not be uninteresting to your readers, I have concluded to drop you a note and give you the "material" for writing it.

In Blandford, Otis and Becket, three towns whose soil is noted for its peculiar adaptation to the cultivation of the potato, the crop, in nearly every field which I have seen or heard of, is much larger than that of last year. Business calling me through these towns recently, I made numerous inquiries respecting the rot, and was informed that not a single sign of it has as yet appeared. Many farmers are strong in the belief that the rot will not materially, if at all, affect the present crop. Judging from the appearance of this year's potatoes which I have seen cooked, which are unlike those of last year, being dry, mealy and sweet, and not at all affected with those peculiar dark streaks which indicate the rot, I think the crop in Western Massachusetts will generally escape its ravages.

The corn crop is unpromising. It has grown rapidly and rankly, and there are an abundance of ears, but they do not "fill up" well. Rye, in this section, has done unusually well the present year, it being "headed" *very* full, and the kernels looking large and healthy.

Yours, L. R. WEBB.

Chester Factories, Aug. 21st.

For the New England Farmer.

DISEASE IN QUINCE BUSHES AND PEAR TREES.

MR. COLE:—Some three years since, there appeared a disease in quince bushes in this vicinity, which threatened their destruction. It commences at the end of the limbs and extends down until in some cases the whole withers and dies. This year it has made its appearance in pear trees. I have a fine one that was grafted with the Bartlett last spring; a short time since, one of the grafts which had grown finely began to decay, the leaves died, and has extended down to the trunk, and I fear I shall lose my tree. It does no good to cut off the part affected, as I tried it on my quinces, and it made its appearance below where it was cut off. Cannot you or your correspondent C. (as he is a tree doctor) tell the cause and remedy? If so you will oblige one that is interested.

JERE. FULLERTON.

Raymond, N. H., Aug., 1851.

REMARKS.—The disease of which our correspondent speaks in both the quince and pear is doubtless what is called the fire blight, for which there is no remedy, excepting to avoid high culture and to cultivate hardy kinds of fruit that are not liable to this disease.

For the New England Farmer.

PLUM WEEVIL.

MR. COLE:—A few days since, I saw in Mr. Bradstreet's garden, of this town, several plum trees, of vigorous growth, full of fruit of promising appearance. He remarked, that the last year he lost most of his plums in consequence of the *curculio*, or *plum weevil;* and that he had saved them the present year, by repeatedly dressing his trees with air-slacked lime. I noticed that the leaves were completely coated with lime. He said the lime was made to adhere by throwing it upon the tree, when moist with water or dew—and where the lime was it would not go. If this be so, it will not be difficult to preserve a fair proportion of plums against the ravages of this meddlesome insect. We have known many cultivators, who have lost nearly all their fruit under their operations. It may be that others are familiar with this preventative remedy; still I thought there could be no harm in mentioning it,—for if any one can save *half a bushel* of fine *green gages* by the use of *half a peck* of air-slacked lime, he will make a good exchange by doing so. P.

Danvers, August 19, 1851.

THE PROFIT OF RAISING PORK.

It is always desirable for the farmer to know what profit, if any, he is making upon each branch of business pursued upon his farm. If it costs more to make pork than can be obtained for it in market, he had better produce no more, at least, than enough for his family supply. I have frequently inquired of my neighbors the cost of making pork, and the answer invariably has been, I do not know. The same emphatic "I do not know," is a stereotyped answer to all similar questions, propounded to a large class of farmers.

When a crop is prepared for market, we ought always to know what it has cost us per bushel to produce it. The same is true in relation to every thing raised upon the farm; we would then know what branches of farming afford the best return for the labor expended, and capital invested; that being determined, we could direct our labor accordingly.

Now for the profits of raising pork. In an agricultural journal, an eastern correspondent gives the following figures, which I transcribe for two purposes. The one is to show the profit of the business in his locality, and the other object is to institute a comparison between the profits of the eastern farmer and those of the western.

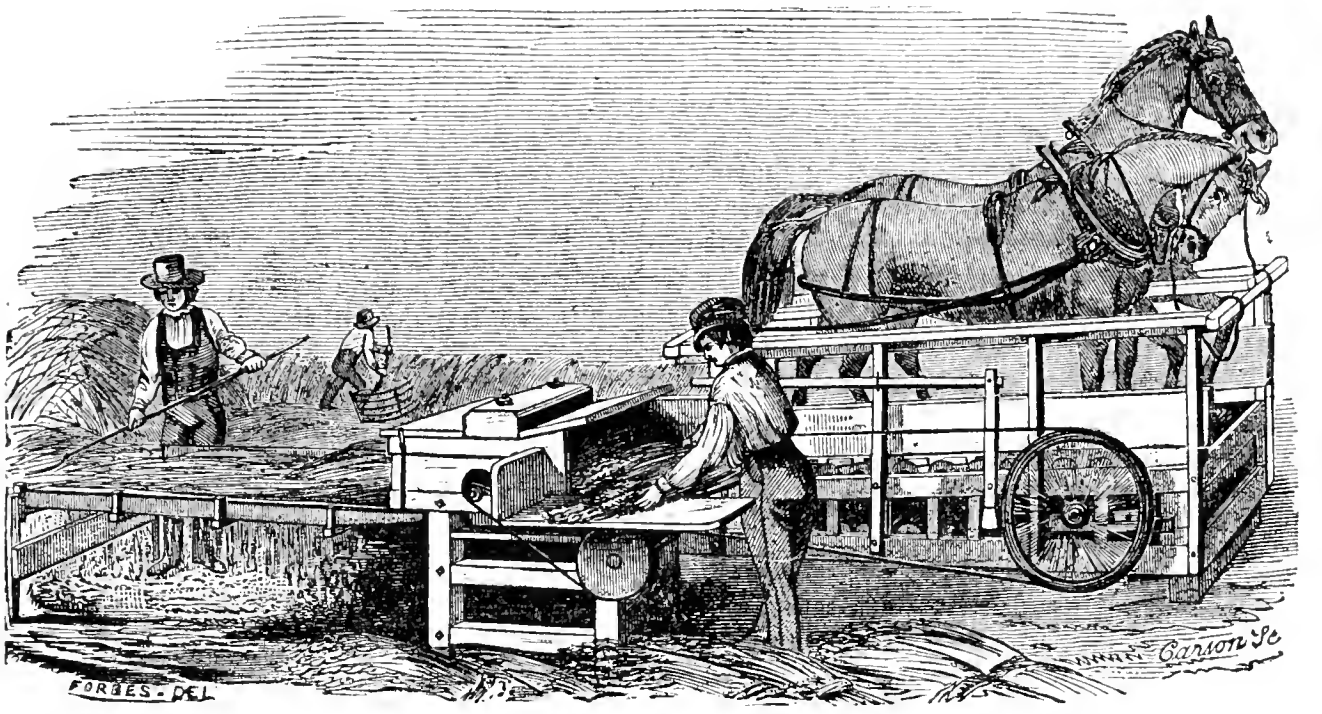
Cost of pig, 50 lbs. live weight 4½c lb	$2,25
6 bushels of meal 75c	4,50
13 do. do. 78c	10,14
	$16,89

Hog killed in Dec., weight 411 lbs., sold for 6 1-4c per lb., amount $26.71, showing a profit of $9.57, or 58 per cent.

The cost in Michigan would have been as follows:

Pig, 50 lbs. live weight, 2½c	$1,50
19 bushels of meal, 40c	7,60
	$9,10

411 lbs. Pork 4 1-2 is $18.49, showing a profit of $9.39, or 103 per cent. This exhibit gives the Michigan farmer a profit of 45 per cent. more than the Eastern.—*Wool Grower.*



Overshot Threshing Machine and Vibrating Separator, in operation.

EMERY'S LATEST IMPROVED HORSE POWER.

The attention of the proprietors has recently been directed to the late improvements made in the Rail-road and Endless-Chain Horse Power, and they do not hesitate to pronounce them valuable acquisitions to that machine. The manufacturers say:

The arrangement removes all liability of breakages and wear of link and pinions (heretofore unavoidable,) as the direct stress upon the links working over small pinions is wholly avoided; they are acknowledged by those using them to run with lighter friction, and enables the power to be operated at a less elevation than heretofore. Thereby combining GREATER STRENGTH and DURABILITY with LIGHTER FRICTION, without the liability of breakage of links or the wearing of links and pinions. The farmer or mechanic is enabled to perform a greater amount of work, or to operate with less power, or elevation, as best suits his wishes.

The arrangement for tightening the endless platform by means of a joint bolt connecting with the bearings of the reel shaft, is new, and is a very simple and effectual mode of effecting this object, as it may be instantly done with a common wrench without stopping the machine. The platform is considerably longer than usual,—avoiding the liability of large or unsteady horses stepping over or off at either end.

The Overshot Thresher, (represented in the cut,) and Vibrating Separators, with improvements, have been sold with like success as the powers. They admit of a level feeding table, thus avoiding accidents (which often occur with the inclined feeding board,) by preventing hard substances, sticks and stones from getting into the machine and breaking spikes, endangering those engaged with them. The grain by this motion is thrown on the floor within three feet of the machine, and admits a separator to be attached sufficiently high to allow the grain and fine chaff to fall through it, while the straw is thrown off without being cut, and in fit condition for binding.

The Two Horse Power Thresher and Separator is capable, with three or four men, of threshing from one hundred and fifty to two hundred bushels of wheat or rye, and the single one from sixty to one hundred bushels, or double that quantity of oats, per day.

CENTRAL BOARD OF AGRICULTURE.

A meeting of this Association was held at the State House, on Wednesday last. Every Agricultural Society in the State was represented, excepting the Housatonic. Col. M P. Wilder was elected chairman, and E. K. Whitaker Secretary. After a general and animated discussion upon the various topics connected with Agriculture, a committee was appointed to prepare a summary of business, who reported that a committee of three persons be appointed upon each of the following subjects, viz:—upon Ploughing—upon Milch Cows—upon all other Live Stock—on Farms—on Agricultural Implements—and Manufactures.

A committee was also appointed to propose to the several Agricultural Societies of the State, an arrangement of the times of holding their shows, so as to afford members an opportunity of interchanging visits with each other. This committee made a report which was adopted by the Board.

On motion of the Hon. J. M. Proctor, a committee of three persons was appointed to report on the

subject of agricultural education, and the best measures to be adopted for the encouragement of such education. In discussing this resolution, Professor Fowler, of Amherst College, introduced the subject of *flax cotton*, a sample of which he held in his hand, in order to show, briefly, what inestimable blessings may flow to mankind by a more intimate scientific knowledge. Other gentlemen spoke with great earnestness on this subject, and the resolution passed unanimously. After dividing the State into three sections, a committee was appointed for each section, consisting of one person, to visit the shows of the societies and report such matters of general interest as they think would be useful to the Board. The Board then adjourned to meet again early in January.

For the New England Farmer.

AGRICULTURE---NO. 1.

THE PHILOSOPHY OF SOIL, &c.

We hail with manifest pleasure and gratitude this all-glorious age, when the science of agriculture is being looked upon, not in its former degraded and disgraceful light, but as a science truly worthy of our profoundest research;—when the office of the "tiller of the soil" is not considered as the drudgery of all labor, nor the farmer's life as devoid of whatever interests; but to the contrary, he who earns his bread "by the sweat of his brow" —he who labors from morn till night o'er his harrow and plough, is in fact being deemed equal in position with him who, from day to day,

> ——"pores o'er the many lusty volumes
> Of his heart's forgotten lore."

There has been truly a great revolution in the agricultural world within a few years. Indeed, it has been comparatively wholly regenerated and reformed. And now this science is regarded as one of vital importance to the perpetual growth and increase of our—I trust—yet infant republic. It is being looked upon with a philosophic—a scientific view; with a view to raise its standard of true merit, to promote its best interests, and give it that position in the scientific world which its real merit demands. Philosophers and men of letters are turning their attention to it. Men of great and gigantic minds, of powerful intellects and of great wisdom, are being engrossed in the cause. And by their continued developments in relation to it, still render it a theme of increasing interest and an occupation replete with many sources of enjoyment.

We find that to be a *true* farmer, we must *fully* understand our business—not only the *practical* part thereof, but the *theory*, the rudiments, the grand fundamental principles. By thus preparing ourselves, we render us emphatically *independent workers*, not dependent upon the opinion, the doctrine or "say so" of any other man.

He is not truly an engineer who is simply capable of putting in motion and stopping at an appropriate time his ominate car, but he should render himself able to tear in pieces, to build up, to separate and examine every component part and portion of his structure, then reconstruct again. Then will he be competent to look upon his completed fabric, each part separately considered, and turn every portion to the very best practical advantage and benefit.

Likewise with him who follows the pursuit of agriculture. He first must have an accurate knowledge concerning the nature and essence of the soil which he is about to till. He should be perfectly familiar with its ingredients and elementary principles, the relations they bear to each other, and what they would be the best capable of producing under certain combinations. Thus then he comes into immediate contact with the sciences of geology and chemistry, without a good practical knowledge of which he is, in fact, unfit for his profession.

We observe, then, that this occupation is far from being that decidedly uninteresting and monotonous one formerly represented to be, but is engrossed with a never-ending variety of speculations which demand the closest possible scrutiny of philosophical research.

But I perceive I am spinning far too lengthy for a preface, and must proceed immediately to the theme upon which I propose to expatiate, and if in the course of the following remarks I should chance to "rake up" from the unbounded resources of science any truths, or throw out any hints which may prove of any use to tend to increase the fund of knowledge of any of your numerous readers in regard to the fundamental principles of agriculture, I shall feel myself fully rewarded.

The vegetable kingdom, we find, may with propriety be considered as the connecting link between the mineral and animal creation, and serves to unite them into a common chain of beings, for it is through the means of vegetation alone that mineral substances are introduced into the animal system, since generally speaking it is from vegetables that all animals ultimately derive their sustenance. Vegetation then seems to be the method nature invariably employs to prepare food for animals. Nor does the vegetable exhibit more wisdom in this admirable system of organization, by which it is enabled to answer its own immediate ends of preservation, nutrition and propagation, than in its grand and ultimate object of forming those arrangements and combinations of principles which are so well adapted to the nourishment of animals.

But a question arises here, Where do vegetables obtain those principles which form their immediate materials? Indeed this is a point said to be yet somewhat in the dark, but let us see. The soil which at first view seems to be the aliment of the vegetable, is found on a more minute inspection, a thorough investigation, to be in fact little more than a channel through which they receive their nourishment, so that it is very possible to raise plants without either earth or soil. We have instances of this in the hyacinth and other bulbous roots which will grow and blossom so beautifully in glasses of water. But methinks I hear some one say, "You would have something of a job of it to raise trees thus?" No doubt I should, as it is the burying of the roots in the earth which supports the stem of the tree. But this office, besides that of affording a vehicle for food, is by far the most important which the earthy portions of the soil perform in the process of vegetation, and it is discovered by analysis that but an extremely small proportion of earthy matter is found in the vegetable.

In this connexion another question of no small importance arises. If the earth does not afford

nourishment to the plant, why is it necessary to be so attentive to the preparation of the soil? It is to impart to it those qualities which render it a proper vehicle for the food of the plant. Water is found to be the chief nourishment of vegetables; if, therefore, the soil be too sandy, it will not retain a sufficient quantity of water to supply the roots of the plant. If, on the contrary, it abounds too much with clay, the water will lodge there in such quantities as to threaten the decomposition of the roots. Calcareous soils, upon the whole, are the most favorable to the growth of the plants, from their containing a great quantity of carbonic acid, which is one of the most essential ingredients to vegetation. Soils are therefore usually improved by chalk or carbonate of lime.

But we find that different kinds of vegetables require different kinds of soil. Thus rice, a moist retentive soil; while wheat, a firm, rich soil; and potatoes, a soft sandy soil. Forest trees are said to grow better in fine sand than in stiff clay, and in fact, light furiginous soil is said to be the best adapted to fruit trees.

But what is going to be the object of *manuring?* says one.

We find that manure consists of all kinds of substances, whether animal or vegetable origin, which have undergone the putrid fermentation, and are completely decomposed, or nearly so, into their elementary principles. Now the great object of supplying the soil with these decomposed substances seems to be, to furnish vegetables with the principles which enter into their composition. For manures are found not only to contain carbon, hydrogen and oxygen, but their decomposition supply the soil with these principles in their primitive and elementary form. And I might add, that it is doubtless for this reason that the finest crops are produced in fields which were formerly covered with woods, as this soil is said to be composed of a rich mould abounding in those principles; and also accounts for the fruitfulness of the crops produced in this country immediately subsequent to its being covered over with unbroken forests.

But again. It seems to be a query with some, why animal substances are deemed superior to others for manures. Indeed, it does appear the most natural, far, that the decomposed elements of vegetables should be the most appropriate to the formation of new vegetables. But the addition of a much greater proportion of nitrogen, which constitutes the chief difference between animal and vegetable matter, renders the composition of the former much more complicated, and consequently more favorable to decomposition. The use of animal substances is chiefly to give the first impulse to the fermentation of vegetable ingredients that enter into the composition of manures. The manures of the farm-yard are of this description. But there is scarcely any substance susceptible of undergoing the putrid fermentation that will not make good manure.

The heat produced by the fermentation of manure is another circumstance which is extremely favorable to vegetation; but this heat would be too great if the manure were laid upon the ground in the height of fermentation—it is used in this state only for hot-beds.

Since all organized bodies in the common course of nature are ultimately changed and reduced to their elementary state, they must necessarily then enrich the soil, and afford food for vegetation. Now, then, it is not fully understood by many how it is that agriculture, which cannot increase the quantity of those elements that are required to manure the earth, can increase the products so wonderfully, as is found to be the case in all cultivated countries. We find that it consists chiefly and simply in suffering none of these principles to remain inactive, but to employ them to the best advantage.

This object is attained by a judicious preparation of the soil, which consists either in fitting it for the general purposes of vegetation or for that of the particular seed which is to be sown. Thus if the soil be too cold, it may be warmed by slacking lime upon it; if too loose and sandy, it may be rendered more consistent and retentive of water by the addition of clay or loam; if too poor, it may be enriched by calcareous earth or chalk. On soils thus improved, manures will act with double efficacy, and if attention be paid to spread them over the ground at a proper season of the year—to mix them well with the soil, so that they may generally be diffused through it—to destroy the weeds that might appropriate these nutritive principles to their own use,—to remove the stones which might impede the growth of the plant, &c., we may obtain a produce a hundred fold more abundant than the earth would have spontaneously produced.

In conclusion, then, we find agriculture to primarily consist in thus preparing the soil for the growth and development of the plant,—in discovering the radical method of obtaining the several principles, either from their grand original sources, air and water, or the decomposition of organized bodies, and in appropriating them in the best manner for the purposes of vegetation. R. H. H.

Burlington, Vt., Aug. 27th, 1851.

Remarks.—In most sections of New England there is sufficient lime in the soil, so that there is no profit in applying this substance. We advise those who try lime to make exact experiments in a small way; as some have applied lime extensively without any advantage, but with serious loss in the outlay.—Ed.

For the New England Farmer.

COLOR OF HOUSES.

Mr. Cole:—Under the above head, I notice in your last number an article by L. Varney, of Sandwich, N. H. I fully agree with him as to the color of paint for common farm-houses. I say farm-houses, because I am a farmer, and feel a partiality to one of them, in which I was born and reared, and still occupy. As to painting, my text is, cheapness and durability with good taste. Mr. V. says, "arguments, to be effective must be supported by facts." So say I. I am fully of the opinion that *red* is the *color*, in preference to white at least; and he that can show that yellow or some other color is preferable to red, will confer a great favor upon the inquiring public.

The following will show why I have a preference for red. This old house which has sheltered me all my days, was, in part, newly clapboarded and painted red with white trimmings, by my father, in June, 1830, it then being near 10 years old. In November, 1849, I painted it red again, with white trimmings as before. White, the absence of

color, was here *itself* absent, and had been for years; in its place was the color of the old pine rails that had served for half a century. On applying the paint we found the trimming very oil-thirsty, much more so than the clapboards, which were yet nothing but a good red, and covered with so good a body of paint that a less quantity was sufficient to the yard for the first coat than was required for the second upon the trimmings. Now, to keep in taste, it becomes necesary this fall, as a matter of economy to repaint the trimmings; but the red is as if it were but yesterday laid on, and so will remain from five to ten years to come. These being naked facts, I have settled upon the conclusion, that the interest of the cost of white painting will paint and keep painted red in good taste through all coming time.

Any one who would practice economy in house-painting, needs but to adopt my taste and be satisfied that the above statements are true; and I will prove them to the satisfaction of any skeptical inquirer who will favor me with a call at the old red house in Lyme, N. H. HARRIS ALLEN.

Lyme, N. H., Aug. 18th, 1851.

For the New England Farmer.

WINTER WHEAT.

FRIEND COLE:—If I mistake not, you have been among the advocates of the *wheat* crop, so that whatever *deficiency* appears on my part, you will please supply.

It would seem an *imperious duty* as well as *necessity*, that a general movement in this branch of agriculture should (without loss of time), be adopted.

The potato rot (not this season fully developed) admonishes every farmer of his duties to himself and his dependencies.

Where rests his substitute for this unsafe and valuable esculent? It must be that *wheat* is his only safe reliance. At all points in New England we hear the most flattering accounts.

We can only look with surprise at this *long neglect*. The farmer will raise his corn and all small grains of little value as compared with wheat. In the vicinity of Boston, his *straw* (valuable and productive as rye straw) *will sell for as much as the best of hay*.

His doubts can easily be satisfied by making trial. When he looks at the wheat statistics of our country (see Patent Office reports) where in (New York,) Rensalaer, Hudson, Westchester and other counties, only 7 or 8 bushels to the acre are produced, and all the West producing so small crops to the acre, on the average, he will be surprised, and say, *I will cultivate well and beat them*. From all the West and South, they cry out against *rust*, *weevil*, *hessian fly*, *smut*, &c., as the existing evils, more or less. This year they are fortunate; so in New England, the crop is beyond all expectation.

Sow and lay down to grass early in September, editor of the Ploughman's notions of sowing grass seed with wheat to the contrary, nothwithstanding. Crude notions may be expected if practical experience is deficient. The best grass fields I have seen, is where they were laid down with winter wheat. The quantity of dead wheat roots seem to operate as a manure to nourish the grass, while the young wheat seems to protect and shelter the young grass in winter.

On high grass lands, wheat may be sown late in September. Mr. Joseph Stone, of Westchester, sowed as late as the middle of October, and got over 20 bushels to the acre.

This I thought a *test* on what I called poor wheat land. Sod wheat does well, and an exhausted piece of mowing is good to turn over for wheat. Descending lands are best. We say—and *we mean what we say*—let every farmer take up the matter in earnest, and if not *this*, *the next year will give him his reward*. Yours, ESSEX.

Boston, Aug. 25th.

For the New England Farmer.

POTATO ROT.

MR. EDITOR:—The newspapers, both agricultural and most all others, seem to be teaming on the potato rot (so called; perhaps the cholera would be quite as applicable,) and I have taken great pains, from the beginning of that incomprehensible disease, to find out the cause of it. I have noticed the opinions of very many of the ablest writers in this country on the subject, and all are entitled to respect for the efforts they have made in trying to ascertain the great secret of this formidable disease or pestilence. And, by the way of an honest apology for myself, I will here state that I have never written to the editors of newspapers but once before in my whole life. Now, sir, if I shall be able to satisfy you that my views are correct, you are at liberty to publish the same in the Farmer.

1st. I contend that the potato rot (so called) is a disease of that plant, and that opinion I have fully entertained from the beginning of it in this State. I have listened to the bug and insect theories enough to satisfy me, that nothing short of the power of the Almighty causes the above mentioned rot; if this is not so, let some of our philosophers define the cause, and prescribe the remedy. Again, if any one will prove that bugs or insects of any kind are the cause of the aforesaid, the remedy is ready. There is a cause, no doubt, operating somewhere. But I will now reason from experiments of my own.

Mr. Editor, you will recollect that in 1838 or 9, I exhibited to you in the Yankee Farmer Office, at Portland, (Me.,) three potatoes, the 3d year from the seed of the ball; said potatoes weighed 1 1-2 lbs. each, I think, which no doubt you will remember. I have cultivated the same from that time to the present, without any serious injury of the rot; and I have never done that which I believe to be one cause of deformity in potatoes, if not a remote cause of rot, namely—cutting them up to plant. I have always planted perfect potatoes of middle size in one hill; and up to this day my potatoes bare tremendous crops of apples or balls. I planted two acres early last May, and the balls now are full of growth. For this kind I received a premium in 1840, at the fair in Cumberland Co., and once since, by another gentleman. Last year I tried an experiment, as follows:—I had about 1 1-2 acre in once piece, the soil as near alike as any that could be found. I planted Chenangoes and some other early kind on the end where I began to plant; then I planted about three-fourths of an acre to my own kind, then one bushel of a kind new in this vicinity, called the Oxford Premium, then finished out the piece with the Orange or old kind of Yellow potato.

Now for the result: the Chenangoes were dead as hay in three weeks, and the old Yellows two weeks before my own kind or the Oxford Premiums showed any symptons of disease.

The Oxford Premiums bear bountiful balls, nearly up to my own, and are of a blue color, in form much like my own; and I am informed they were obtained from the seed of the ball, neither of which have ever suffered with the rot like any of the other kinds of potatoes.

I have tried experiments like the one just described every year since the pestilence has been known here, and the result has been uniform.

I now propose the following as the only preventive to the pestilence sent by the higher power (as I believe) to make men do more like him, i. e., if you want whole potatoes, then plant whole ones and well formed; then, plant none that will not bear seed on their tops (balls), and my opinion is, we shall get free from this pestilence in much less time than we were in erecting it.

Yours truly, MATTHEW CHURCHILL.

Raymond, Me., Aug. 13, 1851.

For the New England Farmer.

DIFFERENT KINDS OF CHERRIES.

MR. COLE:—Some two years ago I procured one of your American Fruit Books, and in looking it over I found many new varieties of cherries described, with other fruits, which I had not seen in any similar work. Being always desirous to procure the most choice varieties, I took your book for my guide, and with difficulty seeured several kinds. This year many of them have borne fruit, which in my estimation far surpasses anything I ever saw before. When considered as to points of real merit, market value, public favor, hardiness of fruit and trees, &e., it readily shows to me that many of our foreign varieties had better be dispensed with, as the most of them are full of defect and disease, although some do well in our northern country. I have selected twelve varieties, in my estimation the very best in every respect. Coe's Transparent, Ohio Beauty, Rockport Bigarreau, Black Eagle, Sweet Montgomery, Cleveland Bigarreau, Kirtland's Mary, May Duke, Downton, Sparhawk's Honey, Holland Bigarreau, Downer's Late, and might add the Black Tartarean, for its good qualities, but the tree is rather apt to winter kill with us. Should be glad to hear from others that have eultivated the same. L. BURT.

Walpole, N. H., Aug. 28*th*, 1851.

For the New England Farmer.

FOWL FACTS.

MR. EDITOR:—In these days of hen fever, there is a good deal of theorizing and baseless speculation, not only in fowl carcasses but in fowl opinions. Can there be no standard of fowl excellence invented, by which a man may know what is the best stock for producing poultry, and what the best for producing eggs? Is not weight the best standard for flesh, and weight and number the test of laying qualities? Is not the problem to be solved just this—With a given amount of food, what breed of hens will give us the largest returns in poultry or in eggs? It would greatly facilitate the solving of this problem, if your fowl correspondents would give us the faets, touching their opinions. If the Shanghaes or the Polands are the best layers, let us know how many eggs a well-fed hen will lay in the first year of her maturity. Will gentlemen have the kindness to give us the steelyards and the arithmetic of their opinions.

Your correspondent from Wakefield, R. I., thinks the Black Spanish the best layers, and a cross of these upon the Shanghaes the best for poultry. What are his *facts?* How many eggs will a Spanish pullet lay in her first season? What is the average of his flock, and how much will his crossed fowls weigh on an average, say a six or eight months old? Shall we hear from Mr. Dimon? W. C.

Stonington, Ct., Aug. 18*th*, 1851.

For the New England Farmer.

HOW TO DESTROY WITCH GRASS.

MR. COLE:—I noticed in a late number of your journal something in relation to the destruction of white weed. I am much gratified with the communication of your correspondent. He asks for a cheap and certain mode of destroying witch grass; and though I do not actually at this time promise to furnish so much, (for I know from experience that when this enchanted herbage has taken deep root in the soil, it is not easily destroyed;) yet, as it can be got rid of, I will relate one instance of its destruction. I once had under my eare an orchard, eonsisting of about one acre and a quarter, which had been laid down to grass ten years. When it was turned up, three-quarters of it was completely swarded with witch grass. It was planted to a crop of potatoes the first year, which eame up very well, and also the witch grass with them, both looking very flourising; (they were hoed three times, whieh was barely enough to keep the grass from heading;) after the erop was removed, it remained until nearly the time winter set in, when it was ploughed and harrowed, which process was continued through the winter season, as often as the weather would permit; the result was, that the witch grass was nearly all destroyed. This plan was pursued the ensuing year, with the effect of totally destroying the whole of it. If any one of your subscribers are troubled with this noxious weed, which is so annoying to the tillers of the soil, let them but persevere in the above plan, and they will eradicate it. If any of your correspondents would inform me of as eheap and certain means of destruction for Canada thistles, I should be very much obliged. Yours, respectfully,

L. W.

For the New England Farmer.

SKIPPERS IN CHEESE.

MR. EDITOR:—Much eheese is annually lost or rendered unsaleable, by being infested with skippers. To drive out these, when they have once obtained a lodgment in the eheese, eut a small circular hole on the outside near the centre; carefully remove the round ring or plug; and having excavated a portion of the inside, so as to leave a hole to the middle of the cheese, fill it with the best French brandy. As the liquor is absorbed by the cheese, renew it, and repeat the operation several times. Then fill up the hole and replace the plug, covering it carefully with a piece of paper pasted over, and the skippers will leave immediately.

Yours, &c., WM. A. YEAKLE.

Germantown, Aug. 27*th*. 1851.

EXPERIMENTS

OF THE INJURY TO CORN CAUSED BY GATHERING THE FODDER.

Several publications in the Register have stated the increase of Indian corn, matured with the blades and tops. The common usage in this county, which I have followed, is to gather the blades as soon as they begin to spot, and to cut out the tops immediately on securing the blades. About the first of September last, I stript the blades from several rows in one of my corn fields, leaving a row alternately undisturbed; and cut the tops about the 7th of the month, in like manner. As I designed to make a fair and satisfactory experiment, I suffered both blades and tops to be much withered before I took them from the stalks. The last of November I gathered the corn from the stripped and unstripped rows, when it was dry, and in good condition, and put it away in my barn in separate parcels, in the shucks, from both of which I husked out on the sixth of the present month one hundred ears, without particular selection, and now subjoin their weight and measurement. I am sensible that this experiment will not precisely correspond with others which may be made. The result of such experiments will be influenced by the quality of the soil, the goodness of the crop, the manner of planting, and the maturity of the corn at the time the blades and tops are gathered. My experiment was made from a field planted four feet each way, which had an early vigorous growth, unchecked by insects or drought, and which produced more than forty-five bushels to the acre. I made other different trials upon the parcels I have mentioned, both by weight and measurement, which I think unnecessary to state, as they all tended to the same result; but perhaps I ought not to omit to mention that the weight of the cobs of the unstript corn was double the weight of the stript, as it proves that subtracting the blades and tops dries up that part of the plant which immediately supplies the aliment to the grain. To this cause I attribute the perfection of the grain to the end of the cob of the unstript corn, whilst that on the stript had, for the most part, withered or perished.

100 ears of Indian Corn, matured with blades and tops—weight on cob	64 lbs.
Do. shelled	54 lbs.
Do. measurement	26 quarts, 1 pint.
100 ears of Indian Corn stript of blades and tops, weight on cob	50 lbs.
Do. shelled	41 lbs.
Do. measurement	21 quarts.

I have long desired to abandon gathering fodder; but it is hard to depart from common usage, especially if the deviation has the appearance of negligence. The month of September is usually devoted by farmers to this work; the dews are then heavy, and highly injurious to laborers; it is the season for intermittent fevers, which I believe are often contracted by this employment. The month of September might be most usefully employed in drawing out marl and other manures, and preparing fallows for wheat. When the wheat is sown and the corn gathered at full maturity, the cornstalks, with the blades and tops, afford some provender and excellent litter for cattle. Few farmers have such floating capital, as justify them in entering upon the schemes of improvement without calculating the cost and probable result. The provender afforded by Indian corn cannot be abandoned, unless an equivalent be supplied. A farm divided into four or five fields, of forty acres each, and one of them annually in Indian corn, will not produce fodder, even if the land is in an improved state, beyond five hundred pounds to the acre—equal to ten tons. Four acres set in orchard-grass and clover, will, if marled and manured, in two cuttings yield ten tons of hay. A gentleman in an adjoining county, in whom I have entire confidence, assured me that from one acre, very highly improved, he gathered six tons in one year. I estimate the enclosing, marling, manuring and setting in grass four acres, at one hundred dollars per acre, and the land thus diverted from the usual purposes of agriculture, at twenty-five dollars per acre, amounting in the whole to five hundred dollars. The capital thus invested is not sunk, but is safe and sound, and the interest on this sum, together with the cost of cutting and securing the hay, which I estimate at forty-five dollars, is the price to be paid annually for hay in lieu of tops and blades. A field of forty acres of Indian corn which now yields, under the old system of gathering, forty bushels to the acre—equal to one thousand bushels, if my experiment, or that of others, be not entirely fallacious, will produce an additional fifth, amounting to one thousand nine hundred and thirty-three and a third bushels—equal, at fifty cents a bushel, to one hundred and sixty-six dollars and two-thirds, to which is to be added the value of the labor saved, and the grazing after the hay is secured, which is worth something. If a lot be once well set in orchard-grass and occasionally dressed with manure from the stable, where the grass is fed, it will remain in a state of undiminished production for many years—in this I feel confidence, from my own observation.

WM. CARMICHAEL.

Wye, Queen Ann Co., Md.

Since the above was in type we find the following article in the Farmer's Register, which we subjoin.—EDS. F. & P.

"I have this year made an experiment to ascertain the loss occasioned to the corn crop by taking off the tops and blades at the usual time. Eight rows at the gathering the fodder (September) were left untouched, extending from one end to the other of a field of fifty acres. Four rows on each side of the eight extending in the same manner through the field, and on ground in every respect the same, had the blades pulled off and the tops cut. The corn when matured was carefully gathered, put in separate parcels, stripped of the shuck and measured. The corn which retained its blades and tops to the last, furnished 17 3-4 barrels of measured ears; the other eight rows, which had been stripped, yielded 16 barrels. A bushel of each was weighed, but there was no apparent difference by the steelyard. The loss sustained by taking away the blades and tops is by this experiment within a fraction of 12 per cent., being 11 barrels and fifteen-sixteenths. This, however, is not all; the land is deprived of an exceedingly rich manure in the blades and tops, as will occur at once to those who have observed the places where blade and top stacks have stood; a manure that goes far towards affording an equivalent for the draft made from the land by the crop. I have a field on the Scioto, in Ohio, from which forty successive crops of corn have been taken, nothing but the grain, however, having ever been removed. The ground

has sustained but little diminution in its product, except on a few spots where the soil has been abraded by freshets. This culture has been forced by peculiar circumstances of position in relation to the river, and the kind of labor used there, but is now about to be changed, as those difficulties are overcome. I am sure no land could have borne such a system where the tops and blades were taken off; but the limits of a letter would not afford space for my reasons.

I left at your office in Petersburg, last June, a specimen from some ground yet covered with wood immediately adjoining, also a third specimen from land that had yielded crops for the last ten or twelve years, from the vicinity, and of the same formation. An examination of these specimens, by one (like yourself) skilled in the analysis of soils, might lead to interesting results.

Yours, with high respect,

T. Massie.

—*Farmer and Gardener.*

Mechanics' Department, Arts, &c.

IMPROVEMENTS IN THE MANUFACTURE OF ALUM.

Mr. James T. Wilson, of Middlesex, (Eng.,) has recently patented a new process for manufacturing alum, consisting in subjecting aluminous shales to the direct action of a sufficient quantity of sulphuric acid to saturate at a single operation all the alumina contained in them, and convert it to the state of sulphate, the alum being obtained by subsequent crystalization in the usual way. The shales should be selected of a kind as free as possible from coal, or iron, lime, and other soluble impurities, and after having been exposed to the air two or three months, to reduce it to small fragments, and then burned in a lime or other similar kiln, is to be placed in an open boiler, about 15 feet long, 5 feet wide, and 4 feet deep, lined with lead, and having a false bottom at a height of about 15 to 18 inches above the bottom, composed of lead of about 24 lbs. to the square foot, perforated with numerous holes of half an inch in diameter, and supported on an iron frame-work, and provided with suitable conveniences for allowing the bottom of the boiler underneath to be examined and cleared out. Into this boiler, which is to be placed over a furnace of such a position that the flame does not rise to within a couple of inches of the false bottom, the shale is then deposited, the larger pieces being screened out, and laid immediately on the false bottom, and sulphuric acid of a specific gravity of 1·845 added in the proportion of 10 cwts. to every 12 cwts. of shale, with sufficient water to reduce the specific gravity to 1·35 or 1·4; and nearly fill the boiler. Heat is applied, and a gentle ebullition kept up for eight-and-forty hours, when the whole of the available alumina will have been dissolved, and the solution will be fit to be treated for crystalization by using sulphate of potash or ammonia. The patentee has, however, observed that, when alum is once crystallized from solutions obtained as above described, a certain quantity of the acid in such solution remains in excess, and renders the purification of the alum a matter of difficulty. Now, to obviate this objection, he introduces into the solution either ammoniacal liquors of gas works, or condenses therein vapors containing ammonia, which combines with the excess of acid, and renders the solution fit for immediate crystallization.

SUCCESSFUL APPLICATION OF STEAM POWER ON OUR CANALS.

At the foot of Hubert Street, there is, says the *Tribune*, moored a small steamboat, which though not very inviting in its appearance, combines all the requirements for canal motive power, and the evidence of her ability to do the necessary labor is furnished by the three heavy laden barges which are beside her, and which she has towed from Norfolk, Va., up the Potomac river to the Cumberland mines, and thence through the Alexandria Canal, the Chesapeake and Delaware Canal, up the Delaware River, and through the Delaware and Raritan Canal to New York, a distance of nearly five hundred miles, and in a few days she will continue her voyage to Albany. She is a small boat of about one hundred tons burden, and has two engines, rated at fifteen horse power each, and the only things that differ from ordinary steamboats, is the peculiar shape of her buckets, and the addition of a float back of the wheel, which is in the centre of the boat. The wheels are bent so as to form the segment of a circle, and they enter and leave the water without creating the great motion caused by the ordinary paddles. Should, however, the power required cause any swell, the raging waters are smoothed down and pacified by the float that follows the wheel. This float can be raised or lowered as circumstances may require. The owners of this boat assert that they can take a train of freight boats, loaded with eight hundred tons of coal, from the Cumberland mines to tide-water, at a speed of four miles per hour, at one-third to one-half the price at which the work can be done by horse-power; and the boats can be passed through the locks without detaching them, and in less time than is required by the same number of boats propelled separately. The boat is called the "Virginia," and we invite those interested (and who is there engaged in business, that is not?) to call and examine her. She was built after the plan patented by G. Parker, Esq., of Massachusetts, and is owned by Messrs. R. S. Denny & Co., of Boston, who, we understand, are constructing another boat at Albany to be used on the Erie Canal.

Ladies' Department.

ADDRESSED TO THE LADIES.

Mrs. Gage, who has lately partaken of the hospitality of Governor Wood, in a letter to the Ohio Cultivator, thus writes to the governor's wife and daughters—fit models of imitation for all American ladies:—

These ladies work in the garden, train up the vines, weed the beds, tend the borders, and make around a fairy land of beauty and luxury. *Why may not you do the same?*

Now, dear girls, you whose homes are situated away from the bustle and confusion of the city—by the babbling brooks, or upon the borders of the forest, or even you who live in more favored places, amidst the comforts of wealth and ease, let me ask you sometimes to think about the wife of our gov-

ernor—think of her as one like unto yourself—performing all life's holiest duties cheerfully, carefully. I have heard some of you sometimes say, that such a one was as "proud and stuck up, as if she was the governor's wife." Now don't slander the governor's wife any more—go imitate her quiet domestic virtue—be faithful to your duties, create around an atmosphere of beauty and usefulness—live plain, simple, truthful, earnest lives. Think less of the trimmings of your dress, more of the garniture of the heads and hearts, and more of your yards and gardens. For the sake of those you love best, do this. How can your sons or your brothers grow up coarse and unrefined, if you throw around them a panorama of beauty and harmony? Fill your gardens and yards with fruits and shrubbery—toll the birds to your bowers, and let them sing their merry harmonies at the threshold, and by and by you may have a home of your own, each one of you, that will fill the heart of the sojourner within thy gates with hopeful happiness.

FEMALE EDUCATION.

Shame on us, that we, who boast of having raised women, 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 summer, or coasts down the hill or skates merrily over the pond in the winter, the girl, untrusted, unbenefited, walks pensively by the side of her teacher, to the village, or takes a two-mile airing in a 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 the principal of a large female institute to me the other day, when I remonstrated with him on the importance of this and other like exercises for the girl. 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, enterprise to carry out, duties to discharge? Has she not the burden of life to carry, and its toilsome road to travel by 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 unforseen 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.*

THOUGHTFUL KINDNESS.

It is very easy, oftentimes, to do an act of kindness impulsively, and on the spur of an occasion. And as so done, it may be often both useful and gratifying to the recipient; may confer a real favor, and merit thanks and the feeling of gratitude. But how much more beautiful and noble than this, and how much sweeter and happier in its total influence on life and character, is that kindness which is thoughtful, considerate, anticipatory; which busies itself with contributing to the good of others, which thinks beforehand what their wants are to be, and how they may be met most pleasantly and efficiently; which thus sows the seeds of happiness and progress along the commonest waysides of life and sheds an influence of refreshment and peace on all the circle. To such a friend, the affections turn with an attachment which is full, overflowing, most intimate. Around such, grow up inevitably all beautiful associations, and grateful memories. For such friends there is nothing we would not bear, or attempt to accomplish. They are enshrined in our warmest and sweetest affections; and heaven itself takes a new charm from the hope, of there meeting and communing with them forever.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

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The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

FEEDING HORSES ON THE ROAD.

There is no one thing in which farmers manage their stock so badly, as in feeding horses too frequently while travelling. Some will bait their horses every ten or twelve miles, though they may not be more than an hour and a half or two hours in going from one stage to the other, and this is often done soon after the horse has eaten a hearty breakfast or dinner; when the horse stops, he is usually fatigued or hot, and he needs rest and cooling; to fill the stomach then with food, before the previous meal is digested, is injurious in the extreme; let the horse be well fed in the morning before he starts on a journey, and he will travel from seven o'clock to twelve, without requiring any food; then let him rest two hours at noon, and he will be prepared to travel again till seven without baiting. Horses that labor on the farm, work half a day without eating. In and around cities, are thousands of horses that work hard during the forenoon and afternoon without baiting, and yet they are kept in good condition, though at work almost every day in the year; they are employed in trucking, in cabs, omnibuses and other vehicles, and they usually labor hard; although these horses are frequently under the best of management, no one thinks of giving them a baiting between their regular meals.

The following article of J. V. C Smith shows the management of horses in the East, in this respect:—

"Barns are not required in Syria, no hay even being cut or in demand—cattle, goats, sheep, &c., having excellent feed the year round. Horses are far better managed in Syria than in England or the United States, more spirited, and endure the severest kinds of fatigue better than in any part of Europe or our own best of countries. The system of feeding, which is uniform throughout the East, is to give them fine straw, broken up by pounding, analogous to being cut. It is put into a small bag containing perhaps a peck, mixed with four quarts of barley or beans. In Egypt, beans are preferred. When put up for the night, the bail of the bag containing their supper is slipped over their ears, and they are left to make their meal and then have a regular night's sleep. Early in the morning the mess is repeated, nothing more being given. Fresh hay is never given them; in fact no such article is known. I have ridden one horse twenty days—oftener ten hours at a time—without ever stopping to bait.

"No such custom as luncheon for horses is recognized. Night and morning are the meal times for them, for donkeys, mules and camels. Their endurance under immense loads, day after day, sure footedness and vivacity, are extraordinary, and a theme of admiration. One month in a year, June, they are turned out leisurely to grass, and then the dry straw and provender is invariably resumed. In this connection, it may be mentioned that in shoeing horses, the people of the Orient are far in the advance of us. The shoe is a thin piece of iron plate, covering the entire under surface of the hoof, except a small oval hole for the exit of the frog, which is pressed through and recovers its position by an elastic movement when the foot is raised. The shoe, therefore, is not a burden, but a genuine protection, vastly better than ours of a pound weight each."

WORCESTER CATTLE SHOW.

The annual show of this society took place at Worcester on Thursday last. The weather was favorable, and a large collection of people were present to enjoy its festivities. The first exercise of the day was the PLOUGHING MATCH. There were sixteen entries, each of a single pair of oxen —no double teams or horse teams being admitted. All the teams were without drivers. The depth required was six inches, without restriction as to any greater depth. Sixteen rods of ground, or about one-tenth of an acre, was assigned to each team, and the time occupied in ploughing fifty minutes. The first team came out in thirty-five, and the last in fifty minutes. No limitation being fixed as to the time taken up in doing the work, there was consequently little hurry or whipping, which ensured neat and skilful execution. We noticed three boys of about 14 to 16 years of age, holding

the plough and managing the team and performing their part in a manner which would have done credit to mature years. Some of the best farmers in the State were on the ground as judges; and among the strangers present, we noticed the Hon. J. W. Proctor, President of the Essex Society.

The Address was delivered by Mr. KNOWLTON, editor of the Worcester Palladium, and was replete with good sense and practical suggestions. It had also another merit, which is an important one, on a day so busy as that of our County Shows—and that was of brevity.

At the dinner table there were excellent toasts and speeches, having application to the various branches of husbandry. Gov. LINCOLN spoke of Farm Labor and the profits and dignity of farming as an occupation. He referred to a speech on some public occasion by Lord Ashburton, in relation to the *kind of labor* employed on a farm—whether it be intelligent, or not, and the difference to the employer in point of profit, between three or four hands capable of pursuing ordinary farm labor under a few general directions, and those who can do little or nothing without the constant direction and eye of the master. We believe this point will arrest the attention of employers, and demand some action in order to avert a great evil which our young men, and women too, are gradually falling into, in regard to the business of husbandry. We shall take occasion to call attention to it more fully hereafter. He stated, too, as his belief, that no business whatever afforded a greater profit, with the same amount of capital, than that of farming, and that it was altogether more safe and healthy than any other. His remarks were listened to with great attention, coming as they did from one of so much experience on the subjects which he discussed. The Governor has served the society some twenty-five or thirty years as its presiding officer, has retired from his post full of honor, and is succeeded by his brother, Col. JOHN W. LINCOLN.

For the DRAWING MATCH there were some twenty-five entries. This part of the exercises seemed to have more interest and attract more attention than the ploughing, and we understand usually excites more competition than any other part of the Show. A very large concourse of spectators was present, and they were as enthusiastic as the holders of the whips themselves. The same cattle that ploughed were also in the contest with the cart. They were generally young, and of middling size, but well disciplined, nervous and active.

There were some very fine cattle in all the classes in the pens, and among them a number of young cattle raised by Mr. BROOKS, of Princeton, who is as successful as a breeder as in all his other farming operations. But as a whole, it was thought by good judges that the show of neat stock was not so good as it was last year.

There were but few entries of sheep or swine; of the former we had no opportunity of making particular inquiries after them. Among the swine we observed a Suffolk boar two years and five months old the 26th of this month, whose weight is 484 pounds, and as handsome an animal as ever wore tusks. A barrow of the same breed sixteen months old, weighing 424 pounds, and a pig ten months old, 254 pounds, all the property of GARDNER G. HUBBARD, Esq., of West Needham. These animals were among the finest we have ever seen, and we were informed by the proprietor, that they are remarkably mild in disposition, and lay on flesh with surprising rapidity. There is room for improvement in our breeds of swine, and we recommend our friends to look in upon Mr. Hubbard's stock.

The show of poultry was somewhat extensive. In passing the different cages we felt a twinge of regret that nearly all our native breeds were banished from the ground which they had occupied so long. Nearly all the odd-looking bipeds of the Eastern world were there, with their strange names and outlandish dresses. But our smart and gentlemanly-looking rooster, with his sleek, dapper wife, had been read out of the company and left at home to sing and scratch upon their old dunghill.

The show of Implements, we were told, was very fine; they were exhibited at the Mechanic's Fair, and we had no opportunity to make an inspection of them.

The rooms of the Horticultural Society were open and their show of fruits was exceedingly creditable. Apples, pears, plums, peaches, nectarines, and all other fruits of the season, were abundant. Crawford's Early, among the peaches, seemed to bear away the palm, and the Bartlett among the pears. The fruits were judiciously arranged, and it was refreshing to linger for an half hour among them.

On the whole, the Worcester Show was a good one. The County has many men of intelligence, earnestness and liberality in all that relates to husbandry and they are doing their part in pressing onward, the great work of improvement in this, the mother of all arts. Our thanks are due to the officers of the society for their politeness in tendering to us the hospitalities of the occasion.

ACKNOWLEDGMENTS.

From Leonard Cheney, of Southbridge, Cheney peach; this is a handsome fruit of first-rate quality, and under favorable circumstances has attained to a very large size. Twelve specimens which Mr. Cheney sent friend Earle, of the Worcester Spy, averaged ten inches and a quarter in circumference; tree hardy, a good grower and a great bearer. We consider it one of the best peaches for general cultivation. We also have from Mr. Cheney, which he procured from a neighbor's garden, a small white peach which is

nothing extra in quality; but the tree is very ornamental when in blossom, as its blossoms are very large and of pure white.

From A. B. Currier, Concord, N. H., plums for a name. The name is Yellow Egg Plum.

From Samuel A. Kinsman, of Barre, Mandell Grape. This is among our pleasant native grapes, but it has the hard pulp and pungent taste peculiar to all our wild grapes. The Strawberry Grape which we cultivate is earlier and superior in quality.

Of E. Myrick, of South Groton, specimens of the Sage Grape, same which is described by J. Fisher Allen, Esq., of Salem, in his work on the vine. These grapes also have the unpleasant foxy taste so peculiar to all our wild grapes.

From C. T. Symmes, of Lancaster, a noble specimen of Jacques peach, and a large handsome apple for the name; we do not know the name, but it is not the Lyscom, as has been suggested; the quality is rather poor.

From Joel Lake, nurseryman, Topsfield, fine specimens of Royal George peach; a noble cluster of Princess Imperial Gage plum, containing twenty fine plums on a twig of ten inches; Red Gage plum; two kinds of Seedling grapes,—the early ones are ripe and very good, the others not yet ripe. We do not know the names of the apples sent us, and as they do not ripen till December, we cannot judge of their quality.

From Nathan Smith, Weston, Seedling peaches, large size, high colored and very beautiful; they are very juicy, tender, melting, and of a most delicious flavor; it is one of the finest varieties we have tasted this season.

From James S. Draper, Wayland, superior specimens of Garden Royal apple, of much larger size than we have usually seen. Mr. Draper remarks, "Of its eating qualities you have well judged in your 'Book.' Of its size for the market. I think you could safely give it a higher recommendation." Specimens we have seen were doubtless from old trees without higher cultivation; had we been furnished with fruit of the size of that before us, we should have given it a higher recommendation for the market.

From Joseph Allen, Northboro', very large and beautiful apples of pleasant quality; tsrongly resembling the Hubbardston Nonsuch, but tapering little more to the top; we have never seen the fruit before.

From Col. Elisha Hale, Rockbottom, (Stow), a box of excellent peaches.

From Levi Burt, Walpole, N. H., a box of sweet apples, excellent for baking; the tree is a good grower and good bearer; they originated on his father's farm, Luther Burt.

From John Washburn, Plymouth, a basket of native plums of very good quality, on which he makes the following remarks:

"I sent you this morning a few plums; this has no other name here than the Round plum. We always have a bountiful supply of these plums, and have no quarrels with the curculio, for with three trees in my garden he is always welcome to all he wants, and then he frequently leaves enough to break off some of the limbs. There is a tree of this plum in my neighbor's garden that is 100 years old, and still bears good crops; we always raise them from seed and they produce the same. If you like it I will send you two or three trees this fall gratis, and will take pleasure in doing so. I picked a few plums to-day, of River's Golden Gage; these were rather overripe; size about that of the Green Gage, and not much different in quality; color a bright golden yellow, as its name indicates; the Orange plum has borne a few with me this year; the size is considerably less than the Washington quality, barely good."

The trees will be very acceptable.

MOTT'S AGRICULTURAL FURNACE.

These furnaces are admirably adapted for boiling vegetables and food for stock, and are often used for household and other purposes where much water is required to be heated.

They are a double kettle or boiler connected on the top of a box stove in such a manner that the fire passes between the outer and inner kettles, which causes the water to boil as quickly and with as little fuel as in a boiler set in brick.

There are several sizes, holding from 25 to 150 gallons; they possess an advantage over the common boiler set in brick inasmuch as they are portable, and can easily be moved from one place to another.

THE BLACKBERRY.

Very few regard this shrub of the slightest value—it does, however, possess some qualities which entitle them to the attention of others than the mere pass-by; for instance:

"The blackberries have a desiccative and astringent virtue, and are a most appropriate remedy for the gums and inflammation of the tonsils."

"Boorhave affirms that the roots taken out of the earth in February or March and boiled in honey, are an excellent remedy against dropsy."

"Syrup of blackberries, picked when only red, is cooling and astringent, in common purgings or fluxes. The bruised leaves, stalks and unripe fruit, applied outwardly, are said to cure ringworm."—*Am. Farmer's Encyclopædia.*

For the New England Farmer.

NEWLAND'S STRAWBERRIES.

Mr. Cole:—I am a constant reader of the New England Farmer, am often instructed, and find many things to approve. I am always happy to notice your liberality towards the opinions and views of others who differ from you, and who are undoubtedly most sincere and honest in their expression of them. On perusing the last number of the Farmer, I read a communication with the caption, "*Newland's Strawberries*," which seemed to me to be unfair, and altogether too severe. In my opinion, Mr. Newland did not exaggerate in the statements he made of the strawberry to which he applied his own name. He had the appearance of an open-hearted, upright man; was somewhat sanguine, as most persons are who suppose they have made a discovery, and was evidently one of those men who drive their business with earnestness and zeal, be it what it may. He came to my garden and assisted me in preparing the ground and setting two hundred and sixty of his plants, on the 8th May, 1849. The following summer we gathered thirty-five boxes of as sweet and handsome berries as ever grew; not so large as some other kinds, but infinitely sweeter and richer flavored than *any* other kind which I have tasted. This year we commenced picking on the 18th of June, and had them in profusion until the 24th of July—five weeks; after that time we picked a few each day, until the 3d of August. No account was kept of the number of boxes; but a family of six persons was constantly supplied twice and three times a day, about a dozen boxes sold, and as many more given away.

That Mr. Newland supposed these strawberries were a new kind, I have no doubt; but he was mistaken. I can take him to a garden where they have been cultivated for twenty years, and from thence taken to a city market, and *pronounced the best berries that were brought into it.* There they are known as "the Old English," while many about here say they are identical with the "Wood Strawberry."

That they are the best kind for *family use*, I think all persons, who like sweet, highly-flavored fruit, will admit. Another merit which they possess is, that they continue some three weeks longer than other varieties; they grow high up from the ground, out of the dirt, and part from the hull in picking. If people are willing to purchase fruit that is acid and unpalatable, because it is large, producers will be quite likely to supply them with it; it is easier to gather when quite large, and most kinds are harder, and will bear more jostling than the "Old English." But a sweet, finely-flavored fruit must be more wholesome than one which is quite acid; and altogether more economical to those who have no sugar plantations about them!

Allow me to suggest that your correspondents sign their articles with their own names. You do not mean to be responsible for all your correspondents say, I suppose. And without some paternity an article loses half its force.

I am truly yours,

Simon Brown.

Concord, Mass., Sept. 13, 1851.

Remarks.—Friend Brown may find Newland's strawberry a good variety for private use; yet as it is the old Alpine, or a seedling from that which is no better, it is a complete imposition upon the public. We have perceived no difference between this and the old Alpine. A large number of intelligent cultivators around Boston purchased Newland's strawberry, and gave it fair trial, and they have universally, so far as we have heard from them, decided it is identical with the old Alpine, and that it is a great imposition upon the public. We have no belief in Newland's sincerity; he was informed by those who had tested his strawberry, that it was an imposition, yet he has gone into other parts of the country and practised the same deception.

For the New England Farmer.

THE RIGHT KIND OF FOWLS.

For ten or twelve years I have paid considerable attention to the raising of fowls. I have never kept as many as most of my brother farmers; but I have endeavored to keep and preserve the *best* kind for *laying*. My object has been principally to furnish *eggs* for the market, and not keep fowls on which to speculate, as many have done. But I must confess, that, like a thousand others, I have had a little touch of the "*fowl fever;*" and this has been brought on, in a great measure, from reading the glowing descriptions in the different agricultural papers of the enormous profits to be realized from particular breeds imported from foreign countries. Now, the fact is, the *public* have been awfully duped, and I have shared somewhat in the result. The fact is, the public have not had, generally, but one side pictured out to them, by writers on different breeds of fowls. It is evident that nearly every article on the subject of fowls has been written by those who felt a deep *interest* in the matter; not an interest for the *public* at large, but an interest for their *own pockets*. Individuals who have had the imported breeds of fowls to dispose of, have actually overrated their good qualities, inasmuch as they have only told half the story; for while they have gone on to give an accurate account of the weight of their fowls, the produce of their eggs, &c., they have seldom said anything about the cost of their keeping, the size of their eggs, or the healthiness of the fowls themselves. Now, these, be it remembered, are essential items of account. It is *true*, the pure Shanghai fowls will weigh down twice the number of pounds of the common Yankee hen, and may perhaps deposit as many eggs in 365 days as the Yankee hen; but it is *untrue* that it costs no more to keep the former than the latter; and it is equally untrue, that the Shanghai produces as large an egg, according to their size, as the Yankee hen. It is certain, too, as every one (who has kept both kinds) will, I presume, testify, that our common fowls are more hardy than foreign breeds.

Before a persón is prepared to decide which fowls are the best for the farmer to keep for profit, he must prove them in different ways. Now, supposing a person buys a hen of the large breed of fowls, and one of the common Yankee hens, the former being twice the weight of the latter; the one he pays six shillings for, the other two, (this being about the price valued upon each in this vicinity). The two fowls are kept in separate enclosures and fed all they will eat; and from my observation, and from reliable statements by others, the large fowl will consume twice the amount of

grain of the smaller fowl, while the produce of eggs in numbers will he equal. Supposing the eggs are sold by weight, the difference would probably be as five to six. Now, any one who can do a simple sum in addition and subtraction can satisfy himself whether he had better purchase the large fowl or the small one. The reader will here perceive that I have figured on a small scale, but he can also perceive that my figuring is equally applicable on a large scale.

It was my intention when I commenced this article to give a sort of history of my success in the different breeds of fowls; but I forbear, as I have already pursued the subject to sufficient length. I desire to state, however, for the benefit of those who have followed me thus far, with the expectation of ascertaining "the right kind of fowls" for profit, that if I could be placed in possession of the 24 pure Yankee hens I owned six or eight years ago (which, by the way, produced me upwards of 3300 eggs annually), I would relinquish my present stock in trade, which consists of upwards of 60 of various breeds.

Everything must have its day and run; and so of course will the "fowl fever." My candid opinion is, that in less than ten years, the pure Yankee fowl will stand in the same relation to the foreign fowls, that the foreign fowls now do to our common fowls. They must be *crossed* with our breed, or they will eventually run out. Please mark my prediction, Mr. Editor. ALBERT TODD.

Smithfield, R. I.

For the New England Farmer.

POTATO CROPS.

MR. COLE:—So fluctuating is the condition and progress of the potato, as now cultivated, that what is averred *one week*, may be far from the fact the next. It seems to be admitted by all, that the last half of the month of August is the most critical period, in relation to what is called the potato disease. So far as I can learn, this disease has not shown itself to any extent in this vicinity. One man whom I know, has gathered and sold from his farm, the present season, seven hundred bushels of potatoes at an average price (when put up in barrels) of *one dollar* per bushel, about four times as much as they used to command when potatoes were plenty, before the *rot* was known among us. Of the entire crop he did not find *one per cent.* defective. Still there was *here* and *there* one, when cut, that would show the *mulatto colored stain*, which I take to be an unmistakable precursor of decay. On Saturday, I spoke with a farmer from Middleton, who was taking with him some potatoes to retail in the market, and asked him if he found anything of the rot among his potatoes. He said he had not, until he dug those he then had,—about two bushels. From these he had thrown out about half a bushel, which, he thought, had a suspicious look. On turning over those in his basket, a few were found tinctured with a tinge of suspicion; so that we are not yet so far out of the woods, in regard to the *potato rot*, that it will be safe to cry very loud respecting it. Those who have sold their potatoes and pocketed their money, may rest easy, provided they gave no assurance of soundness, directly or indirectly; but, as a general thing, a warranty on potatoes is not a very safe business.

One word as to the *Danvers Reds* or *Bradstreet potato*, to which the attention of your readers was called in the spring. This appears to be a late variety. It has grown luxuriantly, and, so far as I have seen, the yield is firm and sound. I saw them growing in Middleton, on the farm of Dr. A. Nichols, along side of a variety obtained from the eastern part of Maine, and I must admit that the Maine potato had a decidedly superior aspect. Some of these I have tried upon the table, and find they taste as well as they look. Generally speaking, the quality of potatoes this season is good. What is to be the result of the crop, can be better told the last of October, than the last of August. P.

Danvers, Sept. 8th, 1851.

For the New England Farmer.

QUESTIONS.

MR. EDITOR:—Will you please to answer the following questions?

Are side shoots as good to bud apple trees from as the leading ones?

Where nursery trees the first year from the bud are much inclined to branch, is it best to prune them?

Will a good supply of mulching around young standard apple trees, with the rest of the land lying in grass a part of the time, answer as well as constant cultivation?

What is the size of the Red Russet apple compared with the Roxbury Russet, and does it bear much in odd years?

Will you name a few of the most valuable kinds of apples for cultivation, having special reference to those that are constant bearers or bear most in odd years? WM. G. CHURCHILL.

Deerfield, N. H., Sept. 2, 1851.

FEEDING AND FATTENING SWINE.

The following article which we find in the *Maine Farmer*, contains some excellent hints on the subject of fattening hogs; and as the business is now in season, we lay it before our readers.

MR. EDITOR:—Many of the experiments I have observed, have resulted in a loss, instead of profit to the owners. And why is this? In the first place, I am aware that an error is committed in the outset. We buy too much live pork; the main object should be, to make pork, not to buy it. We should also consult economy in judging what number of hogs we can keep to advantage; the larger our family, and the larger our dairy, the more we shall find it expedient to keep; for there are a variety of articles in a family which may be thrown to waste and be lost, if not given to pigs. Almost all of every rank, trade, or profession, especially out of the cities, find it a matter of convenience to keep at least one hog. Although corn, or meal, is the staple article for fattening, yet there are remnants of bread, bran, meats, fish, vegetables and various other articles, such as skim-milk, whey, &c., from a dairy, which greatly promote the growth of pigs, and becomes a nuisance cast into the gutter. These it would be unfair to charge to the account of the pigs. I shall therefore attempt to show that by keeping only a suitable number of hogs, and leaving out of the account all waste articles, that raising our own pork may be more economical than buying pork for cash.

In endeavoring to show this, I would maintain that a hog should be fattened in the shortest possible time. That therefore, a good appetite should if possible be created and preserved. If a hog will eat well, he will fat well, and if he will not eat well, he will not fat, but waste more than he will eat. Give him that which suits his palate best, and he will soon gain a good appetite; purchase molasses and sweeten his dough, rather than he should not eat up all clean. Sweet apples are good for this purpose, when to be had. Since the potato rot has commenced, I have used sweet apples as a substitute, boiling them and mixing them with meal, and think them a far superior article to the potato.

A hog to be fattened cheapest, and in the shortest time, should constantly be fed to the full, and fed regularly at about the same hours daily. I am in the habit of throwing into the pen between meals, ashes, containing some charred coal, rotten wood, weeds from the garden, &c.; all these quicken the appetite. But I have found no practice superior, or equal to sweetening dough with molasses, to give a hog an appetite, and to fatten him. I use the rinsings of molasses hogsheads, which cost nothing; but $1,20 would buy all the sweetening necessary for one hog.

But to endeavor to illustrate what I have said, I will show you the result of an experiment I have made the present season on a pig managed in the manner I have recommended.

Cost of a pig, 50 lbs. live weight, at 4 1-2 cts. per lb., $2,25; 6 bushels of meal fed, up to September 5th, at 75c, $4,50; 13 do. fed, to December 6th, when killed, 78c, $10,14; total cost, $16-,89. Weight of hog December 6th, 411 lbs.; deduct weight live pig, 50; net gain over live weight, 361. 411 lbs., at 6 1-2 c. per lb., market price, comes to $26,71; total cost of feeding, $16,80; net profit, $9,82.

I have made no account of milk or molasses fed, as we never are in the habit of selling skim-milk, but when sweet, give it to our neighbors for family use, and the molasses costs nothing. I fed to this pig about half the skim-milk produced from a cow, say two gallons per day up to September 5th, 90 days, mixing with it meal, which only produced what I desired, a rapid growth. I then commenced fattening him, always feeding him to the full, using in the remaining 90 days about six gallons of the rinsings of molasses hogsheads, occasionally sweetening the meal, using some skim-milk. In the whole 180 days, the gain per day appears to be a fraction over two lbs., but would have been considerably more, had both been weighed alive; the true method of ascertaining the correct net gain.

Some may think that a single hog in a pen may be made to do better than each, where a number are kept together in a pen; I think I have found the fact to be the reverse of this; hogs seem to love society, and after a short acquaintance, become attached to each other, and are peaceable and quiet, thriving better than one alone.

I have taken some pains to show the true reasons of so many failures to find profitable returns from keeping swine, a matter of much general importance. C.

Hamilton, Dec. 10, 1850.

☞ The receipts for tickets at the Mechanics' Fair in Providence, were $900 the first day, and $1800 the second.

CENTRAL BOARD OF AGRICULTURE.

The above association, composed of delegates from the different County Agricultural Societies, was convened this day at the State House, and called to order by Hon. Seth Sprague, President of the Plymouth County Society.

A Committee consisting of Professor Fowler, of Amherst, Hon. John Daggett, of Attleboro', and Paoli Lathrop, Esq., of South Hadley, reported a list of officers for a permanent organization of the Board. The following gentlemen were elected:—

Hon. Marshall P. Wilder, *President.*
Hon. Henry W. Cushman, } *Vice Presidents.*
Hon. John W. Lincoln, }
Hon. Allen W. Dodge, *Cor. Secretary.*
Hon. Edgar K. Whitaker, *Rec. Secretary.*

Voted, That His Excellency, the Governor, His Honor, the Lieutenant Governor, the Secretary of State, and the Members of the Executive Council, be invited to take seats, and participate in the deliberations of the Board.

On motion it was ascertained that delegations from all of the fourteen County Societies were present, and that the State Society was also represented.

The President stated briefly and pertinently the objects of the organization of the Board, and especially directed attention to the great importance of concert of action on the part of the different societies.

J. W. Proctor, Esq., President of the Essex Co. Society, concurred with the President in the great necessity of interchange of opinion, and of friendly relations between the agriculturists of the State.

Simon Brown, Esq., of the Middlesex Society, favored the meeting with some forcible remarks to the same effect.

Hon. A. W. Dodge, of the Essex Society, enlarged upon the importance of establishing a common standard by which the County Societies might engage more understandingly in their improvements in *stock*, especially in relation to Milch Cows—also in a standard measurement of corn; and other well devised rules for the different societies in the regulation of Premiums.

Hon. J. Gardner, of Bristol, concurred in the views of Mr. Dodge, and regretted the irregularity which existed in his own county in relation to standard rules in the adjustment of premiums.

Dr. Reed, of Berkshire, considered that the annual reports of the different societies were very defective, owing to the want of a common understanding in relation to just rules at annual exhibitions. In the western part of the State this was certainly a cause of great dissatisfaction.

Richard Bagg, Esq., of Hampden, thought that much of the uncertainty and want of method in the societies was the result of neglect in the early training of farmers—and was of the opinion that the first principles of farming should be taught in the Common Schools.

Hon. John C. Gray, President of the State Society, recommended that a Committee be chosen to report business to the Board, and that said Committee be constituted from the local societies. The State Society had set the example of instituting annual shows—and the County Societies had adopted the same course, and had even eclipsed the parent society. Mr. Gray gave a highly instructive statement in relation to the movements of the State So-

ciety, and the efforts it was now making to obtain from Europe the most valuable kinds of stock to improve our own.

On motion of Hon. Geo. Denny, of Worcester, it was voted that a Committee, to consist of one from each society, be appointed to take into consideration the time of the several societies' exhibitions, so that they may not interfere with each other.

While the above motion was pending, a spirited discussion ensued upon the indispensible importance of systematizing the action of the various agricultural societies in the Commonwealth, so that the best interests of the farmer might be promoted. The discussion was conducted by Hon. J. H. W. Page, President of the Bristol Society, Col. Wilder, Mr. Dodge, Mr. Denny, Dr. Reed, Mr. Bagg, Mr. Gray, Mr. Sprague, Mr. Daggett, Mr. Proctor, Hon. B. V. French of Norfolk, Hon. J. T. Buckingham of Middlesex, Dr. Gardner, Hon. R. C. Winthrop of the State Society, Mr. Brown and Hon. J. W. Lincoln, President of the Worcester Society.

The Committee for arranging the time for the annual exhibition was then chosen as follows:—Hon. M. P. Wilder, Hon. John C. Gray, Hon. J. W. Lincoln, Hon. A. W. Dodge, Hon. J. W. Proctor, Hon. Seth Sprague, Hon. J. H.W. Page, Hon. H.W. Cushman, Dr. S. Reed, Richard Bagg, Jr., Esq., Wm. O. Gorham, Esq., Charles H. Bursley, Esq., S. Brown, Esq.

On motion of Mr. French, voted that Hon. B. V. French, J. W. Proctor, Esq., and Hon. Geo. Denny, be a committee to report business to the Board.

Voted, That the members of the agricultural press be invited to take seats at the Board.

The Board then adjourned to 3 o'clock, P. M.

Afternoon Session.

Mr. French, from the Business Committee, reported that committees of three be appointed on each of the following subjects, including the premiums to be offered and the principles upon which they are to be awarded, viz.: on Ploughing—Milch Cows and Dairy Products, all other Live Stock, Farms and improvement of lands, cultivation and measurement of crops, agricultural implements, manufactures.

The committee on recommending specific days for the annual exhibitions, submitted the following report:—For Essex, last Wednesday but one in September; Worcester, last Thursday but one in September; Worcester, (West,) last Thursday in September; Norfolk, last Wednesday in September; Middlesex, first Wednesday in October; Plymouth, first Thursday in October; Barnstable, second Wednesday in October; Bristol, second Thursday in October; Hampden, last Thursday and Friday in September; Housatonic, last Wednesday and Thursday in September; Franklin, last Wednesday and Thursday in Sept.; Berkshire, first Wednesday and Thursday in October; Hampshire, Franklin and Hampden, second Wednesday and Thursday in October; Hampshire, third Wednesday in October.

Voted, That the officers and delegates to the Board be authorized to invite the co-operation of their different societies to carry into effect the above recommendation.

Voted, That the thanks of the Board be presented to Mr. King and Dr. S. Reed and other editors, for their offer to publish the doings of the Board in their several papers.

Voted, That the Secretary be authorized to offer for publication the proceedings of this meeting to the various agricultural papers of the State.

In conformity with a previous vote of the Board, the President submitted the following lists of Committees, viz:

1*st. Ploughing.*—John W. Proctor, Esq., Hon. Seth Sprague, Hon. Johnson Gardner.

2*nd. Milch Cows and Dairy products.* — Hon. Geo. Denny, Hon. B. V. French, Hon. Allen W. Dodge.

3*rd. All other Live Stock.*—Paoli Lothrop, Joseph Howe, W. O. Gorham, Esqrs.

4*th. Farms and improvement of lands.* Hon. J. T. Buckingham, Hon. John Daggett, Horace Collamore, Esqrs.,

5*th. Cultivation of Crops.* Hon. J. W. Lincoln, Alfred Baker, Esq., Richard Bagg, Jr., Esq.

6*th. Agricultural Implements.* — Simon Brown, Esq., Dr. S. Reed, Charles Bursley, Esq.

7*th. Manufactures.*—Charles C. Sewall, Esq., Gen. Samuel Chandler, Saml. Powers, Esq.

The foregoing Committees were authorized to report upon the various subjects referred to them, at an adjourned meeting of the Board.

Voted that a Committee of three be chosen to report a Constitution and Bye-Laws, and what further measures are necessary to organize the Board. Hon. Henry W. Cushman, Professor W. C. Fowler and James H. Knowles, Esq., were chosen said Committee.

On motion of Hon. B. V. French a Committee of five was chosen to report on the subject of Agricultural Education, and the best measures to be adopted for the encouragement of such education

Upon this motion a very able debate followed. The speakers did not differ as to the necessity and propriety of legislative action—but several of them advocated the action of public spirited individuals jointly with the legislature, as in the foundation of the State Normal Schools, and Reform School at Westboro'. The discussion occupied most of the afternoon session, and was conducted with much ability by Professor Fowler, Mr. Dodge, Dr. Reed, President Wilder, Mr. French, Mr. Gorham, Mr. Daggett, Mr. Brown and Dr. Gardner.

The following gentlemen were then chosen the Committee—viz: Col. Wilder, Mr. Proctor, Professor Fowler, Mr. Page and Dr. Reed.

On motion of J. W. Proctor, Esqr, a Committee of one from the Board was chosen to visit each of the Agricultural Exhibitions the present year.

The above vote was carried into effect by the appointment of the following gentlemen, viz:

The President, to visit the Hampshire exhibition.

Mr. Dodge, the Hampshire, Franklin and Hampden.

Mr. Cushman, the Bristol.

Dr. Gardner, the Franklin.

Mr. Proctor, the Worcester.

Mr. Lathrop, the Essex.

Mr. Bagg, the Norfolk.

Mr. Page, the Barnstable.

Mr. Whitaker, the Plymouth

Mr. French, the Berkshire.

Mr Hubbard, the Worcester (West.)

Professor Fowler, the Hampden.

Mr. Sprague, the Middlesex.

Col. Lincoln, the Housatonic.

(Should Col. Lincoln be prevented from attending Dr. S. Reed was chosen substitute.)

Voted, That the thanks of the Board be presented to the President, Secretary, and the other officers of the meeting.

Voted, To adjourn to the second Wednesday in January next, at this place, at 10 'oclock in the forenoon.

EDGAR K. WHITAKER, *Secretary.*

Boston, Sept. 3, 1851.

N B. In conformity with a vote of the Board the several Agricultural papers of the State are respectfully requested to publish the above proceedings.

PRESERVATION AND USE OF STRAW.

MESSRS. EDITORS:—In Western New York straw is worth more care than some farmers bestow on it. With many it is thrown into a sort of excuse for a stack, or removed just so as to get it out of the way of the machine. This mode of doing business is all out of order, for the straw left thus will require a long time to rot sufficiently to be drawn out as manure, as portions of it long remain dry or nearly so.

Every farmer will find it to his advantage to build a good firm stack pen, say seven or eight rails high—well staked or locked, with two rails at each corner of the pen. Build your pen as near as you can guess, just large enough for the straw you intend for it, and then stack it as nicely as you would hay, and if your stack is large, provide yourself with a hay knife, cut down and feed out as regularly as you would your hay.

A good thing to put upon your straw is a good supply of *brine*, (as fine salt will not dissolve,) and this can be easily done when stacking. The advantages of using brine are many. Your cattle, horses and sheep will eat it better, and there will always be a supply of salt in their feed; besides, salt is considered a fertilizer, and on some lands very beneficial to crops, and perhaps would not be injurious to any. This three-fold benefit is sufficient to compensate any farmer for the trouble and expense of putting a good supply of salt, in the shape of brine, upon his stack of straw.

And feeding out straw as above mentioned has many advantages over the common careless way of letting cattle run to the stack as they please, and pull out and tread under foot, until they are in danger of being crushed to death by the fall of the heavy mass of snow and ice that invariably accumulates upon the top of the stack. An instance of this kind once came under my notice. Word came that the straw stack had fell over, or that the trap had sprung and caught under it a fine two-year old heifer. Hark, she is alive; I hear her breathe. Call the boys; go ask neighbors A B C if they will come and help dig out the poor creature. Then with forks, shovels, old axes, and everything we could lay hands on, we fell to work to remove the frozen mass, and release the poor animal from her uneasy confinement.

By taking the above advice, all such troubles may be avoided, and you may have plenty of this kind of fodder to last all winter, and no more; for it should be thrown out in the course of the winter and spring, that it may become mixed with the manure and absorb its liquid portions, when it can be easily removed from the yard with forks and wagons to the soil that most needs it.

From experience and observation we have become satisfied that spring is the best time to clean your barn-yard, not by throwing it into large heaps in or out of the yard, but by drawing it where you want it to use, with as much moisture in it as it will absorb, drop in loads so near together as will manure as high as you wish, then spread no faster than you want to plough, so as to prevent loss by evaporation.—J. SIBLEY.—Eagle Harbor, Aug. 11, 1851.—*Rural New-Yorker.*

CURE FOR GLANDERS.

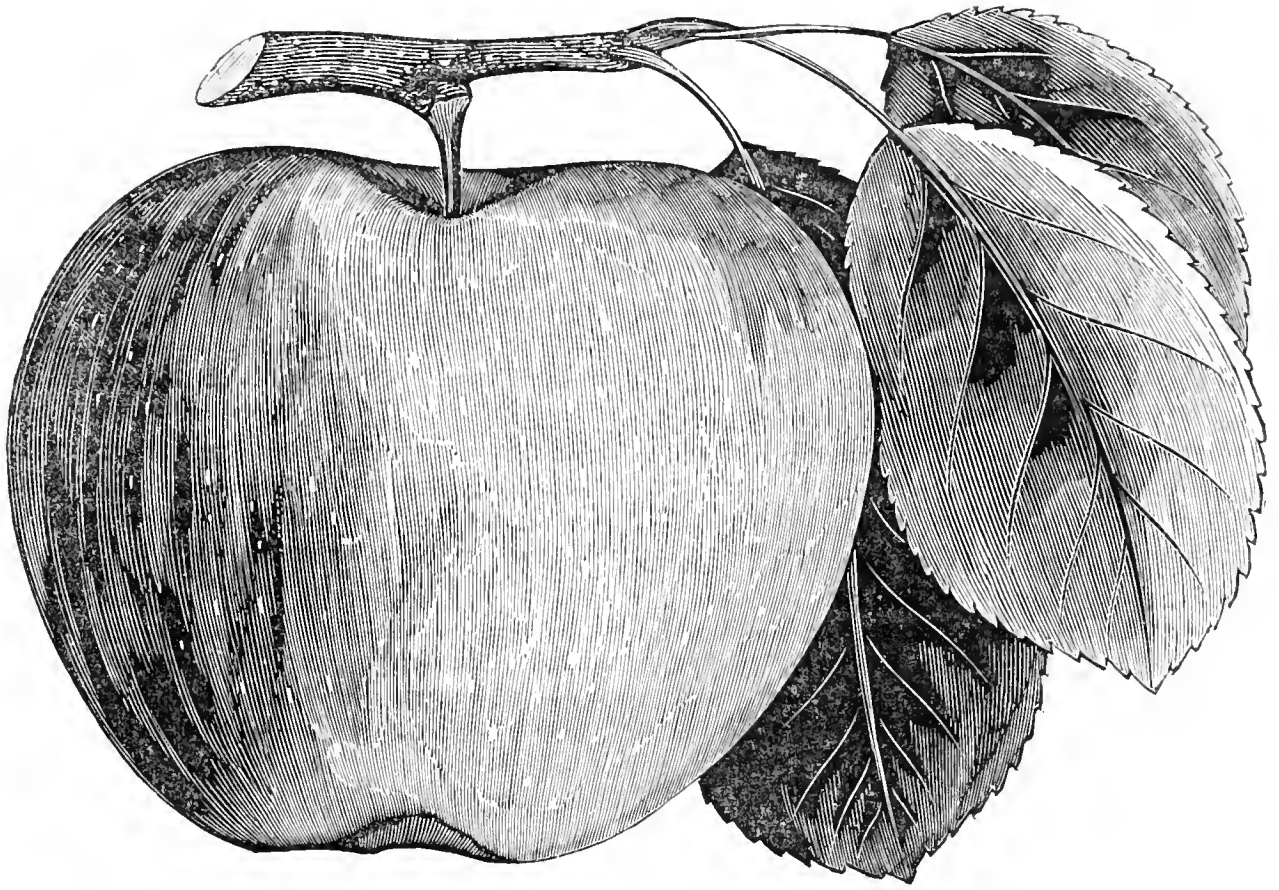
MESSRS. EDITORS:—I have heard it said all my life that glanders in horses were incurable. But this I have proved to my entire satisfaction to be a mistake. Some time in September, 1850, I met with an opportunity of trading for what I thought was a good brood mare—at the time she was running copiously at one nostril, which was represented to me to be distemper. I was suspicious of its being glanders, but concluded to risk it. It afterwards proved to be glanders. Now for the remedy: In the first place I bled copiously; I then put in a rowel or seaton of polk root, between the jaws and in the breast; I then procured one gallon of fresh tar; I next fixed a small mop on a stick long enough to insert it as high up as the eye. I inserted the tar into the nostril in this way twice a day until I had made a complete cure. I had never heard of the remedy before—but supposed there are a great many little fibres in the head of the animal that, from some cause or other, discharged the matter, and I supposed the tar would heal them up. Great care should be taken to keep the blood in a good state, to prevent it from turning to farcy about the time the running at the nose ceases, as I believe glanders will produce farcy, and farcy produce glanders. Respectfully, yours, BASON HOLLOW. —Cobb's Mills, Ala., May 15, 1851.—*Farmer and Planter.*

NORTHERN POTATOES.

On the 1st inst., we received a basket of potatoes from C. D'Invillers, Esq., of this borough, which were planted on the 24th of May, and exhibited well-formed bulbs in six weeks after. They are called the Early June Potatoes, the seed of which were obtained from Buffalo, four years ago. They are exceedingly smooth, round, well favored variety, and have appearance of being of fine quality, which we are informed they possess in high perfection. They have never been known to be affected by the rot, and are evidently a hardier potato than the Mercer. The vines are very luxuriant, though the ground in which they were produced was not manured for the crop, but was in good condition.

We understand the same potatoe is raised in great abundance—indeed is the favorite variety—throughout the entire "lake country," and was recommended on account of its quality and freedom from the rot, to general cultivation in all the potato-growing States.

We shall endeavor to acquaint ourselves with all the necessary facts connected with its history, and will test its quality, so that we can speak more authoritatively of its value to the region south and west of Michigan and northern New York.—*Ed. Germantown Telegraph.*



RICHARDSON APPLE.

This apple originated in the orchard of Ebenezer Richardson, of Pepperell. A few years ago it was exhibited at the Concord Cattle Show, and among many fine specimens of apples, it was distinguished for its large size, great beauty and superior quality. It has been disseminated considerably in nurseries, but has not yet gone into general cultivation. It is one of the most tender, delicious, fine flavored apples of its season; large, roundish, inclining to conical; smooth; green, mostly covered with red, bright in the sun, numerous large light specks; stem two-thirds of an inch long, rather stout, in a broad, deep cavity; calyx large, open, in a narrow, deep basin; flesh greenish-white, remarkably tender, juicy, of a rich, delicious and almost saccharine flavor. Good specimens are of the highest order; those in the shade want character. This is a moderate grower, and the original tree is called a good bearer; from the first to the last of September.

MASS. HORTICULTURAL EXHIBITION.

This exhibition which we announced last week took place upon the 17th, 18th and 19th, and was all that its most ardent admirers could have wished it. It has been visited by throngs of our citizens and illustrious guests, whose only disappointment seemed to be that they could not taste as well as see the rich fruits so profusely scattered around. The many strangers that visited the exhibition on Thursday expressed themselves as much astonished as delighted.

The floral temple by Jonathan Mann, Jr., the floral baskets by Miss Russell, Fletcher Webster, James Nugent, J. P. Cushing, W. E. Carter, Winship & Co.; the guitar and harp of Mrs. William Kenrick; and the grass boquets by Mrs. J. Walsh, are deserving of special notice from the lovers of flowers. The pair of boquets, which won the first premium for the Bradley vases, by James Nugent; and the premium boquets for the society's vases, from J. P. Cushing, Esq., were exceedingly fine.

Of plants, J. Nugent, Hovey & Co., (a splendid Fuchsia), and Winship & Co. made a fine display.

Of cut-flowers, Samuel Walker, Esq., (the worthy successor of Gen. Dearborn, both in his civic capacity and as an eminent horticulturist), had a fine show of Dahlias; as also James Hyde & Son. The finest collection of cut-flowers, (which obtained the premium,) was by J. Mann, Jr., of the House of Industry. Messrs. J. P. Cushing, Nugent, Copeland, Winship & Co. and Kenrick, were also large contributors.

Of fruits the display was magnificent; pears, apples, peaches and grapes, in endless variety.

Samuel Walker, Esq., (President of the society.) exhibited a splendid collection of pears, of which we will mention the following, in order once for all to give a faint idea of the variety and

to avoid repetition: viz., Flemish Beauty, Dutchess d'Angouleme, Maria Louisa, Bartlett Dunfore, Catillac, Vicar of Winkfield, Urbaniste, Napoleon, Seckle, and many others.

M. P. Wilder exhibited fine Golden Beurre, Dix, Belle, Worcester, King Edward, Brougham, Andrews, Frederic of Wurtemburg, Glout Morceau.

J. P. Cushing made a grand display of early Crawford peaches and Red Rare-ripes; and a great variety of pears.

Hovey & Co. Pears; among them Louise Bonne de Jersey, Beurre d'Amanlis, Beurre St. Quentin, Beurre d'Anjou, Stone, Passe Colmar, Le Cure, Seuille, French Autumn Bergamot, with a splendid basket of assorted fruit, early Crawfords, grapes and melons.

J. S. Cabot. Fine pears; Bartlett, Henricarte, St. Michael, Paquency, Neil, Henry IV., Muscadine, Fulton, Columbia, St. Andre.

Josiah Lovett, 2d. Fine Hessel, Ben Armudi, Belle Lucrative, Harvard, Pound, Bon Chretien, Beurre Dial, St. Ghislain, Beurre Bosc, Washington, Great Citron, &c.

R. Manning. Bergamot, Miel de Waterloo, Lewis Rousselet, Lawrence, Fondante d'Automne, Long Green, Edwards, Huguenot, Figue.

Josiah Stickney made the best display of pears, receiving the first premium.

John Gordon. Among others the Queen of the low countries, Easter Beurre, Cumberland.

In the lower hall was B. V. French's unrivalled collection of apples, from Gloria Mundi to Crab, $20 premium; plums by Henry Vandine, bronze medal; peaches, (gratuity) by N. Stetson; plums by J. T. Gates, bronze medal, and Josiah Lovett; peaches, (gratuity) by W. Bacon and W. Kenrick; basket of assorted fruit by James Nugent.

Vegetables.—Squashes and potatoes, S. W. Cole; beets and turnips, Stone & Co.; custard squashes, (silver medal) Francis Marsh; melons, A. D. Webber; squashes, E. M. Richards; tomatoes, Nahum Stetson; sweet potatoes, J. W. Brown; cabbages, Jona. Mann, Jr.; Hybrid sweet corn, (society's silver medal,) A. R. Rope; squashes and vegetables, A. Bowditch; snake cucumbers, Thomas Page; blood beets, (gratuity $5) J. B. Moore; and for turnips, (society's silver medal;) cauliflowers, (gratuity) Fletcher Webster, and $8 premium for 2d best display of vegetables; squashes, (gratuity) Josiah Crosby; potatoes, (gratuity) Anthony Hatch; water melons, (gratuity) John Gordon; best display of vegetables, J. B. Moore, $10; 3d, J. Crosby; 4th, A. D. Williams, (gratuity); apples, J. B. Moore, 2d premium, $15; Josiah Stickney, 3d, $12; John Gordon, 4th, $8; for the best dish of apples, Silas Pierce, $6; 2d best J. Stickney, $5; 3d, Josiah Lovett, (gratuity;) 4th, J. B. Moore.

J. P. Cushing. Fine Catillac, Easter Beurre, Doyenne Gris, Gansell's Bergamot, Winter Nelis, Bartlett.

S. Downer, Jr. Fine Bartlett, Columbia, Passe Colmar.

W. R. Austin, $6 for best dish of 12 pears, Duchesse d'Angouleme.

B. V. French. Fine pears; and a magnificent display of apples, receiving the first premium of $20.

Fine pears were also exhibited by Francis Dana, Thomas Page, A. D. Weld, S. Philbrick, (Andrews,) W. Kenrick, J. Hyde & Son, H. B. Stanwood, (Bartlett) C. N. Brackett, A. W. Stetson, Lewis Wheeler, J. B. Moore, Nahum Stetson; J. Fiske Allen exhibited splendid grapes, Black Hamburg, Rose, Golden and Red Chasselas, Bowker, Bishop's. Winship & Co. had fine Bruxelles, Jalousie de Fontenay, Catillac. George Wilson, fine Paradise d'Automne, Beurre Bosc, Charmontel. S. Sweetser, fine Pears, &c. Cheever Newhall, (gratuity for pears.) John Washburn, Josiah Richardson, (gratuity.) Galen Merriam, W. C. Strong, W. R. Austin, John Gordan, (gratuity.) William Bacon, Jonathan Mann, Jr., Fearing Burr, (gratuity.) A. D. Williams, (gratuity.) Henry Vandein and W. A. Crafts exhibited fine pears. A magnificent stand of grapes, which received the silver medal, was exhibited by Dr. Nathan Durfee. A. W. Stetson exhibited a fine vine of Black Hamburg grapes; also Sweet Water. Other contributors were J. Breck & Son, J. Fisk Allen, C. E. Grant, W. C. Strong, ($15) best grapes, and $7 for a dish of assorted fruit, nectarines, &c.

For the New England Farmer.

INSECTS AND THE POTATO ROT.

Mr. Cole.—It is curious to observe the variety of opinions entertained relative to the decay of the potato. It is a subject of so much antiquity, that every one feels at liberty to speculate upon it, while very few have the presumption to make any positive assertion respecting it. In fact, it is hardly safe to aver what is known to be true, lest by possibility it may prove otherwise.

I admire that perseverance in opinions that holds on until the contrary is shown; but, when convinced, to continue to argue still, is nearly allied to obstinacy. Such, if I do not mistake, is the fact in relation to those who still contend that *insects* are the cause of the potato rot. It seems to me that Dr. Harris, in his modest but admirable letters on this subject, has demonstrated, as far as is practicable, that the decay of the potato, commonly called the potato rot, *is not caused by any insect hitherto known among us.* I think this should be set down as an established fact; and so it seems to be admitted in all quarters, except on the banks of the Merrimack; and in certain papers whose distinguishing characteristic is disagreement with all others.—These thoughts came to mind, on the perusal of your last paper, in which I perceive Mr. Whipple, of Lowell, has put forward his *insect notions* as applicable to a *green*, and not a *black* insect,—and holds on to his *green louse* with great pertinacity.

I am not surprised that the gentleman to whom his letter was addressed should have hesitated in acquiescing in this opinion as to the *green insect*, when it is perfectly well known that this insect is *not knew*, but, on the contrary, that its characteristics are as distinctly described as any other to be found in our books. Gentlemen who are beginning their inquiries in these matters, should not be too sanguine in their notions.

What evidence is there that this *green-house plant bug* (so called) is the cause of this potato rot? Why, it is said to be found on the *leaf*, on the *stem*, or on the *root*, of the potato vine; and it is said to be a *devouring insect*. Are there not other insects, of like character, found in the same positions? Why, then, should this have all the glory? The truth is, the potato disease is peculiar and distinct, the same wherever it has been observed, proceeding from one cause, and one only. What this is, I will not presume to say; I will only say, that the gentlemen of Lowell are taxing the credulity of the public too strongly, when they ask them to believe that they have discovered the cause, either in their *black* or *green bugs*. *

For the New England Farmer.

RECLAIMED MEADOWS.

On the farm of Horace Ware, Jr., in the town of Marblehead, adjoining the estate of R. Brookhouse, is to be seen an example of the application of labor and skill, rarely equalled, in bringing a worthless morass into productive bearing, in the short space of *two years*. This morass was on the borders of a small pond of five acres, in which there was a depth of two or three fathoms of water and mud without limit. The ground was covered with a thick growth of blueberry and other shrubs. These were taken off for the wood they yielded. A ditch was dug from the pond to the sea shore, whereby the pond was lowered about six feet. This is so regulated by a sluice, as to admit of raising and lowering at pleasure. When the water was let off, the surface of the meadow settled near two feet. A covered drain was laid all along the shore, to take off the upland springs. The surface was ploughed by the aid of pulleys from the shore, not admitting cattle upon it. The hossacks, stumps, roots, &c., were cleared out and deposited in the edge of the pond, and these covered so as to leave a regular border, on the edge of which ornamental trees were placed. Thus prepared, the ground was planted with potatoes in the summer of 1850, and yielded a produce that sold for $75 an acre; being gathered before *the rot* commenced.

In the winter of 1850 and 51, Mr. W. prepared a compost of gravel and night soil, mingling four parts of gravel to one of night soil, with which he covered the entire surface of the meadow to the depth of two inches; 31 wagon loads of night soil were used on two and two-thirds acres of land. The surface then covered was harrowed and pulverised as far as practicable. On the 20th of last March, grass seed, clover and rep-top, were sown upon it. In June one and one-half tons to the acre were mowed, it being so lodged that there was danger of rotting, if not then cut. In August three-fourths of a ton to the acre more was cut. The present prospect is, that there will be another crop as good as the last, thus yielding about three tons of hay to the acre the same season the seed was sown.

It may be asked, what is the appearance and quality of this hay? In our judgment, it is worth three-fourths as much as the best of English hay. That is, the produce of each acre, for the last two years, has amounted to $125. How much has been the labor applied we are not informed, but hope to be when Mr. W. completes his statement for the use of the committee, whom we accompanied as a *looker-on*. Our impression is, that the crops have paid for the labor and manure; and that a meadow has been secured that will yield two tons or more of hay annually, for six years to come, without further dressing. Whether this is or not better than other experiments, we express no opinion, but think it a good illustration of successful labor, especially when the benefit of improved appearance and the health of the neighborhood is taken into view. We saw another pond in the vicinity, where the proprietor of the land adjoining has been at quite as much expense in preparing his ground, without taking the precaution to cut off the shore springs or to lower the water in the pond, and has as yet realized nothing but a coarse meadow grass, scarcely worth cutting; and probably never will realize any better until he learns what he wants, and how to obtain it. Such is the difference between *speculative farmers*, who ride in a carriage with kid gloves on, and *real farmers*, who are ready to apply their shoulders and their hands to any part of the work that demands it.

September 2, 1851. P.

For the New England Farmer.

MANAGEMENT OF MOWING LANDS.

Mr. Editor:—I perceived an article in the Farmer of August 2, headed "Management of Mowing Lands," penned by Mr. E. Bridge. The ideas advanced are different from my own, at least as far as my experience teaches. I think that hay ought not to be cut until the seed is full, or in the ear, which can be determined when the earliest heads begin to brown; I am now speaking of herds-grass. I think so for two reasons; first, when cut in the bloom, what is under the husk being soft, dries up to comparatively nothing, and the stalk being full of sap, must necessarily lose its weight much more than when the seed is full. I have seen both kinds placed before horses, and they will invariably leave the green and take the hay that has the seed full. By cutting when the seed is full, there is a saving of at least 25 per cent. in weight to the acre. Second, I think no meadow ought to be cut two years in succession, without having a little seed scattered on the ground, which will make young and vigorous roots come on as the older ones die out; whereas, if cut in the blade, the seed is not replenished; so that meadows must necessarily run out in a marked time.

With regard to feeding meadows, I find a great benefit in feeding my meadows in the fall of the year. By so doing, the seed that is left on the ground vegetates in the spring; otherwise it would not. I prefer sheep to any other stock to take the after-feed, as they take it closer and more even, so the scattered seed has a better chance to vegetate, and they scatter the manure more equally over the surface of the ground.

I have upland meadows managed as above described, that have been mowed nineteen years in succession, without breaking up; neither has any manure been put thereon in that time. I mow the

hay fed on the land, and the five last crops were the best; they averaged from one and a half to two tons to the acre, and I see no good reason why, managed as above described, I could not continue to mow them for twenty years more.

If you think the above worthy of a place in your paper, they are at your service.

Yours respectfully, SETH WETHERBEE.

Jacksonville, Illinois, Aug. 17, 1851.

REMARKS.—Our correspondent's mode for managing mowing lands seems to prove a very good one for the rich lands of the West, but it would not answer in New England, where the lands are less fertile. We must improve our lands by top-dressing, or by thorough tillage and manuring, else they will fail to produce good crops of grass. We agree with him as to the time of cutting herds-grass, very nearly; if cut when the seed is almost full, there will be more tons to the acre, each ton will contain more nutriment, animals generally will prefer the hay, and for laboring animals it will be as good as earlier cut hay with a small portion of grain. This is according to our experience and observation.

For the New England Farmer.

HORTICULTURAL EXHIBITION AT HAVERHILL.

MR. EDITOR:—A society that has existed in the neighboring town of Haverhill for several years, for the purpose of promoting the planting of shade trees, determined, this year to see what could be done by way of a Horticultural Exhibition, and invited the co-operation of the neighboring towns. It was held on yesterday, 16th inst., and proved conclusively that there is in private gardens in this vicinity a large amount of very fine fruit; and that exhibitions of this kind are of unspeakable value, in enabling a community to know the good and the worthless fruit in its own neighborhood, so as to profit by the comparison. I have never seen a finer display of choice varieties of pears, peaches and apples, (except in quantity) even in School Street, than was presented to the admiring sight at Haverhill, yesterday. Of peaches, there were splendid specimens of the Yellow Alberge, Early Crawford, Noblesse, Early York, Grosse, Mignonne, Oldmixon, Red Rareripe, &c.; of pears, Bartlett, Seckel, Marie Louise; of apples, Porter, Hubbardston Nonsuch, Spice, Bellflower, Lawrence, R. I. and N. Y. Greenings, Roxbury Russett.

The display of flowers was very pretty, but there was nothing particularly striking, except a very fine show of Dahlias and Astors by Gen. H. K. Oliver, of this town.

But what particularly excited my attention were some very fine seedling peaches that have been growing for years in the gardens where they originated, and might never have come into public notice, but for the medium of this exhibition. I feel that every seedling peach of superior quality, originating so far north as this, is of too great importance to remain obscure; and I am happy to forward a sample of a few of the most striking fruits of this character, that were on exhibition. And you will gratify and benefit many in this region, and perhaps render the public a service, by inserting in the Farmer your personal decision upon their merits.

What I have marked *No.* 1, grew in the garden of T. M. West, Esq., of Haverhill. The tree has been in bearing several years. The Committee on Fruits at the Exhibition, decided that its characteristics are so closely akin to the Early Crawford, as to designate it to be a seedling of that fruit. So far as a careful examination will justify a comparison of the two, the seedling seems to be rounder in shape, the grain a trifle coarser and the flavor somewhat sweeter than that of the Crawford. We afterward ascertained that it sprung up near a Crawford tree. The testimony to the fact that it is a seedling, is too emphatic to leave it an open question. Mr. West christens it the "Manelle."

No. 2 is from a tree about twelve years old, raised by Mr. Johnson Noyes, of Haverhill, who has young trees of the variety for sale. He calls it "Noyes' Seedling;" and it is perfectly true to its original, as a sufficient number of trees from it, in bearing, show. It is something smaller than the Crawford, but so handsome, high flavored, juicy and melting a fruit, that I think you will pronounce it of great value. It is a hardy tree, and a good bearer.

No. 3 is a "Noblesse" seedling, well known around Haverhill, perfectly true, a good bearer, and equal, I think, to the budded "Noblesse," which it closely resembles in size and color.

No. 4 is a smaller fruit, called the "Buttrick." It is a high flavored, handsome, delicious peach, a great bearer, and perfectly true. Young trees of either of these last mentioned varieties may be purchased of Mr. Johnson Noyes or Mr. T. D. Harmon, of Haverhill.

I trust the specimens I send will come to hand in good order, so that you can discuss their merits to good advantage. I add a pear and an apple for a name. Yours, &c., H. F. H.

Lawrence, Sept. 17, 1851.

REMARKS.—Peach No. 1 is a splendid fruit, which strongly resembles Early Crawford in appearance and quality; but it is rather milder, which is very desirable. The other three varieties are generally large, very handsome, and of excellent quality, ranking with our best varieties. As they have originated in the North, they will be more hardy than foreign kinds, and we doubt not that they will prove to be valuable acquisitions. As they produce the same from seed, they are far more valuable, as they are more easily propagated, and more hardy, and more sure to produce good crops. This is the general opinion throughout the country.

The pear is probably the Flemish Beauty, but not a well ripened specimen, as the quality is inferior to that fine fruit generally. We are not acquainted with the apples.

OCCUPATION.—Occupation cures one-half of life's troubles, and mitigates the remainder. A manacled slave working at the galleys is happier than a self-manacled slave without employment.

For the New England Farmer.

THE FRUIT CROP.

Fruit in general is rather abundant than otherwise, in this section, the present season. Apples are not so plenty as in some seasons, but there are enough for home demand, and some for export. The Roxbury Russet and Rhode Island Greening bear very well, but they are not so fair as they formerly were, which is the case with many other varieties in this region. The few past years have appeared to be rather unfavorable to the growth of the apple. Pears are more than an average yield, although some varieties do not ripen so well as others; native kinds generally succeed better than foreign. Quinces are somewhat abundant, of good size and very fair. There are many raised in this section, and the supply for a few years past has been greater than the demand. Peaches are quite a large crop; many trees are breaking from the weight of their fruit; the late warm and dry weather has ripened them very rapidly, and imparted to them an excellent flavor. Plums are plenty and good; the curculio has not attacked them so generally as in past years. The cultivation of the plum is receiving considerable attention of late. Cherries were good in quality, and of sufficient quantity. At the rate cherry trees have been planted for a few years past, this fruit must become extremely abundant ere long. Grapes are a light crop this season in this vicinity; native varieties, on high ground, produce a moderate quantity; but there are few in low situations.

Of other fruit of small kinds there has been a good supply; and the year, on the whole, may be called one of plenty with respect to fruit.

Leominster, Sept. 13, 1851. O. V. Hills.

NUTRITION IN VARIOUS GRAINS.

Wheat is one of the most important of our 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 above 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.

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 the 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, then, has not only abundants 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 per centage of fatty matter and of sugar is quite small, but that of starch much larger than any grain yet mentioned, being between eighty and ninety per cent.; usually about eighty-two.

Indian corn is the last 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, and 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.*

WATER CISTERNS.

Mr. Freas:—I am sure you will agree with me, that it is seldom the case that proper conveniences for supplying stock with water are found even on the best managed farms. Oftentimes the cattle are compelled to go several rods from the yards to a spring, brook or pump, and stand there shivering and chilled with the piercing blasts until the water is cut open or the trough filled for their accommodation. In this way the farmer loses, annually, more than it would probably cost him to

supply a good cistern, with the requisite fixtures of trough and pump in his yards, and where the animals could at all times accommodate themselves with drink without difficulty or strife. It often happens when several are driven out to water, that there is a chance for only a few to drink at once; this gives rise to contention and pushing, and wounds and injuries, often of a serious or even fatal character. Where they have free access to water, however, at all times, accidents of this nature seldom if ever occur. Cisterns are now constructed on scientific principles, and are found eminently to subserve the purposes for which they are applied. There is no heavy outlay required for brick, limestone or plank, and the exquisite manner in which all the details of the work are consummated, ensures the owner against the periodical recurrence of those heavy pecuniary expenses which were necessary, formerly, for repairs. By excavating a hole in the soil, in some convenient place—say in your shed or barn-yard, of the desired capacity, and coating the bare sides with cement, you will secure a cistern that will be permanent, and which will cost you but a mere trifle. One man will excavate it in a day or two, and a barrel of cement, costing one dollar and thirty cents, or thereabouts, will be sufficient to coat it. The shape of the cistern, for greater strength and convenience, should be that of an egg, with the large end down. The covering may be either of wood or split granite, and should have a hole for the insertion of the pump, and another, provided with a wooden funnel, rising six feet above the surface, for ventilation. By filtrating the water from your out-buildings, and keeping the funnel constantly open, you will secure a regular and constant supply of excellent water, both for your stock and for domestic use.—*Germantown Telegraph.*

TEXTURE AND FLUIDS OF VEGETABLES.

The elementary texture of vegetables is formed of vesicles, the coats of which consist of transparent membranes of extreme tenuity. These vesicles are of such minuteness that many thousands of them are contained in a square inch. Keiser assures us that these minute cells vary in their diameter from the fifty-fifth to the three hundred and thirtieth part of an inch. Kirby exceeds this computation, and places their minuteness at the thousandth part of an inch, giving, according to this hypothesis, no less than three hundred thousand cells to the square inch. These adhere closely together and form a cellular texture, that may be considered the basis of every organic part of the plant.

Fluids of different kinds are diffused throghout the plant, occupying the cells and intercellular spaces, being transmitted from one to another, but how is not fully determined. It has been urged that fluids are forced upward in the plant of the capillary attraction. Others deny the existence of capillary tubes in vegetables. A more recent theory adopts the *endosmose* and *exosmose;* which is, simply, the existence of contrary currents where two fluids of different densities are found, separated by an invisibly porous septum or partition. One of the currents is stronger and sets toward the denser medium. This is termed the endosmose or inward flowing. The other sets toward the rarer medium, and is called the exosmose or outward flowing. Now these two mediums exist with the plant—the rarer being the moisture of the soil, which is taken up by the rootlets; and the denser, the elaborated or proper juice. Consequently the two currents exist, as is proved by the upward flow of juice to the branches, and the deposit of principles in the soil peculiar to the plant, and which when accumulated, prove highly injurious to the healthy development of individuals of the same species, proving the absolute necessity of a proper rotation of crops.

In most plants, found among these vesicles and interspersed throughout all parts of the plant, are numerous ducts acting as air tubes. Glands also exist, whose office, by some, is supposed to be that of secretion, or the conversion of the juice into the various products necessary for the nourishment of the plant.

The external covering, or cuticle, which protects the plant from the injurious effects of atmospheric and hygrometic changes, is spread over the whole surface, enveloping not only the trunk and branches, but the leaves, and the more delicate petals and organs of fructification. It is perforated in various parts—especially in the leaf—with a vast number of minute oval orifices called *stomata.* In those leaves whose position is vertical, these stomata are found on either surface. But in the horizontal leaf, they exist only on the under surface—whilst in such aquatic leaves as lie on the water they are on the upper surface. Their office appears to be that of respiration exhaling moisture and inhaling air. They communicate immediately with the intercellular spaces, and are so minute in size that the largest known does not exceed the five hundredth part of an inch.

TO PREVENT MOTHS GETTING UNDER HIVES.

Pound a handful of peach leaves and salt them well, and strew them over the bench under the hive. In two or three days, repeat the operation. The flavor of peach leaves is offensive to the moth, but not to the bees.

Another Remedy.—Raise the hive about an inch upon four little pebbles. Take a piece of half-inch pine board from three to six inches wide and a foot long; cut one side full of creases about a quarter of an inch deep; lay this creased side down under the hive and you will find all the millers will use it to raise their broods under; because it is a secure place from the bees, but not from the bee-keeper. If he chooses, to watch and kill, he will finally destroy the larvæ and *save* his honey.—*American Agriculturist.*

Improvement in Bee Hives.—Mr. Robbins H. Stevens, of Litchfield, Hillsdale Co., Michigan, has taken measures to secure a patent for an improvement in Bee Hives, consisting of a series of boxes placed in a rectangular case, and which are so arranged, that but four boxes are used for one swarm of bees, having communication through all the boxes; but each box has an opening in front, and the whole four openings placed directly in front of a square tube passing through the front board of the case, but with a passage in it for each box. By this means any of the four boxes may be taken from the hive, with the honey it contains, without disturbing the bees or the other three boxes.

Mechanics' Department, Arts, &c.

BRIDGING THE NILE.

A French engineer is constructing a strong, beautiful edifice across the river, where the water is both deep and swift. The arches are of large brick.

This is the first bridge, it is believed, ever built over the Nile. It was commenced by Mohammed Ali some years since, and a fear is entertained that it never will be finished. The diving bell is an extraordinary machine, in which sixty men are at once sunk to the river-bed to drive piles, lay the foundation stones, &c. The water at the lowest point is thirty feet deep, and the mud thirty more below that, down through which the foundation of the pillar is sunk, in iron boxes, till its weight lodges on the bottom. The whole length of the piers for receiving the enormous arches is ninety feet. Last season 25,000 men were employed, at present only 2,000, the Pacha having used up all his funds in building and furnishing costly palaces in all directions. Every three months the governor of a district is called upon for a certain number of villagers to this public work.

ANOTHER TRIUMPH OF NEWARK MANUFACTURES.

Mr. H. C. Jones, of this city, says the Newark Advertiser, the merits of whose famous locks are acknowledged throughout the country, has received a very gratifying letter from Mr. S. C. Herring, of New York, who, it will be remembered, took out one of his salamander safes to the World's Fair, on which he placed one of Mr. Jones' locks. In the safe, it appears, he placed a £200 note, ($1000) which he offered as a reward to any one who should pick the lock *with the keys*—the offer to remain open for thirty days. Forty-five days elapsed, but the money remained in the safe, although repeated trials were daily made to open it. No further demonstration, it appears to us, is necessary, to prove the entire safety of this lock against the most expert burglar.

IMPROVEMENT IN THIMBLES AND SCISSORS.

We learn by the London Patent Journal that a Mr. Charles Marsden, of London, has taken out a patent for an improvement in thimbles and scissors, which is worthy of attention. He makes his thimbles ventilating, so as to permit the free escape of perspiration. There is a metal lining within the large cylinder of the thimble, and this is perforated and attached by metal points to the outside one; this allows the perspiration to pass out of the thimble.

In cutting with scissors, it is necessary, in order to keep the cutting edges in contact, to give them a side twist, which not only inflicts injury on the fingers but precludes the use of them with both hands. One of the bowl arms, with a verticle projecting arm which presses on the other arm, gives a permanent side pressure to the blades, ensuring proper contact of the cutting edges without effort of the user; this also ensures a good cutting edge from end to end of the blades. Small instruments are liable to be overlooked now-a-days as too insignificant for improving or patenting, but they are the kind of patents that pay best, and these improvements on the scissors and thimble are very valuable, indeed they are exceedingly useful. While we wear coats and pants, we respect the genius that does not overlook improving the instruments which make them. The ladies, too, will bless Mr. Marsden for his improved thimble.

LIBRARIES FOR OPERATIVES.

In manufacturing establishments where no access to a public library is enjoyed, could money be better expended by the proprietors, than by establishing a well selected library? Good books, with the current magazines and newspapers of the day, would furnish mental food which would be literally devoured by our numerous operatives, whose means do not give them access to these sources of instruction and amusement. How many journeymen and apprentices would be saved from the contaminating influences of the dram-shop by a good library? Let every foundry and machine shop have its library; and let it be considered as necessary to their success, as the motive power which propels their bellows, lathes and spindles.

To Harden Steel Without Springing.—Let it be heated as uniformly as possible, and dip it perpendicularly and slowly into the water, so that it may chill regularly on all sides at the same time, and near the surface of the water. If dipped obliquely, the under side will chill first, and as it contracts will draw the upper side, which is still soft. When chilled in that condition it is thrown out of shape. The lowest heat at which steel will harden is always the best, as by raising the heat above that point you only open the pores, rendering it more brittle without getting it any harder.

These facts are derived from experience in making small tools, &c., in my business. I am a watchmaker.—*Scientific American.*

Ladies' Department.

THE FAMILY ALTAR AND ITS INFLUENCES.

At no time does the family below present to my mind so faithful and striking a type of the family above as when with one accord they have met in one place, to offer united praise to the father of mercies. True it is with this, as every illustration of life in that better country, much imperfection is mingled. A large share of devotional exercises consist of confession of sin, and supplication for strength against time of temptation; besides which wandering thoughts and the jaded spirits too often mar our worship and render our solemn service vain. Yet, nevertheless, the family has been repeatedly used by God himself as an emblem of his triumphant church; and scarcely could one have been selected which would appeal so forcibly, because so sweetly, to the hearts of all men in all ages.

The residence of my father was inland, and remote from facilities for acquiring education. After mature reflection my parents consented that I should follow the bent of my own inclination, and seek such advantages in a distant city.

The history of my first year was similar to that of many ambitious youths. I was acquiring a knowledge of men and manners, but the narration *how* is not material.

About this time a fit of sickness rendered it necessary for me to seek maternal care, under whose blessed influence health soon returned. The day before I again left home, to plunge more extensively than I had hitherto done into the whirl of business, I was sitting by my mother, and pouring into her willing ear some account of my cares and annoyances. She heard me patiently, and when I had concluded my story, put her arm around my neck, and kissing my forehead, said, "My son—*my dear son*, never think yourself forgotten by us. *Your father mentions your name every night and morning.*"

I understood this perfectly. From my earliest infancy I had heard fervent petitions offered at such times for the temporarily absent one, and now, as I was going out into the world—perhaps, never to return—the remembrance of this circumstance was a comfort to me. I knew the paths of youth were slippery, for I had seen sufficient of the world, even in a year, to be well aware of the fact, and in some degree realized the privilege of being so remembered.

I have been young, and now am old, yet those words still ring in my ears and influence my conduct. The lips which then supplicated for me have changed supplications for everlasting praises; yet, in times of sorrow and perplexity, I feel my mother's lips on my fevered brow, and her words are cordial in my heart. In times of joy and prosperity I remembered them, and they acted as a moderating agency to the sanguine restlessness of ambition.

Parents! throw around the hearts of your children a similar indestructible chain. At the family altar teach them by suitable petitions that you sympathize with them in their feeble attempts to do right; there, let confession be made for family sins, and grateful praise returned for family mercies; then may you hope for a re-union of your dispersed family in a better country, even a heavenly. B.

MAKING PICKLES.

This is the season for making pickles, and the following extracts from *Miss Beecher's Receipt Book* will, we doubt not, be valuable to many of our female readers:

Pickles.—Do not keep in common earthen ware, as the glazing contains lead, and combines with the vinegar.

Vinegar for pickling should be sharp, though not the sharpest kind, as it injures the pickles. If you use copper, bell metal, or brass vessels, for pickling, never allow the vinegar to cool in them, as it then is poisonous. Add a teaspoonful of alum and a tea cup of salt to each three gallons of vinegar, and tie up a bag with pepper, ginger root, spices of all the different sorts in it, and you have vinegar prepared for any kind of pickling.

Keep pickles only in wood or stone ware. Anything that has held grease will spoil pickles. Stir pickles occasionally, and if there are soft ones take them out and scald the vinegar, and pour it hot over the pickles. Keep enough vinegar to cover them well. If it is weak, take fresh vinegar and pour on hot. Do not boil vinegar or spice over five minutes.

To Pickle Tomatoes.—As you gather them throw them into cold vinegar. When you have enough, take them out, and scald some spices tied in a bag, in good vinegar, and pour it hot over them.

To Pickle Peaches.—Take ripe but hard peaches, wipe off the down, stick a few cloves into them, and lay them in cold spiced vinegar. In three months they will be sufficiently pickled, and also retain much of their natural flavor.

To Pickle Peppers.—Take green peppers, take the seeds out carefully, so as not to mangle them, soak them nine days in salt water, changing it every day, and keep them in a warm place. Stuff them with chopped cabbage seasoned with cloves, cinnamon and mace; put them in cold spiced vinegar.

APPLE JAM.

The apples, which should be ripe and of the best eating sort, being pared and quartered, as for making apple jelly, are put into a pan with water enough to cover them, and boiled until they can be reduced to a mush. Then for each pound of the pared apples, a pound of sifted sugar is added, being sprinkled over the boiling mixture. Agitate it well until reduced to a jam; then put it into pots.

The above is the most simple way of making it; but to have it of the best possible clearness, make a thick syrup with three pounds of sugar to each pint of water, and clarify it with an egg. Then add one pint of this syrup for every three pounds of apples, and boil the jam to a proper thickness.

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The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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FARM WORK FOR OCTOBER.

With the farmer, each season, each month and week, has its special duties,—duties which, if postponed, cause him a loss, and derange that order and system which distinguish the thrifty husbandman. In New England, and particularly in Massachusetts, the best apples are probably produced that are to be found in the world, and everything relating to their growth and preservation becomes a matter of importance. It is not unusual among us to see apples, in small quantities, eighteen months, and some few two years old, nearly as sound and fair as when first taken from the tree. The American Golden Russet may be found in quantity in this vicinity in midsummer, in perfect condition. No better rules can possibly be given for their preservation than those laid down in Downing's "Fruits and Fruit Trees of America." He says:

"In order to secure soundness and preservation, it is indispensably necessary that the fruit should be gathered by hand. For winter fruit the gathering is delayed as long as possible, avoiding severe frosts, and the most successful practice of our extensive orchardists is to place the fruit directly, in a careful manner, in new, tight flour barrels, as soon as gathered from the tree. These barrels should be gently shaken while filling, and the head closely pressed in; they are then placed in a cool, shady exposure, under a shed open to the air, or on the north side of a building, protected by a covering of boards over the top, where they remain for a fortnight, or until the cold becomes too severe, when they are transferred to a cool, dry cellar, in which air can be admitted occasionally, in brisk weather. A cellar for this purpose should be dug in dry, gravelly or sandy soil, with, if possible, a slope to the north; or at any rate with openings on the north side for the admission of air, in weather not excessively cold. Here the barrels should be placed on tiers on *their sides*, and the cellar should be kept as dark as possible."

Corn that is cut up near the ground should not be suffered to remain long in large heaps on the barn floor, as the heating process which soon takes place is very injurious to the kernel: generating mould and extracting the saccharine juices of the grain.

Now is the favorable time to collect all the weeds that have escapod the hoe. By placing them in heaps and sprinkling then with lime, the seeds are destroyed, and valuable accumulations may be made to the manure heap. All the potato and other vines, with all the rubbish that may be found along the fence sides, in the garden, or that has been collected about the the buildings during the hurry of summer business, may also go to swell the heap. The lime will hasten decomposition, and will not be unfavorable to the plants, as there is little or no nitrogen in vegetable heaps to be set free by its action.

Cut down the Balks which have been made by unskilful ploughing, and cart the rich deposits into the barn cellar, or by the barn window to be mixed with the droppings of the cattle through the winter, every load of this, saturated with the gases of your animal manures, becomes about equal in value to the pure droppings of the stall. If the balks are extensive, and lie upon the borders of mowing grounds, a better course is to plough, level, and manure them in August and sow down to grass—they then come in to your grass fields the succeeding summer.

Seeds.—October is the month for saving and securing most of the seeds that are to be used in the next year. No pains should be spared in preserving the best of every kind. Success in all the crops depends in a great measure upon this. The fairest and best shaped roots should be laid aside from which to gather a crop of seeds next year; so of the earliest and handsomest ears of corn. Attention to this matter now saves all trouble in the busy hours of planting, and ensures a better quality than could be selected from the remnants of your crop in the spring.

Sugar Beets and Mangold-wurzel should be collected before severe frosts occur. But as they continue to grow so long as the leaves remain

green, it is well to let them remain until the frosts begin to be heavy and constant. Turnips, parsnips and ruta-bagas may be left later.

All roots should be excluded from the light during the winter, and kept in as low a temperature as can be made convenient without danger of their freezing.

Trees.—When the leaves have fallen and the tree is in a state of repose, all kinds of hardy trees may be transplanted with success in autumn. Mr. Downing thinks it the *best* season for transplanting. A small mound of earth thrown around the trunk will prevent its being shaken by the winds—the fine loam settles about its roots during the winter, and it is in place in the spring, ready to start with the first genial showers and warm beams of the sun. Trimming, scraping, digging about and manuring the trees, may also be profitably done in this month.

ESSEX COUNTY SOCIETY.

It was a great day for Old Essex on the 25th of September. It was the day of their annual Agricultural Festival. A clear sun and cool, bracing atmosphere succeeded the rain storm of a day or two previous, and made the weather as inviting as any could desire. It seemed to us that a large proportion of the population of the surrounding towns was in the city. Their faces were beaming with smiles, and their hearts were undoubtedly bounding with joy, as they came up, throng after throng, to the Great Festival of the Farmer. Salem itself, with its old associations, its fine buildings, and highly cultivated gardens, is well worth a visit from the man of taste and leisure.

The first business of the Agricultural Society, was the trial of *Working Oxen*, which took place in Lafayette Street. There were several pairs of very fine cattle in the contest, whose movements indicated great strength, combined with good discipline. In this part of the exercises there seems to have been much interest manifested, this year, at all the shows, by the unusual crowds of people that have assembled to witness the several trials. The farmer finds an honest pride in testing the skill and strength of the team which he has reared with unceasing attention and care; while others are gratified in beholding the docility and power of the sleek and bulky animals themselves.

The *Ploughing Match* took place on a level and beautiful field at South Salem. The lands were laid out with accuracy, and there was certainly a "fair field" for competition. Seven double teams, and some ten or fifteen others, such as a single pair of oxen, and pair of oxen and a horse, were entered. Around the grounds laid out were hundreds of men, skilful with the team and the plough, and among them all, we heard but an unanimous voice that the work was performed with ease, with sufficient despatch, and according to the best rules of the art. The premiums awarded to competitors with double teams were, 1st, to David S. Caldwell, of Byfield, $10, plough used, Ruggles & Co.'s Eagle, No. 20; 2d, Nathan Tapley, of Danvers, $8, Ruggles Plough, No. 72; 3d, J. L. Hubbard, of Byfield, $6, Prouty & Co.'s Centre draught, No. 72; 4th, J. Washburn, of Lynn, $5, Ruggles Eagle, No. 72; 5th, J. Farnum, of Andover, $4, Prouty's Centre draught, No. 72.

The *Show of Cattle in the Pens* was no disgrace to the county, neither was it in numbers anything like what the farmers of Essex can produce. It is a feature in most of our exhibitions in the State, that we regret to see gaining ground. All persons are interested in viewing fine cattle; and no other opportunity throughout the year is offered, so good as this, for placing all the various breeds side by side, where a fair contrast is afforded, and where all their good and bad points may be examined and commented upon. Beside, no other one thing in the exhibition shows the wealth of the farmer and his efforts in improvement, so much as a good display of milch cows, and young and fat cattle. We therefore hope that more attention will be paid in presenting a larger number of the best cattle of all kinds that may be found in the several counties. This subject was alluded to by the president of the society in his opening remarks at the dinner table, and urged upon the attention of his hearers.

We can only allude to the stallions, there being six or eight presented, the breeding mares and colts, all of which indicated considerable attention to improvement in the breeds of horses. The poultry was of the various kinds of all nations, now scattered as it were broadcast throughout the land. There were also four hives of bees and honey.

There was a large gathering at the dinner table. The Hon. J. W. Proctor, President of the society, presided. After the physical man had been supplied, the president made a brief and pertinent address—then introduced his Excellency the Governor, and gave as a toast,

"*The Commonwealth of Massachusetts*—She delights to honor those who have been faithful in her service, and adopts as her motto, 'By their works ye may know them.'"

Governor Boutwell then said, He had no claims to be called a farmer,—he could say nothing to practical men in relation to agriculture, but believed that of all the great interests of this land, agriculture is the most important. That great as were the interests involved in manufactures and in the mechanic arts, we must turn to agriculture as the primary of human pursuits. He said that the practice had been too much in Massachusetts to regard the dignity of agriculture as a sentiment. Our young men engage in commercial pursuits where seventy-five in one hundred fail, or embark in hazardous enterprises, either at home or in fo-

reign climes, from a want of faith in the dignity of of agriculture as a pursuit, He believed there was no better field for youth than the field their fathers trod. In speaking of agricultural education he thought the State might do much, but that there was a power in the farmers themselves, which would render applicable the words of the poet used for the Greeks when struggling under the Turkish tyranny.

"Who would be free, themselves must strike the blow."

He advised the farmers to set in motion the work of reformation in their own towns and school districts. The Governor was frequently applauded, and his remarks were listened to with deep attention. Speeches were also made by Mr. PAGE, President of the Bristol County Society, Mr. WALKER, Secretary of State, and several other gentlemen.

There was a fine display of domestic and agricultural manufactures,of vegetables, fruits, flowers, &c., in Franklin Building, near the Common—also many lots of very nice butter. Half an hour was pleasantly passed at Pickman Hall in looking at the Horticultural Society's collection of fruits and flowers. The pears were unusually fine specimens, as were some of the grapes and apples.

The address was delivered by REV. MILTON P. BRAMAN, of Danvers, and was principally devoted to the subject of agricultural education. A just tribute was paid to the memory of that excellent man, the late DANIEL P. KING, long one of their most active and efficient members. Mr. Braman spoke of the present state of agriculture in China, and the implements used there, contrasting them with those now in use among us, and also spoke of the tenacity with which people are wedded to old habits and usages.

Upon the whole it was a day to be remembered in Old Essex. Such a gathering cannot fail to excite an interest which will be felt in all the departments of husbandry—in the field and in the garden, in the dairy, with the stock, and in every department where there is room for improvement. These festivals stimulate to a laudable rivalry, and give importance to the occupation; they are a centre-point around which throng the thoughts of the farmer while laboring through the year, as the place where his efforts at improvement will be appreciated and in part rewarded. There is also another motive for action and excellence beside that of daily bread; and that is, the approbation of those who are leaders in the work of reformation, whose opinions they respect, and whose examples they are earnest to imitate.

☞ Speculators generally die poor. If they make ten thousand dollars to-day on a coal-mine, they must try and make twenty thousand to-morrow, by dabbling in the Do-'Em-Brown railroad. Like the boy who undertook to steal figs through a knot-hole, they got their hands so full of sweets that they can't pull them back again.

MIDDLESEX COUNTY SHOW.

The annual exhibition of cattle, implements, fruits, vegetables, &c., of this society, took place at Lowell, on Wednesday, the 24th of September. This society, we believe, is the oldest in the State, and its shows for more than fifty years have been holden in the ancient and time-honored town of Concord. We understand that it was the opinion of the Board of Trustees that a more general interest might be excited among the farmers of the county by holding the show this year at Lowell. The people of that city and vicinity were also desirous of aiding in the duties of preparation, and the trustees were unanimous in the decision that the exhibition should take place at Lowell.

The weather was auspicious, the contributions numerous, and in many instances of a high order. Every accommodation was granted by the city authorities, and by the county commissioners, that could be desired, and the festival seemed to afford great gratification to all who shared in it.

There were on the ground four double teams—eight being entered. The prizes were awarded to A. B. Coburn, $10; O. M. Whipple, $7; J. V. B. Coburn, $6, and J. H. Bent, $5. Four horse teams ploughed; Joseph D. Brown received the first premium of $10; Charles Gerry, $7; J. Damon, $6, and N. Brooks, $5. Ten single teams ploughed. The grounds selected had the merit of being near the cattle pens, were somewhat uneven and stony, but afforded a pretty fair average for all the contestants. In looking at the execution of the work, and the ease and facility with which it was accomplished, there seemed to be a doubt on our mind for a moment, whether the ingenuity of man could devise any thing which should make its execution easier and cheaper. The ploughmen exhibited great skill in the use of their implements in avoiding stones, and in the nice movements and changes of the plough in passing uneven places, in order to leave a smooth and workmanlike furrow behind.

Thirteen entries were made for the trial of strength and skill of working oxen, while but seven teams took the ground; the load and wagon, weighing *eighty-five hundred and twelve pounds*, was drawn a distance of some 30 or 40 rods, up hill, with steadiness and apparently without straining, by several of the teams. Some of the cattle would not suffer in comparison with the best of the country.

There was a very fair collection of cattle in the pens, but upon the whole not coming up to what the farmers of Middlesex can do, if they should turn out in greater numbers. There were several specimens of native cows, possessing most of the best points of the animal, and giving strong indications that with proper attention to the sire, these animals would produce a progeny of a very high order.—The weight of one of these cows, belonging to Mr.

Alexander Wright, of Lowell, we were informed, was 1,400 pounds. There were also fine specimens of the Ayrshire, Alderney, Durham and Devon cattle, but our limits will not permit us to particularize.

But a few swine were exhibited. We noticed a fine Suffolk boar, about seven months old, and weighing one hundred and eighty-four pounds, belonging to A. C. Collier, of Concord.

Poultry was on the ground in full force and feather—several hundred of fowls, at least, including all kinds; but so scattered and mixed that no comfortable survey of them could be obtained.

But the crowning treat of the day was at the dinner table; Judge Hoar, the President of the Society, presided in his usually felicitous manner, and in his opening speech "set the table in a roar." Several most happy speeches were made by Messrs. Everett, Winthrop, Francis, of Lowell, F. W. Lincoln, of Boston, and others.

From the spirit manifested by our Middlesex friends, and from all the productions of the farm and the workshop which we saw on that day, there cannot be a doubt but there is not only already a deep interest in the subject of agriculture among them, but that that interest has caught a new spirit, and is rapidly increasing. With fine markets near, and every facility for transportation, the hills and valleys of Middlesex are fast becoming productive and profitable.

NORFOLK COUNTY SHOW.

The annual exhibition of this society was held at Dedham, on the 24th ult.

The number of entries on the society's books indicated that the exhibition would have equalled any that has heretofore taken place, had it not been for the storm which occurred the night previous to the exhibition.

This society is in a most prosperous condition, is doing a great deal to promote the interest of agriculture in all its branches, and is destined to add much to the happiness and comfort of the inhabitants of all sections over which its influence extends.

The exhibition of cattle, swine, &c., was meagre in numbers, but not in quality. Norfolk County is not a cattle-raising county, but no agricultural show in New England will produce better cattle and swine for breeding than were shown at Dedham. The Ayrshire, Durham, Devon, Jersey, and last but not least, the native cattle, were of such character and appearance that the exhibition may justly be proud of the possession of them. The same must be said of the swine exhibition.

The exhibition of embroidery and other needlework shows that the wives, sisters and daughters of the farmers of Norfolk Co. are imbued with the right spirit, and are willing and able, too, to do their share to carry out the purposes for which this society was designed.

The ploughing was well contested, and although the teams may be "nothing to brag on," the ploughmen were of the first order. The field selected was not the most favorable for the exhibition of their skill, but the manner in which they handled their "tools" shew that they were finished workmen.

The display of fruit was very creditable to the exhibitors, particularly in apples and pears.

This society has always had at its shows a fine display of fowls. The Dorkings and Marsh Shanghaes exhibited were as usual very superior specimens. Ducks and geese were fairly represented. There was also a fair display of turkeys. The coop of fowls which attracted the most attention and excited the greatest admiration, was entered by J. P. Childs, of Woonsocket, R. I. These fowls are of that breed known as Black Spanish. They were imported by Mr. John Frickee, of Waterford, Mass., and are from stock bred by his father, in England, into whose possession the progenitors of the fowls exhibited came, upwards of fifty years ago, and by whom they have been bred for that length of time without any crossing.

The Ayrshire and Jersey cattle exhibited by Thomas Motley, Jr., of Roxbury, Samuel Henshaw and J. H. Trowbridge, of Brookline, were very fine. The North Devons shown by B. V. French and others were equally good. These gentlemen are truly benefactors to the public.

Too much praise cannot be given the Committee of Arrangements. They shew extraordinary tact and judgment in arranging the exhibition. Nothing was wanting. No alteration could have been for the better.

This society has purchased a tract of land containing about four acres, on which stationary pens and enclosures have been erected this season, leaving sufficient space for the accommodation of visitors. It is intended before another annual exhibition takes place to erect a large, commodious and substantial building for their use.

There is, among the gentlemen who are members of this society, a commendable spirit of liberality which is worthy of imitation by members of other county agricultural societies. Several donations have been made to it. Mr. G. W. Smith, of Dedham, gave the sum of three hundred dollars; and the entertainment at this exhibition was prepared at the expense of Mr. John Gardiner, Chairman of the Committee of Arrangements. One thousand tickets and upwards were sold,—thus by Mr. Gardiner's liberality the sum of five hundred dollars has been added to the funds of the society.

☞ A great step is gained, when a child has learnt that there is no necessary connexion between liking a thing and doing it.

☞ A high churchman was once asked, "What made his library look so *thin?*" His reply was, "My books all keep *Lent.*"

VERMONT STATE FAIR.

The first exhibition of this Association took place at Middlebury on the 10th and 11th inst. A society was formed in June last, by a choice of officers, and a time appointed for its first meeting; but a perfect organization was not effected until the present month. From the reports received, we are led to believe that the movement has been a successful one, and dispels all doubt in relation to the usefulness and perpetuity of the society. The Register states, "that, though wholly a voluntary movement, commenced late in the season, without funds, without premiums or committees of award, and without any other than a temporary organization, the exhibition was one of which no Vermonter need be ashamed, and which receives high commendation, in all quarters." The show attracted a great number of people, it being estimated that twelve to fifteen thousand persons were in attendance. The address was delivered by the Hon. Frederick Holbrook, a gentleman whose writings have attained a just celebrity throughout the country, and whose personal efforts in the cause of agriculture have stimulated numbers to a better course of husbandry. The success of the enterprise in which the people of Vermont have embarked, to "improve the mind and the soil," will scarcely admit a doubt, with such men for pioneers.

The show of *Horses* probably surpassed that of any exhibition ever made in New England. In numbers, including all, stallions, geldings, working and brood mares, and colts, there must have been several hundred on the ground. Among the contributors, we notice some from this State. This spirit among the Green Mountainers to sustain the breed of their choice stock intact, will be gratifying to all lovers of that noble animal, the horse. The original Black Hawk, the Morgan, and other stocks of the first quality, were on the ground. New England is mainly indebted to Vermont for her horses, and every attempt to preserve and improve the best stock will meet the approbation and encouragement of all classes of her citizens.

The show of *Sheep* was extensive and the quality of the highest order. That of *Cattle* respectable, though not so complete. The number of *Swine* small, and that of *Poultry* the same; the poultry mania not having yet made a lodgment in Vermont. The *fancy articles* were numerous, and exhibited much skilful handiwork. Most kinds of *Agricultural Implements*, many of them from the enterprising manufacturers in this State, together with carriages, wooden ware, furniture, cutlery, stoves, iron fences, harnesses, paper, &c., were presented, and attracted much interest.

We have read the address by Mr. Holbrook with attention, and make such extracts as the state of our columns will permit. It is full of excellent teachings, and we commend it to the careful perusal of every farmer in New England:—

"When we correctly consider the antiquity, the dignity, the importance, and the thousand sober delights and honest pleasures of Agriculture, and then look abroad in our country and see to what an extent it has been neglected, and by how many it has even been despised, we are led to inquire how this can be? We are not long, however, in finding the reason. A large portion of our farmers have been decidedly, absolutely opposed to all innovations or improvements in their business. There have always been honorable exceptions to this in every district; but still the remark is too true, when applied to the mass. It has been contended that the farmer should simply follow old ways, guide his operations by the traditions of his fathers, without regard to new times and changed circumstances; that there is nothing for him to learn by experiment or by study; that the best farmer is he who can plough the greatest breadth of land in a day, mow the most grass or hoe the most corn,—the man who can contrive to get the most out of mother earth, without returning her an equivalent. It mattered not, with such, if he did sap fertility entirely out of her, provided he made money while doing it. It was no matter what became of the fertility of the land, there was enough more that might be served in the same way; and as for the generations that were to succeed him, they might take care of themselves. Under the operation of these views and practices, it has taken less than a half century to wear out the lands of the older States of our country, to run them down so low as to make their further profitable cultivation for some time to come quite a difficult and discouraging work, a work of great skill and patience. It was no part of this kind of farming to stop and inquire how the land already possessed could be improved or kept stationary; acre must be added to acre, (oftentimes more than could ever be paid for,) only to be worn out as previous acres had been.

"Then, too, it has proved little else than an unmitigated curse to our Agriculture, that such numbers of the intelligent, enterprising young men of the country have forsaken the farm for other pursuits. It was quite natural, however, that they should do so; for the fact cannot be disguised, that the community have quite generally considered the young man who remained upon the farm as rather wanting in intelligence and enterprise; that anybody, no matter how ignorant, if he only had 'the hard days-work in him,' would do to conduct the farm, while the promising young men must leave it, go through a long and severe apprenticeship, a training as rigid as military discipline, a systematic course of instruction; in short, must be thoroughly educated, to fit them for other callings, more dignified, more important, more worthy the attention of man, than farming."

Addresses, or speeches, were also made by Generals Wool and Churchill, of the U. S. Army, and other gentlemen, and all seemed to realize a sense of gratification and delight, on this, their first State Festival.

☞ The foot of the owner is the best manure for land.

For the New England Farmer.

SELF-INSTRUCTION.

As the present legislators of the country were the young men of the last generation, so will the future law-givers be selected from the present youth.

And from what station in life were the popular public men of the present day taken? A large number of them were poor boys, who commencing with nothing more than a common school education, have, by their own rightly directed efforts, and by virtue of an indomitable strength of will, raised themselves from a comparatively obscure origin to an elevate position in the estimation of their countrymen. Of this class are Henry Clay, Lewis Cass, and numerous others; and if they prospered in their hopes, surely others may do the same; the end to be gained is no mean one, and is well worth striving for.

There is no young man in the country, however humble may be his place in society, to whom the gates of honor and learning are closed. Worth and merit will always show themselves, and in a community capable of discernment, will always be appreciated.

A young man has no reason to despair because he cannot have the advantage of a college education, and if he has the spirit of a man there will be no obstacle, on the contrary it should stimulate him all the more.

Roger Sherman, one of the committee who prepared the Declaration of Independence, and who was a prominent person during the revolution, was a shoemaker,—he educated himself—he was accustomed to sit with a book upon his knee, improving every spare moment during his work. Mr. Jefferson said of him, he "is a man who never said a foolish thing in his life."

Another was Eli Whitney, the inventor of the cotton gin; if deprived of that useful machine, the chief production of the Southern States would not be estimated at one-tenth of its present value. The worth of this important invention is only to be reckoned by hundreds of millions of dollars. Mr. W. was not wholly a self-taught man, having received an education at Yale College; yet his after usefulness was somewhat independent of his collegiate instruction.

Judge McLean, a gentleman of great legal acquirements, is also a self-taught man. The learned David Rittenhouse, the astronomer, was of this class. I shall close the list, at present, with the name of Benjamin Franklin. Where can be found brighter examples or instances more worthy of emulation?

There are a great many young men in the country villages who do not rightly improve their spare time. There the season of leisure is, during the winter; the sun goes down early and the evenings are long. A great advancement can be made at such times. Let a young man make the trial, and at the close of the season, if he finds he is not mentally improved, then he must redouble his exertions the succeeding winter, and he will not fail. Let his motto be, "Don't give up the ship!" No, never give up the ship—keep the light of science rightly burning; a steady hand upon the helm; a sharp eye ahead for the currents of dissipation, lest they divert him from his course; and if the storms of disappointment sweep over his laboring bark, tremble and waver not, but remain by the helm until safely received in the harbor of success. A good method of improvement for young men in small towns, is by means of literary clubs; concerning which, I shall, with your consent, say something in a future number. S. S. P.

Remarks.—In his late address before the Worcester Society, Mr. Knowlton said, that schools are mere machines. He would undoubtedly agree with us, that they are exceedingly useful ones. The young man who has made up his mind that his education can be acquired only through schools, will never realize his expectations. We are always at school, and the recitation hours are all those, when we are imparting our knowledge to others. The apprentice who labors regularly his ten or twelve hours a day, has still opportunity to acquire all the elements of an education, by the time he has attained his majority. His reading, after that, will soon enable him to make himself useful in almost any calling in life. We beg all correspondents to give us their names, dates, and places of residence.

For the New England Farmer.

PLOUGHING MATCHES.

Pardon the suggestion, to those who have the direction of these matters, that the principles on which the premiums are to be awarded should be definitely stated, in connection with the offer of the premium. For instance, suppose the field, on which the experiment is to be made, is known to be a level plat of grass land, free of stones, with a fair depth of soil, having yielded from one to two tons of hay to an acre, for ten years past. Suppose the ploughing heretofore to have been of an average depth of six inches. Is it not perfectly easy to say, beforehand, what kind of ploughing would be best for such land? May not the *depth* and *width* of the furrow required be prescribed? the manner of laying it also—whether flat—or not flat? And the time within which one quarter of an acre should be ploughed? If any principles have been settled, let those be prescribed, that the ploughman may prepare himself for the operation. It is as easy to order a plough to do work of one kind as well as another;—and when the character and condition of the ground to be ploughed is well known, it is well to stand right at the commencement. These thoughts came to mind on recently witnessing a ploughing match with 16 teams—all on similar soil, each operating his own way. The work was done by *single teams*, without a driver;—and considering the dry and tough condition of the sward, it was well done. The quantity of land to be ploughed by each team was 1-10th part of an acre—a space one rod wide and sixteen rods long was marked out. The work was done in time varying from 35 to 50 minutes. The furrows varied in depth from 6 to 8 inches, and in width from 10 to 16 inches. The idea occurred to us, whether it might not have been well to have prescribed a furrow slice 12 inches wide and 8 inches deep—and to have tried the skill of the several ploughmen in approximating as near as they might to this rule. Although it was prescribed that but *one man* should be engaged in the work—still, if we do not mistake, there was in company with almost every team

a *sympathizer*—holding his wrench, or hammer, or something of the kind—ready to be used when occasion required. Now if this is a necessary appendage to the work, we can see no reason why this attendant may not sling his wrench or hammer on his shoulder, and take his whip in hand, and help guide the team, as well as to stand by, ready to alter the running of the plough as occasion may demand.

We were particularly pleased, in this contest, to witness boys from 15 to 17 years of age handling the plough with marked ability. One boy, whose age we asked, said he was only 15, that he had held the plough to do the breaking up on their farm for two years. This boy would weigh not much, if any more, than 112 pounds. It so happened that his lot was next adjoining to that assigned to an experienced ploughman, who weighed twice as much as the boy. After the work was completed, the old fellow remarked, "If that little chap don't understand what he is about, I won't guess again." The committee were gentlemen of great intelligence and experience, and will unquestionably come to a right conclusion;—we had to leave the ground before any decision was announced; but if we may be allowed the privilege of *guessing*, we should say, that the performance by that boy was second to no other; and that a medal expressive of this fact, awarded to the boy, under the authority of the Chairman of the Committee, would be the best certificate in his favor that could be given.

Sept. 19, 1851. *

For the New England Farmer.

THE POTATO DISEASE.

Mr. Editor:—Since the potato disease first appeared in this country, a vast deal has been written upon the subject, which would make many volumes; but with no general satisfactory result as to showing the true cause of the disease.

As far as my experience extends, I find that the more solid and fine-grained the kind is, the less liable it is to become affected, while the softer kinds suffer the most. For instance, the black potato,—the kind which upon cutting open, are purple inside; they are a heavy, fine-grained, hard potato, and I have not known them to prove rotten at all,—though planted side by side with a softer kind which rotted badly. The round red do not rot much, while the Chenango beside them prove hardly worth digging. The Dean, a soft kind of potato, shaped almost like the long red, rots badly.

People are at a loss what to do when they find disease has commenced; whether to dig them immediately or let them remain in the ground till the usual time of harvesting them. I think, however, that could they be dug as soon as the tops become affected, or better just before, a great part of the crop may be saved.

But I have not yet stated the cause of the potato rot nor its remedy—that is the most difficult thing to settle. But I am fully convinced that the insect tribe will not be proved guilty of doing the mischief. I think it is an atmospheric affection, as much so as the cholera. But the how and why the atmosphere is charged with such a baneful influence, lies deeper hid than the wisdom of man has yet explored. Some may ask the question, why some kinds of potatoes escape, while others are affected? I answer, when the inquirer will tell the reason why in cholera times some are struck down with the disease while others escape.

I find it to be a fact, that just previous to the potato vines becoming visibly affected the month past, there was cloudy, warm weather, then the sun shone hot, which brought on a fermentation, which produced the disease called the *potato rot*. But the question occurs, why potatoes did not rot in former years? Had we not such weather in some of the years long past, as we have had in six or eight years just past in succession?

I consider the potato rot an epidemic, as much so as the cholera or the plague, which in a few years will abate and pass away, as epidemics among the human species have done. I do not believe that a complete remedy will be discovered by man so that any person within this commonwealth can receive the ten thousand dollars' reward offered by our Legislature. Isaac Stearns.

Mansfield, Mass., Sept. 1, 1851.

Remarks.—The subject of potato rot has been so fully discussed in our columns, that we feel obliged to omit some portions of the letter of our correspondent. His own opinions, however, such as seem to have been established by his experience, we have preserved.

For the New England Farmer.

CITY VERSUS COUNTRY.

Mr. Editor:—Having noticed in several late numbers of your journal various communications upon the relative advantages of a city and a country life, I am tempted also, with your permission, to express my opinion upon the subject.

As a resident of a city, I do not wish to say anything to the disparagement of those sections more sparsely occupied with the habitations of rational beings—for happily man is endowed with the faculty of being contented with his position, whether it be among the chill snows of the rugged North, the fertile valleys of the sunny South, the matured opulence of the East, or the wide-stretching liberty of the West. And happy is the man who possesses in the least degree that greatest of all felicities, contentment; but I wish to present a few truthful observations upon city life, as distinguished from life in the country. I can readily appreciate the happiness of those whose intercourse, out of their immediate family, is confined mostly to the lowing of kine, the bleating of sheep, the cackling of poultry, the harmony of birds, and the inaudible utterance of unanimated nature; but, sir, is my task to be condemned as low, should I prefer a greater and more varied communion with the race possessed of the one attribute superior to all others—the power of reason?

I honor that temperament that finds

> "Tongues in trees, books in the running brooks,
> Sermons in stones, and good in every thing;"

but are not more expressive tongues to be found in that unfathomable being called man, and better stored books on the shelves of some snug library? Even by this expression of the poet is shown that the greatest praise he could adduce in behalf of the charms of country life was to liken it to the blessings of unlimited social intercourse.

In the city, the human mind, worn by constant daily attrition with intellects of all grades, becomes sharpened, acquires greater tenacity, and

this same exercise renders it more able to encounter and perform that superior part of labor, wherein the hands are idle but the brain unflagging, that elevates every phase of human life.

Is there an individual who wishes for a quiet residence unmolested by the prying eyes of inordinate curiosity, a residence unhaunted by that pest of *retired neighborhoods*—an inquisitive neighbor, let him seek it in the city, for there only can it be found. In the city a person can retire within himself and be alone without exciting inquisition, or he can find congenial spirits with whom to blend and harmonize; he can attain his own level, wherever it may be, with greater facility than in the limited population of a country district.

Does he seek food for contemplation? Where can it be found in greater variety than in the busy mart of a crowded city?

"The proper study of mankind is man."

The argument is capable of indefinite expansion (for every merchantable luxury from the country is brought to the city, and but comparatively few are or can be reciprocated,) but I will intrude no longer upon your patience. CARPIUS.

For the New England Farmer.

NEWLAND'S STRAWBERRY.

MR. EDITOR:—When Mr. Brown says of this strawberry, that "it is infinitely sweeter and richer flavored than *any* other kind which I have tasted," I cannot but think him extravagant in his language, or unfortunate in his taste, or in the selection of *objects* to be tasted. That this strawberry is a fair producer, in *numbers* and that the berries are of a *passable quality*, will not be denied; but that they will compare with the Hovey, or the Virginia, or others that can be named, in all those characteristics which recommends the strawberry, is to my mind a matter of great doubt. It may be, sir, that the argument used in the brief article upon which Mr. B. comments as "unfair and altogether too severe," has lost "half its force for want of a name attached thereto," in the view of those who pay more regard to *names* than to *facts;*—nevertheless, if the facts stated be true, even such an argument, shorn of half its power, will be more than sufficient to break down Mr. B.'s notions. That the facts were precisely as stated, Mr. B. may be assured. I have three or four gentlemen of intelligence and entire veracity, who personally attended to the cultivation. Allow me to add another fact, drawn from the unsophisticated judgment of a family of children, who know what they like, and honestly tell what they know, without favor to any one. An intelligent cultivator of fruit for the market, (Mr. I. S. Needham,) whose ground I was examining, pointed out the Newland Strawberry, with the recommendation attached to it, and requested me to take home some of them and test their quality. I did so, and had them brought to the table, as being something *extra*. The children, when they came to eat them, said, "Why, father, these are not near as good as those Mr. N. brought the last week—they have no taste to them—they seem kind of flat and insipid; and they don't look near so well." I tried to argue with them, that their judgment was made up more from the appearance of the berry than the taste; but I did not succeed in convincing them that their first impressions were wrong. Now, sir, it may be that these children were not fit persons to sit in judgment in this matter;—but, to my mind, their opinion is entitled to much regard. They had no favorite theory to sustain, or speculating project to foster;—they spoke just what they thought—and although I tried to convince them that they were wrong, in so doing, they satisfied me that they were right. Mr. B. will excuse me for not affixing my name,—I withhold it not because I have the least objection to his knowing it, but because I can write with more freedom when I do not intend to use it. When the individual who signs an article is personally known, it not unfrequentiy happens, that more regard will be paid to the name than to the facts stated. Take, for instance, an assertion in relation to *phosphate of lime* in the production of milk; who is there that will not pay more regard to what Dr. Jackson says on the subject, than they would to the observation of ten farmers who have no knowledge of chemistry? And though the probability is, that there is ten times the chance of the doctor being right—nevertheless, doctors are not always right; for circumstances alter cases. With entire respect, therefore, to the opinions of Mr. B., I respectfully say, that discussions may often be carried on with more freedom and benefit, without the use of a name, than with. Suppose an article to come out signed "John Smith," without any locality attached, what weight would this name carry? Give me facts, and careful analysis of them, and I will dispense with the *name*. *

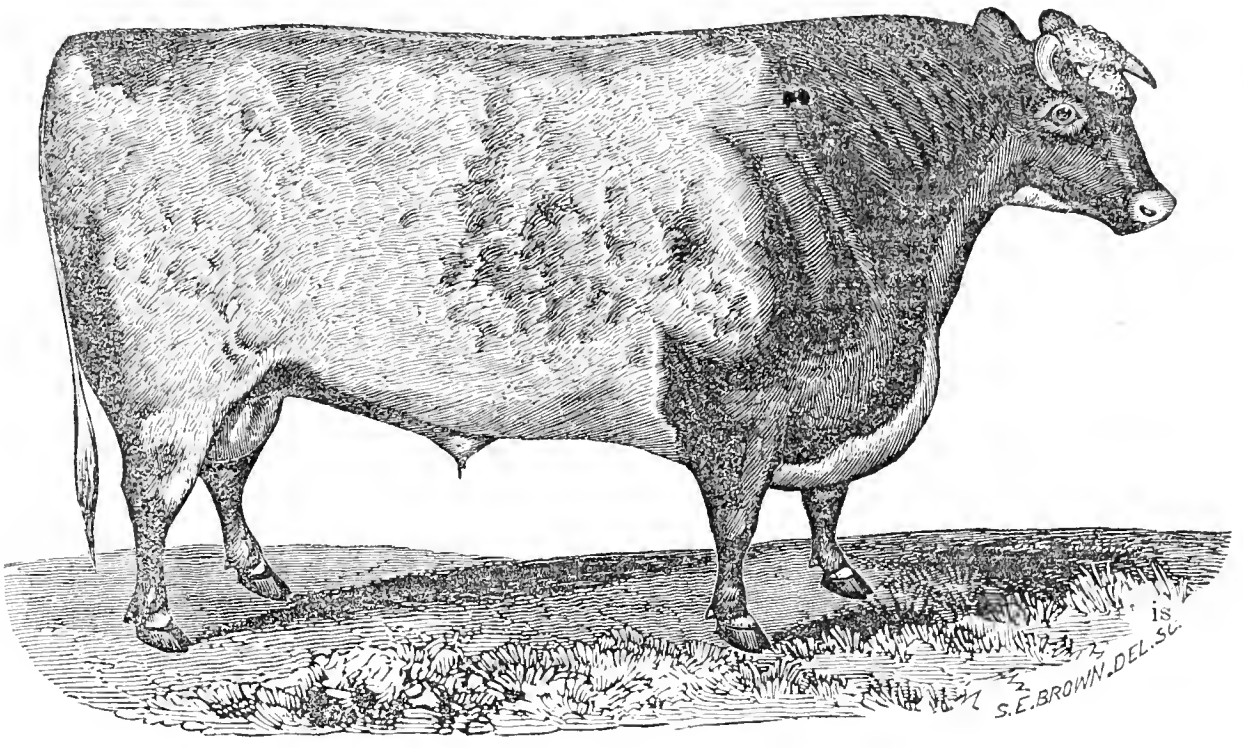
Danvers, Sept. 20, 1851.

For the New England Farmer.

PLUMS---CURCULIOS.

For a few years past it has been almost impossible to raise plums, at least the finer kinds, so indefatigable has been that hitherto unconquerable enemy, the curculio, in his attacks on this fruit. For a number of years in sucession, our crop was completely cut off by this insect; we tried various remedies that had been recommended, and all failed, but the laborious and expensive one of shaking the trees every morning and killing the insect. Two years ago it occurred to us that *air-slacked lime* might be a preventive; we applied it, and with complete success. This year we again tried it, and though we lost a few plums, it was not the fault of the lime, but our own fault; for we did not apply it until the little "Turk" had made his *mark* on some of the fruit. Last year, as soon as the blossoms dropped off, and the fruit was visible, we applied the lime liberally, covering every part of the tree; doing it in the morning when the dew was on, or after a rain, and renewing it every time it was washed off. This plan, as we have said, was successful; and we have no doubt but that all who will give it a fair trial will be satisfied of its utility. We hope it may be tried by others in various locations, and under different circumstances; if it is *good*, let the public have the benefit of it; if they pronounce it *good for nothing*, we say, so be it; we will not quarrel with them; if it wont work with *them*, it will with *us*. Though we have written on this subject before, yet we thought best to write our experience again, that it might corroborate the testimony of your correspondent P., of Danvers. If others have tried the same, will they not communicate the result, that the public may get all the information possible on the subject? J. H. & SON.

Newton Centre, Sept. 25, 1851.



SHORT-HORNED BULL, LORD ADOLPHUS FAIRFAX.

This bull was three and a half years old when exhibited at the North Lincolnshire society's meeting, and won the first prize in 1843. He was also exhibited at Gt. Yorkshire society's meeting at Hull in 1841, and received the first prize as the best bull calf. He was bred by Mr. Whitaker Burley; the property of Mr. Henry Watson, Walkeringham, near Bawtry.

The short-horned breed of cattle was produced in England by choice selection of fine animals; and by a long, judicious course of management by some of the most skilful breeders in the country, they have obtained great celebrity, and are diffused in England as well as in some other countries. This race is remarkable for its symmetry and compactness of form, for its rapid growth and early maturity, which admirably adapts it to the purposes of beef, which gives it a high rank in those countries where beef is the principal object of raising cattle; as the stock is of large size and rapid growth, it needs luxuriant pastures and high keeping.

ACKNOWLEDGMENTS.

Of Dr. John McWales, Milford, some very beautiful specimens of Velvetine Peach. This peach is remarkably handsome, being very high colored, and nearly all covered with a beautiful velvety appearance; it is of excellent quality, and it justifies a high rank, which we assigned it last year. It is one of the best of peaches.

From John Goldermen, Sherburne, seedling peaches, very large and beautiful; the quality of the specimen sent is about medial.

NOTICES OF PUBLICATIONS.

The Union Artist.—This is the title of a new periodical, to be published once a month at Pittsburg, Penn., and devoted to agriculture, horticulture and mechanics. Under the head of Book Farming, the editor says: "The whole energy of the farmer appears to be directed to the *idea* of seeding down a great number of acres, as if upon the amount of land cultivated his success entirely depended. He never stops to inquire whether his soil contains the requisite qualities for the production of the grain which he expects to harvest, nor whether the soil has been properly prepared for the production of the crop he wishes to grow." We cannot speak quite so strongly as does our new friend, for we trust that *now*, there are few who do not *sometimes* make the inquiries which lead to a better mode of cultivation. The *Artist* is well-printed, contains many pictorial illustrations, and what is more, abounds with the right kind of ideas. We therefore welcome it into the wide field of industry, and admonish it to prepare its shoulders for the herculean task which lies in its path.

Hovey's Magazine of Horticulture.—In this work the subject of fruits, foreign and American, is examined very thoroughly. Great pains is taken to clear the nomenclature of fruits of the confusion which has heretofore attended it. The descriptions of fruit are very accurate and minute. Particular attention is paid to the flower department, and the notice of new plants introduced to public attention.

Downing's Horticulturist.—Beside the general subject of horticulture, it has the very attractive feature, landscape gardening and rural architecture, by one of the ablest authors on this subject

in the country. Published by Luther Tucker, Albany, N. Y. Joseph Breek & Co., agents, Boston.

Western Horticultural Review, by Dr. Warden, Cincinnati, is not a whit behind its contemporaries in interest and instruction. It has a wide field open for its operations in the great West, where it will do much good.

For the New England Farmer.

NO TIME FOR STUDY.

A TALK AMONG THE WORKERS—MR. THINKWELL AND MR. OLDSIDE.

Mr. Thinkwell.—Neighbor, what do you think upon the various theories set forth by different individuals in our agricultural papers of late, concerning the potato disease, and the cause of it?

Mr. Oldside.—Why, indeed, sir, I have not read them; and I do not suppose any body knows anything about it. Besides, I think that I am hardly able to take any of the papers. They cost a good deal of money, and the boys get so full of new notions by reading them, that, really, I do not want to have anything to do with them.

Think.—So you do not take any paper for the reading of your family?

Old.—I do not. And I think the boys have as good a chance as I had, to get knowledge. And certainly, I believe that when we were boys the people farmed it better than they do now, a great deal. Why, I believe my father knew better how to raise corn, and potatoes, and wheat, than any of our boys do. And I think that while books and papers on farming have been multiplying, crops have grown the lighter instead of growing the heavier.

Think.—And so you think that men knew more without instruction, when we were young, than they can now, with all the advantages given and secured by books and newspapers.

Old.—Why, I do know that my father raised greater crops than I ever could, and I have raised far greater crops on this very farm, years ago, than I can raise now, notwithstanding all the talk of the boys about what they have learned out of the newspapers. And I think the man who knows how to raise two hundred bushels of potatoes from an acre knows more about farming than one who cannot get more than one-third of that amount.

Think.—Well, I perceive, according to your reasoning, that you, compared with your father, are an ignorant man. And I perceive also, that your sons are more ignorant than yourself. Yet I presume, that you sought to treasure up all of your father's true ideas, and, in addition, to learn what you could, by observation elsewhere.

Old.—Why, yes, I think I have.

Think.—Still, you see no other cause for a short crop of potatoes, than the ignorance of the cultivator. Yet, if you set one of your boys to fill a bag with corn for the mills, and he puts two bushels into it,—and you direct another to put up from a particular place a bag of rye for the same purpose, and he should put up only one bushel, because there was only one bushel of rye there, you would not say that he was too ignorant to measure up a bag full of grain.

Old.—Certainly not.

Think.—It would, however, be just as consistent, as for you to reckon a past generation of men, possessed of so much more knowledge than the present, because they took larger crops from the soil. In taking a large crop, the soil is largely exhausted. The crop that is taken after will be lighter, because the soil contains not the properties equal to produce another crop so large. Your father's ignorance allowed him to exhaust the soil, and you have exhausted it still more, and neither your father nor you had sufficient knowledge to perceive what you were doing. Now, if your sons do not succeed as well in cropping a worn-out soil as your father did upon the soil in its full strength, you charge it all to the books and newspapers, which are laboring to instruct us. The fact is, neighbor, we need to learn how to keep our farms as good as they are, and make them better. All our fathers knew or considered was how to raise a crop. They did not keep their farms good as they were for producing. If generation after generation, over the face of the whole earth should do so, in a very short period the whole earth would become one vast desert, and the human race would perish for want of sustenance.

We must learn wherein the soil that our fathers cultivated is exhausted. Henceforth, no man will rank among intelligent farmers because he can raise a single large crop; but he who shall be seen to make a farm more and more productive, year after year, continually increasing its real value, will be known as a genuine and intelligent farmer. And you may rest assured that our sons will need all the information that they can gain from the best publications of our time, to bring them into the rank of genuine farmers, a few years hence. Our fathers imagined that when they had taught their sons how to plough and plant, and to hoe and dig, they had taught them how to conduct a farm. They little thought that the most important of all knowledge to the farmer had been entirely neglected in their teachings. Such, however, was the case. Under their management, and that of their sons, the soil has in most places lost its former power to produce. We have got to study a new subject. We must learn, and have our sons learn also, how to raise crops with a fair profit and yet have our farms continually growing better.

Old.—Well, Mr. Thinkwell, I do not know but you may get some knowledge from your papers; but my boys and myself have to work very hard to bring the year even, and we cannot get time to study so many new theories; and you know that "Much study is a weariness to the flesh," and we can't expect to meet everybody's notions, these times.

Think.—Mr. Oldside, you and your sons work extremely hard, and I am sorry that you do not succeed better than you do. But much of your hard toil is thrown away upon your worn-out land; and what of your land remains not exhausted is likely to become so far worn-out that no man could get a profitable crop off from it. You may get a light crop, but the whole rule of your farming must be changed before you can make farming a profitable business. You must learn to strengthen your land, while it gives you a living. Then the land will give you more than a living. Your difficulty in making the two ends of the year even will soon be gone; for when in the course of your improvement you shall find that your farm gives a good living, you may be sure that it will next enable you to lay up mon-

ey. When the earth is worked more than it is fed, it will grow poor. And here I must urge upon you to give your sons the means and the time for informing themselves in knowledge. Let them give their attention to those sciences which now offer assistance to the farmer in his calling, and when they have devoted their leisure time to study for a few years, I doubt not I shall have the happiess of seei ng them among the most successful and prosperous cultivators of the soil. C.

Mason, N. H., Sept., 1851.

For the New England Farmer.

POTATO ROT.

The mystery still hangs over the cause of the destructive disease in potatoes. One individual thinks it to be green lice; another that it is black bugs; and another that it is a worm in the stalk.—With all proper respect to lice, bugs and worms, I think they could neither of them breed a pestilence among potatoes.

Learning that the disease had made its appearance in various places, a few days ago I examined my potatoes, to see if I could make any important discovery. Most of the ground had not been manured this season, except with salt; and where it had received nothing upon it, I have not found a single diseased potato. In a piece which was manured from under a stable, and where there was a very large growth, there I found the tubers decaying. This was nearly or quite three weeks since, but the tops continue green, even until now, except as they are now generally becoming yellow by apparently natural ripening; all except in cases to be noticed.

The most indications of decay were in the lower leaves of the stalks of some hills; and in a very few instances the tips of small and tender vines were decaying.

Results of Examination.—The first result of my examination was relative to the commencement of disease in the tuber. Two varieties or kinds of potatoes were examined, with the same result. The disease has no apparent partiality for any particular part of the tuber upon which to begin; sometimes it fastens upon the blow end, then again on the stem end, or upon the side, or in the eyes; no matter where, it can begin here as well as there. In the examination of a white potato, some small specks were discovered upon the surface, which, upon examination, were found to be forthy matter from beneath the skin. The color of the tuber remained unchanged, where this matter was wet. By scraping off the skin, a small hole through the skin was discovered, of the size of a very small pin. Immediately beneath this was found a rotten place, in some not larger than a pin-head, in the substance of the tuber; and around it, immediately under the skin, the appearance of disease extended farther.—In some instances the frothy specks were found to be of a dry, woolly appearance, and immediately under them the tuber was found to be in the second stage of disease, the flesh of the tuber of a darker appearance

These facts seemed to agree with my former opinions upon the subject, that the disease begins in a fermentation of the most tender parts of the tuber. It is evident that the tuber is formed after the same manner that a tree grows; that is, the sap forms a growth of wood, by union of the necessary properties, immediately under the bark. A potato grows by laying on, in the same way. Of this I think I am not mistaken. In this forming-substance of the tuber the disease commences. The skin generally adheres much more firmly to a ripe potato, or one that grows very slowly.

Upon examining some blue tubers, the first effect of disease impaired the coloring of the skin. Here was an indication of an acid destroying the vegetable blue. The coloring matter of the red potatoes would be stronger to resist its action. They would be more likely to retain their color until the second stage of disease.

It is often the case that potatoes have been dug without any appearance of disease in the tops or in the tubers; but after a little time they would rot badly. This creates a difficulty in the way of my supposing the disease to originate in the vines or tops.

It is evident that were the vines grow rapidly, and are very tender and juicy, there the tubers would grow in a similar manner. In such instances, as much experience shows, there is greater liability to rot.

In some kinds, the vines are very green for a long time, as the long reds, but their growth is so gradual that they are very hardy.

Late planted potatoes grow more rapidly, and they are more tender and liable to disease.

Further ideas must be omitted until another time.

Mason, N. H., Sept., 1851. C.

For the New England Farmer.

EGGS AND BEST MARKET FOWLS.

Mr. Cole:—Having just read an article from W. C., a Stonington gentleman, headed "Fowl Facts," I offer a few words in reply. In the first place, your correspondent says that, "in these days of hen fever, there is a good deal of theorizing and baseless speculation," &c., which I will by no means pretend to deny; for I know it to be a fact that *almost* every one who deals in fowls will tell you that the peculiar kind which he happens to have the most to dispose of, are assuredly the best in the country. I, however, know of *some* exceptions.

Mr. C. then inquires if there "can be no standard of fowl excellence invented, by which a man may know what is the best stock for producing poultry, and what the best for producing eggs?" I think that by carefully experimenting with *all* the different kinds of fowls, such a standard could be raised, but at no little expense and inconvenience to the experimenter. I do not pretend that I have found the standard, or shall. Nor am I able to state what amount of eggs, either in number or weight, any of my hens have ever laid in a year; nor the average weight of my mixed fowls. But what I stated before I will repeat; that having kept nearly all kinds common to this country, I *know* that the pure Black Spanish fowls are decidedly the most profitable I have seen to keep as layers.

And I also *know* that the Spanish crossed with the Asiatic are the best for *early* marketing that I have ever seen.

The above is simply my experience; other experimenters may view the subject differently; if so, I for one would be most happy to hear their decision. Yours truly, John Dimon.

Wakefield, R. I., Sept. 15, 1851.

For the New England Farmer.

GROWTH OF A TREE---LARGE HOG.

Mr. Editor:—A year ago last April, Capt. Thomas Derby, of this place, stuck into the ground back of his house a small limb cut from a "Balm of Gilead" tree. It took root and grew some three feet last season, and about the first of June last, it seemed to be running up so very fast, he concluded to measure, and thus know precisely how far it grew within a specific time. At the end of the seven weeks next succeeding his first measurement, it stood forty-nine inches higher than it did at that time; showing a growth of just *one inch per day for forty-nine successive days;* and one of the leaves near the top measured nine and three-quarters, by ten and a half inches. Who can beat that?

Now, let us cross the way from Mr. D.'s, some forty rods, to the hog-pen of Warren Thayer, Esq. Don't start, friend! that isn't one of Barnum's young elephants, but a bona fida *pig*, that was taken from a drove last winter, weighing at that time, 112 lbs., but has stretched himself, Balm-of-Gilead-like, till he measures now, from the root of his tail to the end of his snout, *seven feet, three inches*, and girths *five feet, ten inches.* He may not weigh, perhaps, more than four cwt., as he is not *fat*, but growing finely.

But enough has been said to show that we produce something here besides *brogans.* If you are incredulous,—"*come and see.*"

Yours, truly, Senrab.

Pond Plain, S. Weymouth, Mass., Sept., 1851.

STEAMING BONES.

Analytical Laboratory, Yale College,
New Haven, Conn., June 30, 1851.

Editors Cultivator:—I have written so much on this single topic of bones, that some of my readers may think it worn threadbare. But while I see the great apathy which still prevails among farmers as to their use, when I consider the enormous waste of them which still occurs in almost every district of our country, I feel that I have not said and cannot say too much about them.

It must be acknowledged that there are practical difficulties of some consequence, in the employment of bones as a manure on ordinary farms. If applied whole the quantity required to produce much effect is very great, not less than from 50 to 80 bushels per acre. Crushing or cracking them by hand is a very slow and imperfect process, which soon leads to discouragement if the collection be large. Mills for grinding bones are as yet few, and bone dust as an article of trade is chiefly confined to the large towns, and must be transported often to a great distance. The easiest way to bring bones into a proper sphere for application to the land, and at the same time the most effective and economical method, is to dissolve them in sulphuric acid. This is a simple process enough, but I know from frequent experience that it appears very formidable to the farmer who is not accustomed to novelties. He is afraid of the strong acid; perhaps has some difficulty in finding it at all in his neighborhood, and is often finally discouraged into letting the whole matter stop by one or two failures in his first attempts. No description of a process can avoid every possible source of error, and unpracticed manipulators are pretty sure to make some mistakes, when they meddle with chemicals for the first time. Those who have more faith and perseverance do not give up at the first ill success, but try again, and always reap a reward for their good courage. Such however are comparatively few, and the number of those who shrink from any effort whatever is greatest of all.

In view of the dread which farmers have of this method, I take up for the subject of the present letter the process of dissolving bones by steaming, which has lately excited much attention in Great Britain. This process has already been mentioned in your columns on one or two occasions, but I have thought that a more extended notice might possess a considerable degree of interest. I have at various times within the past year or two received letters from Scotch and English friends speaking highly of steamed bones, and the subject has also been fully discussed by the agricultural papers.

In the Farmer's Guide, just published by the Messrs. Scott of New York, a full description is given of the process, with plates of Mr. Blackhall's apparatus. I will here mention the general principles of his plan. Any old boiler of small size will answer for this purpose. It is fitted so that a considerable charge of bones may be placed on a grating in its upper part, and there be exposed to the full action of the steam. The lower part of the boiler is filled with water, and then all that is needed is a fire, and a safety valve to make sure that the pressure of steam does not become so great as to endanger the safety of the boiler.

If the charge is so introduced in the morning, steam is kept up through the day, and the boiler left to cool off at night. On the succeeding morning the bones are taken out, and are found to be so altered and softened as to be readily crushed to a fine paste or powder. All coherence is destroyed, and the result of the process is thus a mass of extremely minute particles.

This is the same object which is obtained by grinding in a bone mill, or by dissolving with sulphuric acid. In the latter case there are also certain highly important chemical changes, but still the state of minute division to which the bone is reduced, is one of the chief points gained. This division into small particles is of advantage, for the reason that such particles are more readily dissolved and decomposed into the soil, and therefore more immediately and fully available to the plant. This consideration of quick action is highly important in the application of manures. A small quantity of a soluble or finely divided fertilizer will produce a better effect than many times the amount of some substance equally rich in composition, but imperfectly soluble, or in large hard lumps.

For this reason steamed bones have been found highly advantageous as a special manure, a comparatively small quantity answering the desired purpose in hastening and augmenting the growth of the crop. Eight or ten bushels per acre have been found to produce a most remarkable effect, far more than equivolent to a heavy dressing with the ordinary farm-yard manures. In fact it is scarcely necessary that I should enlarge upon their properties in this respect, for even the most careless reader on agricultural subjects must by this time have learned, that any form of soluble phosphates constitutes an exceedingly concentrated and pow-

erful manure for all of our cultivated crops. Phosphates are a necessary condition of life and luxuriance to all or nearly all valuable plants, and it is obviously important to furnish them in such a form as shall be mostly readily available.

Several important papers relative to steamed bones have been lately published in the Journal of the Chemico-Agricultural Society of Ulster, Ireland. Some of these, and perhaps the most interesting, are by Mr. D. T. Jones, a gentleman who was studying in the laboratory of Prof. Johnson at Edinburgh, when I was also a student there. He is now applying his chemical knowledge to the improvement of a large estate in the west of Ireland.

He has made some experiments on the actual cost of the process, counting in the price of the bones, of the fuel, of labor, &c. His boiler held 7 cwt., and the results were taken from five successive charges. Bone dust cost £6 12s, or about $30 per ton, while a ton of raw bones cost but £3 or about $15. The additional expense of steaming was a little less than $1. For a trifle more than half, then, he obtained by the steaming process a ton of bones far more finely divided, and consequently more immediately beneficial, than bone dust. Other writers give almost equally favorable results.

The advantage of economy, then, seems clearly to rest with this process. The question arises, however, is there any loss of valuable substance. With a view to settle this question, Mr. Jones has lately made some direct experiments. Dr. Voelcker, of Cirencester Agricultural College, analyzed some specimens of the steamed bones as prepared by Mr. Jones, for the express purpose of comparing them with the bone dust. The following analyses give his result:

	Steamed Bones.	Bone Dust.
Organic matter,	28.68	35.25
Phosphate of Lime,	57.73	54.40
Carbonic of Alkalies,	4.29	1.49
Sand,	9.30	9.26

A comparison of these two analyses shows, that during the steaming a loss of organic matter has taken place amounting to nearly eight per cent. This is the gelatine of the bone, dissolved out by the stem. This loss is however only apparent, as a moment's reflection will show, that this dissolved gelatine will be found in the water that occupies the lower part of the boiler. After one or two charges therefore, this water should be drawn off, diluted with fresh water, and applied as a top-dressing upon meadows or young grain. The gelatine being a highly nitrogenous, and therefore valuable manure, produces an excellent effect when applied in this way. If not convenient to use this solution in a liquid form, it may be mixed with peat, ashes, vegetable mould, &c., or added to a compost heap.

We thus see that every portion of the bone is preserved, and made useful as a fertilizer, and that too by a cheap process. Some farmer in each neighborhood might set up an apparatus at a trifling expense, and supply the whole adjoining country at reasonable rates. Or an association might do the same thing, each steaming his own collection of bones in turn. By managing in this way the expense to each individual would be quite small, and all the bones got together in the course of the season could soon be brought into a state fit for use. They are now so commonly disregarded and wasted, that in most situations a farmer might possess himself of large quantities for a merely nominal sum.

The crushed mass of steamed bones, if left to itself, soon heats and ferments, causing a loss of nitrogen in the form of ammonia. To prevent this in cases where the bones are not to be used at once, it is recommended to use a little salt; this arrests decomposition, and is itself of some value as a manure. It also serves in many cases as a check to injurious insects, by destroying their grubs.—Where it is desirable to add a highly ammoniacal and energetically acting manure, it is only necessary to withhold the salt, and allow fermentation to go on till ammonia begins to be largely given off. The heap should then be mixed with gypsum, peat ashes or charcoal dust. This applied to the soil, will act as quickly and as powerfully as guano, with the advantage of a far less price. From six to ten cwt. of these bones would produce more effect upon most of our crops, than a very great application of farm-yard manure, and being so portable, might often be employed with a very great saving of expense. I think that the addition of 8 or 10 lbs. of sulphuric acid to each 100 lbs. of this manure would be a still farther improvement.

This method seems to me remarkably feasible, simple, effective and cheap, and I hope that this notice may induce some of our more enterprising farmers to try it, and make their success public. The apparatus need cost but little at first, and the same boiler might be employed to steam food for stock in winter. Yours truly,

JOHN P. NORTON.

—*Albany Cultivator.*

EXPERIMENTS WITH SORREL.

MR. FREAS:—I hear and see a good deal spoken and written against sorrel, which I do not think it deserves. I will give you my views upon it. Sorrel is generally regarded as a worthless production. Still it is not always easy to get rid of. On many farms, and more especially on such as are of a sandy formation, and imbued with acids, sorrel readily takes root, and finding in the soil an abundance of appropriate *pabulum*, it grows and perpetuates itself with surprising and fatal vigor. On all lands of this description, it springs spontaneously. When a farmer finds that his fields have become infested with it, his only remedy is to make the best of it. If he keeps horses or sheep, *they* will find a ready market for the produce of the "sorrel plot," and will be found to do as well as when fed on the best cultivated grasses, with a liberal supply of grain. Of the correctness of this I am convinced by numerous experiments made with a view to ascertain, precisely, its specific value for feeding, my farm being one on which the plant grows with the most luxuriant vigor, and cannot easily be got rid of. Horses, fed on sorrel hay—made, as hereafter stated, without a particle of provender—do remarkably well, and will perform as much work in the spring, as those supplied with any feed it is possible to give them. As the sorrel grows short, and contains, for so diminutive a plant, a very considerable quantity of seed, it should be cut early in the season—say as soon as the seeds have fairly formed, and be made, not by open and long exposure to a hot sun, but in *grass cock.*" This is done by allowing the crop to re-

main in *winrow* till toward night of the first day after mowing, and then *pitching* it into small cocks of eighty or a hundred pounds each, (green hay,) and *raking* up the scatterings afterward, with a hand rake.

In this condition it should be allowed to remain for five or six days, if the weather be fair, and before getting in, it may be turned up—simply reversing the cocks, the bottoms of which will generally be a little moist in consequence of absorption of water from the ground. By permitting sorrel to stand till the seed ripens, the value of the crop for *hay* will be materially diminished, as the seed will be shattered out in cutting and conveying to the barn. When ground, sorrel seed makes a meal highly valuable as a feed for hogs, &c.—A New Englander. — Near Claremont, N. H., July 2, 1851.—*Germantown Telegraph.*

MULCHING---A NEW METHOD.

Mr. Editor:—I dislike straw for "mulching," and would recommend a substitute. My method is the following. I make a square frame of boards by nailing together four strips four feet long and six inches wide at the corners. This I place around the tree, and fill it to the top with *leaves*. A slight sprinkling of soil serves to keep the contents *in statu quo*, and the box has a neat and tasty appearance, especially where the trees are in frequented places. The boxes cost but a mere trifle, as any one who can use a handsaw and hammer can construct them, and besides, there is no inconvenience experienced from the scattering and blowing about of straw.—Secor.—Roxborough, May 21, 1851.—*Germantown Telegraph.*

Mechanics' Department, Arts, &c.

AMERICAN MECHANISM AT THE WORLD'S FAIR.

The London Chronicle remarks that, although the number of articles sent from the United States to the Exhibition is neither what was expected of them, nor, we believe, does it adequately represent their capabilities; there are, nevertheless, many things in their collection which may be examined with interest and profit, and which do credit to their industry, ingenuity and skill.

"Foremost among the articles displayed in this division of the Exhibition are a coach, three or four wagons, a "buggy," technically so called, and a trotting "sulky." We call these "foremost," because, both by the prominent place they occupy, and on account of the real merit of the vehicles themselves, they are really so. The coach—styled by the exhibitor a "carriola"—is a very creditable piece of of workmanship. It is of good design, apparently well built, and is finished with great regard to good taste. There is nothing of the gewgaw style about it. The color, decorations, mountings, finish, ornaments, are all rich and neat. It sweeps gracefully over its curve, as a coach ought to sweep. The carvings on it are admirably well executed, and for symmetry and good keeping in every part, from the step of the footman to the board of the driver, it deserves high commendation. The wheels are much lighter than in carriages of a similar kind in England. This is claimed as a decided improvement. Certainly the appearance of the vehicle is improved by the absence of that bulkiness which gives a lumbering aspect to many an English carriage; and if the roads of our transatlantic brethren are not too rough to deal fairly with such wheels, we know not why they should be considered unsafe upon our English turnpikes.

"The other vehicles exhibited are respectively entitled a York wagon, a Prince Albert wagon, a slide top buggy and a trotting sulky. The chief characteristic of all these is their extreme lightness of weight, when compared with their size. They are richly finished within and without, and beautifully carved; they are upholstered with exceeding taste, made with a constant regard to the comfort of the rider, and exhibit very considerable artistic merit in their design.

"There are several sets of harness, both single and double, among the articles exhibited, which deserve notice. One is a rich and elegant specimen of manufacture. It is made of leather of the best quality, and of solid silver, with graceful and appropriate designs. In this, as in all other harness shown, there is a remarkable lightness and airiness, and an obvious endeavor to do away with all superabundance of weight.

"On a bay, in the main aisle, on the south side of the building, are two chandeliers and several lamps, from a manufactory in Philadelphia. The great use of oil in the United States has led to many improvements in lamps—especially in those on the solar principle, as it is called, (where increased draught is made to bear upon the combustion,) which are unknown among us. Unpretending as these lamps appear, it is stated that they will give an amount of light greater by one-half than any other in use. The chandeliers hanging above them are graceful specimens of workmanship, designed in good taste, and showing a crystal purity of glass. The casting is remarkable for its fineness, sharpness and uniformity. The branches, formed by arabesque scrolls, profusely ornamented with birds and flowers, delicately sculptured or in bold relief, with centers of richly cut glass, claim particular attention for their elegance and lightness of design. This is among the youngest branches of manufacture in the United States, it being scarcely fifteen years since every chandelier, girandole, mantel lamp and candelabra used in that country was imported from Europe; and it argues considerable enterprise and perseverance on the part of the manufacturers, that they have attained so much excellence as to be willing to vie in the Exhibition with the oldest and most celebrated houses in the world.

"In piano-fortes, there is a show highly creditable to the manufacture of musical instruments in the United States. There is a seven-octave grand piano forte; a semi grand, and other instruments of less pretension but of much merit. There are two from a manufactory of Philadelphia, in neat and very unpretending cases, which combine all the best qualities of the highest rank of pianos. In breadth, freedom, and evenness of tone; in promptness and elasticity of action; and in a combination of everything that is rich and sweet in this description of instrument, they claim to be unsurpassed.

"There are shawls of beautiful color, and a high perfection of manufacture; white cotton goods, which, in bleaching, finishing and putting up, appear equal to Manchester products; some very

beautiful flannels, single milled doeskins and wool black cassimeres of thorough fabric. Of the rifles, it is but just to say that they are among the best, if not the best, of any rifles manufactured in the world, the Americans claiming to excel in this species of manufacture. They are made from the best selected Copake cold blast forge iron, and are of an unpretending style, but remarkable for a plain, substantial, and perfect finish; they are strong, simple and thorough in their workmanship, and eminently adapted for real service."

MAKING HOOKS AND EYES.

The N. Y. Evening Post has a letter from a correspondent in Connecticut, from which we make the following interesting extract:

Upon the premises we were shown the works of the Waterbury Hook and Eye Company, where a capital of $16,000 is employed in the manufacture of hooks and eyes. Here were arranged long rows of little machines about the size of small wash-stands, under which a constant shower of these little feminine conveniencies was pouring down, but from what cause or by what agency it was difficult to conjecture. Upon a closer inspection, a large spool of wire was perceived revolving slowly in its rear, growing shorter inch by inch in mechanical harmony with the machinery, while iron fingers curiously articulated, were ready to grasp the severed fragment, and pass it along from change to change until it finally dropped into the receptacle beneath, a perfect hook or eye, ready for use.

For a moment it seemed as if each machine was instinct with life and intelligence. The power of speech seemed to be all that was lacking to complete the delusion. There were but four or five men in the room who passed around occasionally from one stand to the other, to oil the machinery, to supply new wire when the previous spool was consumed, or to empty the vessels when filled by the silvery shower. The whole performance more resembled a voluntary process of nature than the result of mechanical art. The duty of the superintendent of one of these machines, seemed curiously alike to that of the gardener who plants his peach stones, which, after many days, sprout, grow into a tree, blossom and finally bear peaches, which when ripe drop from their branches and are gathered for use.

PROGRESS OF ARTS.

The facilities of getting a broadcloth coat are much greater in our days than in those of our forefathers.

"Among the anecdotes detailed by Dr. Bushnell, in his sermon at Litchfield, Conn., centennial anniversary, illustrative of the age of homespun, was one which deserves to be told by itself, and better than we can repeat it. One of the aged divines of that county, still living, was married during the Revolution, but under singular difficulties. There was an obstacle to the wedding which seemed insurmountable. He had no wedding coat, nor was wool to be had to make one, and it was in the dead of winter. Yet all parties were ready, and he was anxious to be married without delay. At last the mother of the intended bride discovered the difficulty, and promptly had some of her sheep shorn and *sewed up in blankets* to keep them warm; while of the wool she spun and wove a coat for her intended son-in-law."

A Courageous Boy. — In a town not far from Boston, a clergyman was visiting a district school, where a little boy was put forward by the teacher to "speak a piece," because he was bold. When he was done, the clergyman praised him by saying, "Why, my little lad, *you* are not afraid, are you?" "No, I aint afraid of nothin';—*I aint afraid of skunks!*"

☞ Crimes shock us too much; vices almost always too little.

Ladies' Department.

DRAWING.

There is, says the Home Journal, scarcely any more remarkable diversity between ordinary personal accomplishments in England and America, than in the extent to which drawing is cultivated in the former country, as a usual accompaniment of good education. It is rarely that a lady or gentleman among us possesses any acquaintance with design, except in the cases where there are chances to be uncommon talent for art, or where the thing is taken up somewhat professionally. There, it enters into the accustomed routine of instruction, and is so familiar an acquirement, especially on the part of ladies, and in those circles where intellectual attainments are at all extensively pursued, that the absence of a capacity to sketch is rather an exception than the rule. In fact, drawing is cultivated among them as music is with us. We should be glad to see it made, in all schools and systems of education in this country, a regular branch of liberal cultivation. It is a popular but very great mistake, to suppose that it is impracticable and without use, to pay attention to the principles and practice of design, unless there be a special genius for art in the person concerned. Yet we instruct young persons in literature, and exercise them in habits of composition, where it is neither expected nor wished that they should become authors. We do it for the purpose of refining and expanding the taste generally, and of affording accessible resources at all times for calm and harmless and elevated enjoyment. As a means of self-employment and refined gratification—which is independent of society—which accompanies its owner wherever he goes, and sets him secure from *ennui* under any circumstances of privation—an acquired taste for sketching ought to be highly valued. And such taste and capacity as are needed for enjoyment are as much matters of acquisition by any one of ordinary intelligence, as the proficiency which we hourly see in all other branches of accomplishment where there has been no specific gift of talent. All young ladies are understood to be proper subjects for instruction on the piano, and all do acquire facility enough to minister importantly to their own amusement, and that of their friends, though, in a majority of instances, there is neither an ear for harmony, nor any superior sensibility to the effects of music. A study of the scientific rules of drawing, and some manual familiarity with the pencil, are of great value for enlarging the perceptions, and strengthening the enjoyment to be derived from all branches of art in its high and varied signification. For the just appreciation of pictures, of sculpture, and of architecture, and for the extension as the sources of pleasure connected with them, and es-

pecially for the imparting of confidence and consistency to one's views upon such matters, some practical acquaintance with drawing will be found of the highest service. The lofty, intelligent tone of public taste in England at the present day, on the subject of art, may be ascribed, in a great degree, to the wide extent in which the use of the pencil has of late prevailed among intellectual men and refined and reflecting women in every rank of life. Criticism on art, except from one who knows the elements and laws of art, as they only can be known through use, is of little value, but, unfortunately, of very common occurrence.

LETTER FROM "LUCY"---WASTE OF TIME.

Mr. Editor:—As my former missive met with favor, I thought it would not be amiss to send you the following letter, written to one of *our girls*, hoping it may be a word fitly spoken to some of the farmers' daughters who read your excellent paper.

Dear Susan:—I have been long thinking of writing to you about making a better use of your time, and you know me, and love me too well, I trust, to consider what I may say as meddling or fault finding; then be assured once more that it is "much easier to praise than to blame," and I only say this with a desire to promote your happiness.

Have you read Emma Jane's letter in the Rural of July 31st? and do you remember what she said about having your work-basket in the corner where you usually sit down? Now, if yours was on the table, how many stitches you might take in one day when you are just sitting there chatting with Mary, and it would be resting you just as well —and how many good books you might make yourself acquainted with, that you now regret you have not time to read, if you would lay one before you every time you sit there with your head upon your hand, dolefully thinking of nothing in particular. You would then forget your little troubles, and have your book read through in a short time, and the only danger would be of forgetting the other work. It is always best not to sit down much until the work is all done, or you get very tired, but, when you do sit down, do not fold your hands. Let your motto be, "never be idle a moment." Dr. Beecher has some excellent thoughts in one of our late periodicals, which you must read the whole of, when you come here, but I cannot forbear quoting a single paragraph.

"The young abhor the last results of idleness, but they do not perceive *that the first steps lead to the last*. They are in the opening of this career, but with them it is genteel leisure, not laziness; it is relaxation, not sloth; amusement, not indolence. But leisure, relaxation and amusement, when you ought to be usefully employed, are indolence. A specious industry is the worst idleness."

I have quoted this, not that I think you are lazy, but to show you a good man's opinion of the danger of taking the first half step in the wrong direction; the downward road is so easy, and it is so much more difficult to take a step back than forward.

Another thing, dear Susan—how much time you spend running to the window. What if that fine carriage was passing? It was no one that you knew, and if it had been, why should you run? There is no use of complaining that we have not time, when we suffer these moments that the long days are made of, to run to waste. Why, Susan, I read all our periodicals, besides much other reading, just when I am *tending baby*, and mine does not get more tending than any baby should have. The little fellow has become so accustomed to my paper that he seldom offers to pull it, and if he does, I have only to take hold of his little hand with one of mine, and if he is rebellious I hold fast, thus saving the time and quietly teaching him a lesson of obedience.

I do not think of anything more I wished to say, and here is, perhaps, as much as you will remember. I shall expect an early reply, to know you are not displeased.

Yours, most affectionately, Lucy.

—*Rural New-Yorker.*

THE YOUNG WOMAN'S INFLUENCE.

The character of the young men of a community depends much on that of the young women. If the latter are cultivated, intelligent, accomplished, the young men will feel the requirement that they themselves should be upright, and gentlemanly, and refined; but if their female friends are frivolous and silly, the young men will be found dissipated and worthless. But remember, always, that a sister is the best guardian of a brother's integrity. She is the surest inculcator of faith in female purity and worth. As a daughter, she is the true light of the home. The pride of the father oftenest centers on his sons, but his affection is expended on his daughters. She should, therefore, be the sum and centre of all.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

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The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

☞ Also published at the same office *every* Saturday, on a large handsome folio sheet, the New England Farmer and Boston Rambler, an independent Journal, devoted to Agriculture, Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and the usual variety of Literary and Miscellaneous matter, adapted to family reading. Letters from Home and Foreign Correspondents will appear from week to week, together with a variety of contributed and selected articles of a Literary, Scientific, Historical, Biographical, Humorous and Juvenile character, short Moral Tales, &c.; containing more reading matter than any other Agricultural Family Newspaper published in New England. Every thing of a hurtful or even doubtful tendency will be carefully excluded from our columns

Terms, $2,00 per annum in advance. At the close of the year, the publishers will bind the semi-monthly Farmer gratis for any person who subscribes for both publications, paying one year in advance for each.

☞ The Semi-Monthly Farmer contains nearly the same matter as the Agricultural department of the weekly.

☞ Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy gratis for one year.

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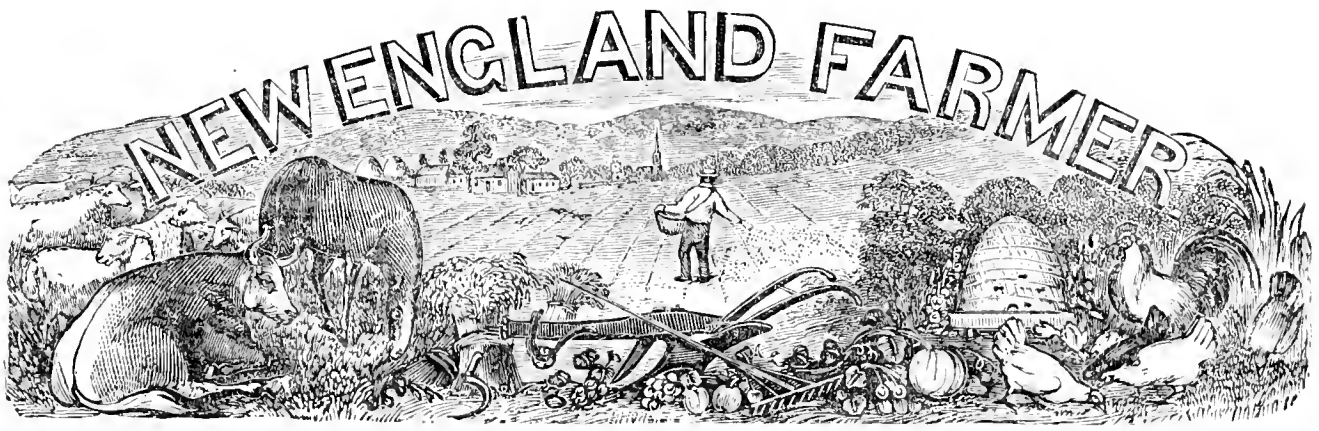
☞ When subscribers wish to change the direction of their papers, or when they return a copy to this office, they will please be *particular* to name the Post Office, and State, to which it has been sent, as well as the one to which they wish it directed; as it often happens that two or more of our subscribers are of the same name, and annoying mistakes have occurred in consequence.

☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, OCTOBER 25, 1851. NO. 22.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

APPLES.

The question is often asked, whether the unusual attention which is now given to the cultivation of the apple will not, in the course of a few years, glut the market, and reduce the price so low, as to make it a crop no longer profitable to the farmer. We do not believe there is any cause for fear on this ground, and will state a few of the reasons upon which we found our belief.

In travelling, recently, some three hundred miles in various sections of this State, and in New Hampshire, in an open carriage, where we had opportunity to see the country as we passed along, our attention was particularly turned to the orchards on our route, and to the manner of planting and managing them. In some cases the orchard had been started by digging small holes in the old, tough sward, and crowding in crooked trees apparently one or two years from the bud, and there they were left to come up as best they might, in the mean time affording the cattle an annual repast in autumn by way of browse. How many of these lean and lonely trees will survive this treatment and come to maturity, is hardly problematical. It would be next to a miracle, indeed, if they did any thing but droop and die.

In other orchards the proprietors had adopted a different mode. With visions of golden fruits in the dim distance, they began with a commendable zeal in the use of the plow: set their trees in somewhat of a strait jacket, in holes two or three feet in diameter, planted potatoes and hoed them, and bid god-speed to their future orchards. This course is pursued for two or three years when the ground is laid down for mowing or turned to pasture; weeds and grass then choke their roots, mice gnaw their bark, while mosses gather upon their trunks, and disease and death are apparent in every feature; the verdict of any honest man upon them would be—*death*, by imprisonment and starvation.

By a fair calculation as we passed along, we came to the conclusion that this is the fate of about *one-half* of all the apple trees that are set throughout the country. But there are many other ways in which the trees are lost. In many localities the Borer is exceedingly destructive, not suspending its ravages when the tree has come to maturity. Thousands are annually ruined by trimming improperly and at wrong seasons of the year. Cattle and horses always improve the opportunity to help themselves to fruit and break down the branches in browsing upon their extremities. Then there are numerous other casualties constantly befalling them, so that of the whole number annually set in New England, we believe it may safely be estimated that *three-fourths* of the whole amount never produce an apple!

With this thriftless practice all about us, no apprehensions need be entertained that the demand for apples will be any less than at present, for the next quarter century, at least. In another paper we shall speak further on the subject.

CHARCOAL, AND THE POTATO ROT.

The experiment has often been made of applying charcoal to potato hills, as a preventive of the disease which has come well nigh to an extermination of the crop,—but we believe without any satisfactory results. Until recently, we have never known charcoal applied other than in small quantities, scarcely sufficient to give a fair expression of its effects. On returning from the New Hampshire State Fair last week, we passed the residence of Mr. David Lane, of Chester, in that State, and improved the opportunity to inquire what the result had been of planting potatoes upon the ground where he had been burning wood for charcoal. He informed us that he had burned six pits, and that after spreading the fine coal and cleaning up the pits, had plowed and planted the ground with potatoes without manure. He was then digging them, and they had rotted considerably; more, where the coal was in abundance, and less, as he approached the edges of the piece

where little coal had fallen, and where the ground had not been heated. This result is what we had hardly looked for. It cannot be set down as decisive, however, that charcoal is totally inefficient in preventing the rot. Other circumstances, of which we are not apprized, may have had an influence upon the crop—such as the free application of manures for several years past, or that the soil is exposed to the flowings of cold springs, both of which have a strong tendency to accelarate the disease, if not produce it.

It would seem that the severe heat to which the ground was exposed must have destroyed everything in the soil itself that is noxious to the plant, and go far to settle the question, whether there is anything in the soil that induces the disease.

BRISTOL COUNTY SOCIETY.

The annual exhibition of this society took place at Taunton, on the 9th and 10th inst. At the Town Hall there was a magnificent display of fruits and vegetables. The manufacturers and mechanics of Taunton contributed largely in the various departments of business, and New Bedford was well represented by some excellent specimens of the implements used in the whaling business. The ladies of Bristol county furnished a large number of articles of embroidery and needle work, and also aided in the various preparations of fruit.

The exhibition of *neat stock* was good in quality and respectable in numbers, being chiefly of the native breeds, with some thorough-bred Devons. There were no Jersey or Alderney cattle exhibited. By far the best bull present belonged to the society. This was a pure Devon, four years old. The heifers and calves shown were of a superior appearance, and would compare favorably with those of any other exhibition in New England. The working cattle were of a fine character, seldom surpassed here or elsewhere.

The *swine* were of the Suffolk breed, not many in number, but of a fine quality generally. The *horses*, both old and young, were very good, and some of the colts were of great promise. Judging from the appearance of the animals exhibited, there must be many good horses in Bristol county; and from the interest manifested in this branch of the show, the farmers have arrived at the conclusion that it is quite as well to keep good stock, as horses of an inferior quality.

Sheep were present in considerable numbers. The exhibition of *poultry* was rather inferior in every respect, there being few present, and none of them thorough-bred.

At 9 o'clock, A. M., on Friday, the *ploughing match* was held. There were thirty-three entries for the contest. The ploughing was of a superior kind. The ploughs used were manufactured by Ruggles, Nourse, Mason & Co., and D. Prouty & Co., of this city.

At 1 o'clock P. M. a procession was formed and proceeded, under the direction of Theodore Dean, Esq., of Raynham, to Templar Hall, where three hundred ladies and gentlemen partook of a dinner furnished by J. B. Smith, of Boston, the celebrated caterer. After the dinner, addresses were made by Mr. Page, President of the Society, Governor Boutwell, Mr. Proctor, President of the Essex County Society, Attorney-General Clifford, B. V. French, of the Norfolk County Society, and others. The subjects of the addresses were, the interest manifested by farmers and others, in the various branches of agriculture,—the improvements which are constantly being made in its practice,—and the establishment by the State government of agricultural colleges and schools.

The speech of Mr. Clifford, was, however, an exception; he, having been called upon to respond for the ladies to a sentiment complimentary to them, which was given by Mr. Page, the President. Of this duty, Mr. Clifford acquitted himself in a most happy and eloquent manner.

This exhibition, was, as a whole, one of the best that has taken place this year. It shows that the farmers of Bristol county are conscious of their own interests and desirous of advancing themselves in a knowledge of their noble calling.

The officers of Bristol County Agricultural Society, for the ensuing year, are, for President, J. H. W. Page, of New Bedford; for Vice Presidents, John Daggett, of Attleborough, and Alfred Wood, of Dighton; for Treasurer, Samuel A. Dean, of Taunton; and for Corresponding and Recording Secretary, Timothy Gordon, of Taunton.

HAMPSHIRE AND HAMPDEN SOCIETY.

The thirty-third anniversary of this agricultural society took place at Northampton on the 7th and 8th of Oct. The Hampshire Gazette gives a pretty full report of the affair. Their plowing match, it thinks, was better than anything of the kind they have had before. Thirty-two teams being entered. Show of Cattle not very large. The show of Horses better than any former one. Sixty-seven entries were made. The show of fruit was very superior. There were 840 samples. We agree with the Gazette, that Mr. Graham, the Secretary, made a "most eloquent and beautiful speech." Our friend Dodge, of the Journal of Agriculture, who was present as a delegate from the Central Board of Agriculture, had a "good talk" with them, and made some confessions of early sins in the legislature by aiding in cutting off Mr. Colman's agricultural head some years ago. Mr. Winthrop said he made no pretensions to knowledge pertaining to the practical cultivation of the soil. He spoke, however, of the great want of

system and accurate information in our practice, and in alluding particularly to Massachusetts, added,

"Our lands are limited in extent and more in fertility. Poor at the ouset, they have been long under the plow. And unless intelligence and science shall do something, and something seasonable and effective, to supply the deficiencies of nature, and arrest the progress of exhaustion, we shall leave little but desolation and destitution to our descendants,—so far, at least, as our own Agriculture is concerned. Our Commerce may continue to extend itself, and to spread its wings over every sea;—our Manufactures and Mechanic Arts may flourish and thrive; and our population may have bread enough and to spare,—purchased in exchange for the profits of other pursuits. But if we mean to retain within our borders a prosperous and numerous Agricultural class,—an intelligent, independent, and virtuous rural population,—

'A bold *yeomanry*, their country's pride,
Which, once destroyed, can never be supplied,'

We must take good care to hand down our soil as well as our liberties,—unimpaired to posterity."

The reports on Poultry, Butter, Bread, Cheese and Horses are well drawn and contain many valuable suggestions.

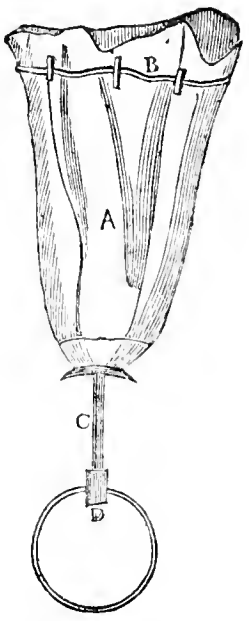
WIRE WORMS.

Professor Mapes, in the Working Farmer, says, that three bushels of *salt* applied to an acre of land will entirely prevent the ravages of the wire worm, and that salt is sure death to that enemy. We should be happy to know that this were so; but a friend from Exeter, N. H., tells us that the kind of wire worms afforded by the Granite State are not so easily got rid of. He has tried various experiments, such as putting a small quantity of salt in the hill and sowing it upon the surface, but without effect. Finally, he made a brine as strong as it could be made, and placed several wire worms in it, and let them remain three or four hours. Upon examination, they were found not only alive, but in excellent spirits and not at all affected by the *pickle* they had been in. Salt is an excellent manure, but we fear it will not kill wire worms.

WITCH GRASS.

Mr. Samuel Ricker, of Wells, Me., writes us in reference to this grass, that he thinks the method of extirpating it, described by "L. W." in the September number of the "Farmer," would always be slow, and oftentimes impracticable, on account of frost. Mr. Ricker's plan is, to plough, harrow and level, and then follow with a brush harrow, which he says separates the roots from the soil and leaves them in a condition to be gathered up easily with the rake. He thinks two operations of this kind will entirely clear the ground of this tenacious grass.

☞ People seldom improve when they have no other model but themselves to copy.



KNAPP'S PATENT COW MILKER.

This invention, patented in Nov., 1849, consists of an India rubber sack, silver cup and piston, which are operated in the following way:

1st. Open the mouth of the sack, and fold it back so as to expose the whole of the upper portion of the tube as far as the silver cup.

2d. Take the lower portion of the piston and ring between the thumb and fore finger of the right hand, holding it firmly.

3d. Take the teat of the cow in the left hand, press a little milk out, just sufficient to see the orifice of the milk passage, then slip the tube into the teat as far as it will go, and with both hands, stretch up over the teat as high as it will extend. This will hold the tube firmly in the teat.

4th. When the instruments are thus applied to all of the teats, place the pail under the bag of the cow, then take hold of the lower portion of the tube close to the teat with one hand, holding it up firmly; and, with the other, take hold of the lower end of the piston, just where the ring passes through it, and withdraw it; when this is withdrawn the milk will flow in a forcible stream from the teat at once.

5th. In a short time the cow will be milked clean, and as soon as the milk begins to cease flowing, or as soon as it begins to drop from either teat, the instrument should be removed in the following manner: with one hand take hold of the lower part of the instrument, and with the other grasp the teat about midway of the sack, and withdraw the instrument, carefully pressing the last drops of milk from the teat through the instrument as it is being removed.

The advantages of this method are said to be, that it does the work in half the time usually required in milking by hand, draws the milk entirely clean from the bag, requires no labor to milk with it, is not injurious or disagreeable to the cow, and does not allow dirt from the bag and teats of the cow to drop into the milk. Cows having sore teats or swelled bags, can always have their milk drawn easily by this milker.

NEW HAMPSHIRE STATE FAIR.

The second annual show of this society took place at Manchester, N. H., on Wednesday, Thursday and Friday, of last week. The people in every part of the State had taken an unusual interest in its operations during the year, and the officers of the society, together with the committees, and all others in any way connected with its welfare, had been judiciously selected from the several counties, so that there was one common impulse to make everything convenient for strangers, and to make the exhibition as useful and attractive as possible. The first great and important feature of the display was, that everything was brought into one proximity. The stock, poultry, sheep, swine, horses, ploughing match, trotting course, forage, water, booths for dining, and every other convenience, were included in an area of twenty acres, enclosed by a high fence, and surrounded on three sides by a forest of yellow pines. An hydraulic ram had been set up on a neighboring stream, which supplied the animals, as well as persons, with an abundant supply of water.

Horses.—The display of this noble animal was very gratifying. There was a fine stallion, sired by the old Black Hawk, and owned by Mr. S. C. Hall, of Manchester; also several of Black Hawk's colts. The old Gifford Morgan stock was represented with his progeny, some twenty-five or thirty in number. Some good looking breeding mares were also on the ground.

Working Oxen.—In this class there was a better exhibition than we have before seen in New England. There was a team of some fifty pairs from Cheshire County, which afforded an admirable display. They were nearly all of light chestnut color, in good flesh, active and well proportioned. A pair of four years old steers, the property of Gen. Erastus Glidden, of Unity, were the admiration of all beholders; although so young, their weight was *three thousand eight hundred and seventy pounds;* in color, symmetry and proportions, they came as near perfection as the most ardent admirer of the ox could desire. This gentleman's success is proverbial. We were informed on the ground, that he never contends for a premium but he receives it—his stock is always thrifty, attains a large size in a short time, and thus affords a quick profit. In a case like this, where success is looked for as a matter of course, it is important to all stock breeders to know his mode of managing—his particular breed, and everything that secures such results. We therefore hope the society will place Gen. Glidden in such a situation as will draw from him a full report upon the *rearing and management of working cattle.* Many other fine specimens were on the ground, but we have room only to mention one or two of each class.

Bulls.—There were many fine animals in this class. Among them we noticed one five years old, the property of Robert Elwell, of Langdon; a calf eight months old, from Dunbar & Currier, of Warner; another six months old, from G. W. Nesmith, of Franklin, the President of the Society. These animals were all excellent, and pronounced so by good judges who went the rounds with us. There was also a very handsome Ayrshire bull three years old, and weighing *one thousand and six hundred pounds*, the property of John Hazelton, of Orford.

Milch Cows.—The display in this class, we are sorry to say, was sadly deficient. From our own personal knowledge of good milkers in the southeasterly part of the State, only, we know that this deficiency was not because better cows could not be produced. There has been a good deal of attention paid to improvement in Milch Cows; that attention has been crowned with considerable success, and the show might have been such as to have commanded the approbation of good judges. We hope that Mr. Preston, the chairman of the committee on Milch Cows, with such other gentlemen as he can call to his aid, will see to this matter another year, and fill up the pens with cows that will do credit to their exertions. There were specimens of fine Devon Heifers, and the Devon stock of all kinds was highly attractive in its pure dark chestnut color, clear face and fine limbs. Ayrshires were not numerous; two or three cows and as many bulls made up all that we saw of that class. No calves, heifers or steers, were noticed. There were a few pure Short Horns or Durhams; some crosses of them were present with the cows, but as with the Ayrshires, few young cattle or calves. We cannot lose any opportunity of urging upon our friends the importance of paying more attention to our native stock. Those persons who attended the show of the Middlesex County Society, of Massachusetts, this year, will not doubt that our cows, when receiving the attention which is usually bestowed upon the foreign varieties, are not only capable of being made profitable milkers, but of being highly improved in beauty and symmetry, by levelling their prominent hunches, and laying on the juicy muscle in their cavities. The native Milch Cows at that exhibition abundantly proved this—and as they are adapted to our climate and pasturage, no effort should be spared to bring them to as high a state of perfection as possible.

Sheep.—Several lots in this class was presented. Among them was a French Merino Buck, two years old, the property of George Campbell, of Westminster, Vt. His weight was 224 pounds, and in June last he gave a fleece of twenty pounds and twelve ounces of fine wool! As considerable attention is paid to the subject of sheep, by many of the farmers along the Connecticut Valley, we were a little surprised that there was not a larger display. Perhaps Mr. Walker, the indefatigable secretary of the society, and who, we believe, is

conversant with that stock, can give us some suggestions upon that important part of husbandry.

Swine.—The lots in this class were not numerous. Some handsome Suffolks, and one immense native sow. Our attention was arrested by a sow and five pigs, natives, the property of Mr. John Adams, of Bedford. The sow had no claims whatever to any particular beauty, but we do not think it extravagant to say, that the five pigs were the finest we ever saw, be the breed what it might. The owner declared them to be pure natives. To us it seemed that the old dame must have looked into the sty of a Berkshire or Suffolk, to say the least; but if not, this perfection goes to substantiate our opinion of what may be done for our native breeds of animals by the same attention which we give to imported breeds.

Poultry.—This class, as has been the case at most of the shows in New England, this autumn, was fully represented. The arrangements were pleasant, and Sir Chanticleer, with Dame Partlett, and their attendants, attracted a great crowd of visitors, particularly of the ladies. Birds of every name and nation were there; but the collection that pleased us most was a cage of White Dorkings, the property of Mr. Dewey, of Hanover. Ducks, Geese, Swans, with birds of lesser wing, all contributed to the cheerful bustle which animated the scene.

Fruits and Vegetables.—The display of apples was very fine. We noticed one lot, from Samuel Simpson, of Derry, which he calls, the *Pound Sweet*, that were unusually handsome in appearance. There were few Pears, Peaches or Plums, it being rather late in the season for them. We noticed fourteen Orange Quinces weighing *eleven* pounds, presented by J. D. Peirce, of Dover. Vegetables of every kind were abundant. There were mammoth Pumpkins, Squashes, Beets, Turnips, Cabbages, &c., together with fine specimens of the Cauliflower and Broccoli.

Winter Wheat.—Fine samples of this grain in the straw and kernel were exhibited from various parts of the State. One lot from Col. Josiah Stevens, of Concord, was very good. This wheat is considerably cultivated in the State, and is becoming a staple article.

Machinery and Implements.—Here was a fine collection of light, cheap and durable farm implements, horse powers, &c., but only a few things particularly new. We noticed a plough, manufactured by A. Doe, of Concord, with a new feature; this was a cast-iron wheel under the share, and between that and the land piece, the object of which is to roll the plough around the end of the land. This is done by striking an attachment to the roller with the foot which raises the plough from the sod and thus prevents tearing it up. We also noticed the pattern of a new fence, presented by Mr. Stevens, of Concord. It is constructed by nailing light horizontal bars of any convenient length, to upright posts, attaching the bars to each other at their ends. When these are extended, varying a little from a straight line, the fence is made, and standing upon the ends of the posts, sustains itself without entering the ground at all. By drawing two pins from any length, a gate is opened for a passage through. We think this may be found convenient and useful where portions of fields and pastures are taken up for cultivation, and a permanent fence is not desired.

Butter, Cheese and Bread were presented in quantities, and were all of a high order. The hills of New Hampshire offer the finest pasturage for cows, and no reason exists why the best of butter and cheese should not be produced in large amounts in that State.

Manufactured Articles.—There was an extensive variety in this department, of almost every useful and ornamental articles.

On Wednesday evening there were addresses at the City Hall. On Thursday, the address was delivered by the Hon. Marshall P. Wilder, of Dorchester, Mass., and in the evening addresses again at the City Hall. The crowd in attendance during the Show was very great, and the whole affair is one destined to make a great impression upon the people of New Hampshire.

What the moral and political effect of these great gatherings of the people is to be, can hardly be conjectured. But there is one point which it seems to us must strike all alike, and that is, that all action or speaking upon collateral matters should be most carefully avoided. In its capacious maw the subject of politics has included commerce, manufactures, mechanic arts, and everything which it could possibly embrace within its folds. We trust that it will find no admission into our agricultural festivals to disturb, and finally to destroy them. We shall not think it travelling out of our sphere to present hereafter some admonition on this particular point. If this treacherous rock can be avoided, we see now no limit to the blessings these associations may confer upon the people.

PLOUGHING.

From a letter received from a gentleman connected with the Hampshire County Society, we gather the following facts in relation to the trial of stubble-ploughs, at the late exhibition of that society at Northampton. There were ploughs in use from four different manufacturers, but after a long trial, Ruggles, Nourse, Mason & Co.'s No. 37 was decided to be the best, on account of its great ease of holding, and its superior work.

A feat never before performed in ploughing, was accomplished by one of the contestants, who used Stubble Plough No. 38 of the same manufacturers. Starting his horses at one side of the field, he set the plough, and then let it run by itself to the end

of the lot, a distance of 35 rods. Then it was just touched sufficiently to guide it round to the next furrow, when it *set itself*, and went through without a hand being touched to it. This is a quality which has long been desired, and it is manifest that the plough which can do its work well without being held has little need of any other recommendation.

For the New England Farmer.

"MONSIEUR TONSON COME AGAIN."

In the Lowell Courier of last week is published a supplementary argument in support of Mr. Whipple's theory of insect depredations on the potato, in which it is inferred from the fact that the "grasshopper has sometimes destroyed entire fields of grass or grain," that like destruction may be brought upon the potato, by insects.

If this grasshopper illustration is rightly comprehended, it amounts to this, and no more. Grasshoppers have always been here. Occasionally they eat up all the leaves of grass, rye, &c. In like manner, aphides have always been here,—but only for a few years have they depredated to any considerable extent upon the potato. Hence aphides are the cause of the potato rot. This is what logicians would demonstrate a *non sequitur*.

Are there not two points in this argument that require confirmation? First, that aphides have never injured the potato so much as since the occurrence of the potato rot; and second, that this injury is the true cause of the rot. The assumption that aphides do more injury now, than heretofore, is altogether gratuitous. It may well be asked what possible connection have aphides, or any other insects, with potato rot? Numerous cases have been reported and come within our own observation, where the whole crop of potatoes has appeared perfectly sound, when first dug, and where the potatoes proved good in cooking; but months afterwards, the rot has been developed in those in the cellar. Will it be said that this rot was occasioned by the depredation of aphides or any other insect? I am not surprised that the scientific gentlemen who have taken part in this potato discussion, have left the field to the exclusive occupation of the gentlemen from Lowell; who, if I do not mistake, are one of that class of disputants, "although vanquished, can argue still."

I trust they will pardon the suggestion, that possibly the argument may be so far extended *without point*, as to become as offensive as the rot itself.

October 2nd, 1851. *

For the New England Farmer.

MANAGEMENT OF BEES.

Mr. Cole:—I have the last Farmer before me. I see our friend B. F. Conant, in Lyme, N. H., wants information from those that keep bees before he gives us his own experience; however, I will give him the history of my keeping bees. I began to keep them about 1821 or 1822, in the old fashioned hives; they did very well till I got six or eight hives, then the stronger swarms would often rob the weaker ones, and sometimes they would swarm late and often go off, and I lost them; at other times they would swarm when I was not at home, and lose them; then in the fall, come to take them up and smother them with brimstone, it gave the honey and comb a disagreeable taste, and I wanted some better mode to get the honey and to save the bees. I went to work in the winter of 1835 and prepared my stuff for a house 8 feet by 10, to put my bees in the next summer, which I did, and have kept them there ever since; the inside of the house I put up shelves, say 12 inches wide and 12 inches apart, then I put the bees on the shelf, and they went to work and have continued to work well. I put another swarm in the other corner of the house, but the first one soon robbed them; so I have kept only one swarm. I have taken 145 lbs. of new white comb made the same year, worth 12 1-2 cents per lb. I will say, here, that it would be unnecessary to build a house for bees, as it would be more expense than to finish a room in the gable end of your barn or the attic of your house and make it tight. The advantage of a house is, you are not troubled with their swarming, because they have room enough to work, and when the weather gets cold the bees go into the middle of the comb; then you may go in and cut off as much comb as you want, only be sure and leave enough for them to live on till the next season. Now I suppose our friend Conant would like to know how I put my bees into the house. Well, sir, I took an old hive and nocked the top off, took the cross sticks out, then I tied the top on so as to keep it in place, then when my bees swarmed I put this hive over them, and they soon went up into it; at night I took them into the house and slipped the top off, then I took a wing and brushed them on the shelf. J. Brown.

S. Thomaston, Me., Sept. 22, 1851.

For the New England Farmer.

TO PREVENT MICE GNAWING TREES.

Mr. Cole:—I have seen in your paper and in the Boston Cultivator a remedy for keeping the mice from gnawing apple trees; but I have not seen my remedy spoken of, and that is, to tread down the first two snows all round the trees, hard; that is the way I serve my trees and I never had a tree gnawed yet, while my neighbors have had hundreds spoilt by mice. You take my word for it, and I will warrant all trees that are served in like manner, in the country where I live when at home; the snow falls from two to four feet deep; a neighbor of mine teamed wood across his field last winter, and he told me the mice did gnaw the grass roots each side of the path; but they did not trouble the grass in the path. If you think this remedy worthy of notice, you can lay it before your readers, if you please.

A subscriber, and well wisher to your payer.

Andrew W. Sanborn.

Sanbornton, N. H.

For the New England Farmer.

WHEAT.

Mr. Editor:—Farmers in this vicinity in former years raised their "bread-stuff," almost universally, but since the "weevel" has been so destructive, the wheat culture has been abandoned by many, and most have depended on the West for their flour. I have sowed a little with hardly any success for six years past until the last season. On the first day of April last, I sowed a bushel on a high elevation, the poorest land I cultivate; and I have a fair crop, of more worth than I could have

obtained of oats, and the land is left in much better condition for grass. Others have had good crops in this region. Summer wheat is sown here mostly. I am glad that attention is turned again to raising this most desirable crop, and hope that the time is not far distant when every farmer will cultivate it with success. JERE. FULLERTON.

Raymond, N. H., Sept., 1851.

For the New England Farmer.

POTATOES.

MR. EDITOR;—In April last, I called your attention to potatoes raised by Mr. I. Bradstreet, of Danvers, from the seed planted in 1845. They were said to be quite prolific—of good quality—and free from rot. This afternoon, in company with Mr. Allen, chairman of the committe on root crops, in Essex County, I have visited the grounds of Mr. Bradstreet, to ascertain the result of his cultivation the present season. He has raised between nine and ten hundred bushels, on about five acres of ground. His men were employed in digging to-day. The potatoes were large and fair, averaging a bushel to sixteen hills. I never saw potatoes of better appearance. He has not found so much as a bushel of defective potatoes in all his crop. The ground on which he was digging was a light soil, well pulverized, in good condition, this being the second year of potato crop. It was manured with common barn manure—a shovel full to the hill. Mr. B. showed us a field in front of his house, where he raised two hundred and eight bushels from six and a half bushels of seed—on less than one acre of land. Mr. B. cuts his potatoes when he plants; placing several pieces in a hill, each piece having about three distinct eyes, throwing away that part of the potato which has small eyes. He is particular in the preparation of his seed, and in the cultivation afterwards. The last spring he sold more than two hundred bushels of his potatoes for seed; and he feels that his present crop is a good one; quite equal to his expectations. I was pleased with my visit to his farm; and am satisfied that his potatoes are as good as he represented them to be. I planted about half a bushel of them in my garden; but the ground being shaded with trees, there was not a fair chance for growth. Mr. B. has two other kinds of seedlings, which appear well; of their quality I cannot speak, not having tried them. Having said so much in other communications about *rotten potatoes*, and the cause thereof, I am happy in the opportunity to state facts in relation to *sound ones*. Upon asking Mr. B. as to the operations of *insects* upon his potatoes; he says they were never more abundant than the present season; but he thinks *these insects* have no connection whatever with *potato rot*. He is a practical man, of great experience, whose opinion is worthy of regard.

Your ob't serv't,

J. W. PROCTOR.

Danvers, Oct. 15, 1851.

REMARKS.—The facts in this communication, so clearly related by Mr. Proctor, are valuable. It is possible that the rejection of the "small eyes," may induce a more vigorous crop. We should have been glad to know more of the condition and situation of the land; whether it is high or low, wet or dry, and how deeply, and when plowed.

For the New England Farmer.

REPRODUCTION OF POTATOES.

Potatoes are produced from two sources; first, from the ball, or seed of it, and second, from the potato itself. Now, I maintain, if we raise them from the potatoes only, the time will come, sooner or later, that they will decay, rot, and finally become extinct; and that the only way to prevent such an issue is to reproduce them from the seeds in the balls at stated periods. There is in vegetables, as in animals, different sexes. The way to keep animals to their pristine size, health and vigor, is to cross different species of the same genus. Can it be less essential in vegetables of different kinds? But the potato cannot be crossed as long as it is raised from the potato itself, which is produced below the surface of the earth, and of course is not regulated by the laws of sexual contact. It is only when raised from the seed of the ball, which is the result of the blossom of the top, the pollen of which has been in contact, that a cross of different species has been effected. Cattle, bred in and in, as it is called, degenerate, and unless the deteriorating course be arrested by proper remedies, will become extinct. This arrest of decay and reinstatement of health and vigor is effected by seasonable crossing. So of the potato; if it is raised from itself alone, it may be said to be bred in and in; and such a process in the lapse of time will result in decay, and finally in utter extinction of the root. I have little doubt but the potato which has been so raised for a long course of years, is now near its extinction, and that all remedies except the one alluded to will prove as abortive in its application as any quack prescripion resorted to, to cure real phthisis in the human species.

The potato has come to its present state gradually. Years before the rot commenced, it had lost much of its former mealy, nutritious quality; as soon as a little cool, speedily it became hard and unpalatable to a much greater degree than it did forty years ago; in truth it is an obvious fact, that the potatoes of this day which *do not rot*, do not possess the palatable, nourishing qualities of former times.

REMARKS. — The subject of potato rot has occupied so much room in our columns, that we feel obliged to make it yield to other matters for the present. We have therefore omitted a considerable portion of our correspondent's remarks. From our own experience, we do not find that the potato has deteriorated in quality, our crop this year being as large, fair, and good flavored, as any that we ever produced. Last year, on an adjoining field, our crop was a failure, the whole field remaining undug; while this year the potatoes are excellent in every way—size, quantity and quality. The whole matter of planting the potato ball has been experimented upon heretofore, without any beneficial results.

☞ A cheerful spirit makes labor light and sleep sweet, and all around happy, which is much better that being only rich.

☞ "I know by a little what a great deal means," as the gander said when he saw the tip of a fox's tail sticking out of a hollow tree.

TENTH ANNUAL FAIR OF THE N. Y. STATE AGRICULTURAL SOCIETY.

Taken as a whole, the exhibition just closed in this city indicated a steady advancement in all the important features of farm implements and the arts of husbandry. Stock breeding, in particular, evidently commands increased attention. The show of Devons has never been approached in numbers, nor equalled in excellence. One gentleman who was a large exhibitor, and constantly on the ground, estimated their number at 500; we thought 350 nearer the truth. Mr. Wainwright, of Duchess, exhibited an imported bull of a light red—a very popular color in England—which was a most beautiful animal, as may be inferred when the reader is informed that the owner refused $300, which were offered for him. He took the first premium among Devons over three years old. The same gentleman was honored with the first premium on Devon cows.

Col. Sherwood's bull, "Earl Seaham," took the first premium in class A, as the best Short-Horn over three years old on the ground. Mr. Morris, of Westchester, received the first primium on cows in this class, and the second on bulls.

Mr. Ayrault, of Geneseo, won the prize on Hereford bulls, and Mr. Prentice, of Albany, that on Ayrshires. The exhibition of neat cattle was very creditable to the State, and their number was not less than 700. Mr. Wadsworth, of Geneseo, took the first premium on working oxen.

It has always been a source of regret to us that so few dairy cows are to be seen at these annual shows. No other domestic animal is more useful, or better deserves every possible improvement. The fat cattle were all that the most fastidious taste could desire. The Hon. Adam Ferguson, Messrs. Wade, Gapper and others, of Canada West, honored the occasion by exhibiting several attractive animals from that province. We hope ever to see a kindly feeling cultivated between the people living under the two governments; and we have reason to believe that such a wish is the prevailing sentiment, alike in the Canadas and the United States.

The high price of good horses, and the liberal premiums of the society, have operated to turn public attention to the rearing and improvement of this class of animals. In skilful hands with sufficient means, the production of horses promises to be very lucrative. There was a large number exhibited, and not a few deserving of notice or commendation; but we have no room in this paper for particulars. Mr. R. F. Pennell, of Somerset, Niagara Co., took the first premium on brood mares; and a special premium was awarded to "Morgan Hunter." Mr. Burnett's thorough bred horse, "Consternation," having by previous premiums been excluded from the list of competitors, received a certificate as the best horse of his class on the ground. Of matched and single carriage horses there was a fair display.

Sheep were abundant, particularly long and middle wooled. The show of Saxons and Merinoes was smaller than usual. Mr. D. Hillman, of Avon, took the first premium on Merino bucks, and Mr. Church, of Vernon, Oneida Co., took the first premium on Saxon bucks. Of mutton sheep, our Canada friends exhibited several pens of fine animals. Mr. Gapper and Mr. Pierce were among the most successful competitors from Canada West.

Swine did not attract particular attention, although there were about the usual number on exhibition, and some were all that could well be desired in the hog line. It is to be regretted that so little attention is paid to the actual cost of growing pigs, sheep and wool, per pound.

Of poultry, there was a good show. The Executive Committee appear to think Malays and Dorkings are the only fowls worthy of encouragement.

The ploughing match was quite spirited, and Mr. Alex. Rumsey, of Ogden, took the first premium.

In no other department was improvement so conspicuous as that of agricultural implements. It would fill a volume to describe those which were really meritorious. Mr. McCormick was present with his world-renowned reaper; Mr. Ketchum, of Buffalo, with his admirable grass-cutter. Steam engines were travelling about on wheels, over rough ground, as steadily as ox-carts; and wheeled cultivators, gang ploughs, seed drills, clod crushers, grain threshers and separators, straw cutters, draining tile and pipe machines, harrows, ploughs, shovels, axes, hoes, ox-yokes, and farming tools of every description, were shown in almost endless variety. Messrs. Rapalje & Co., of Rochester, were the most successful competitors.

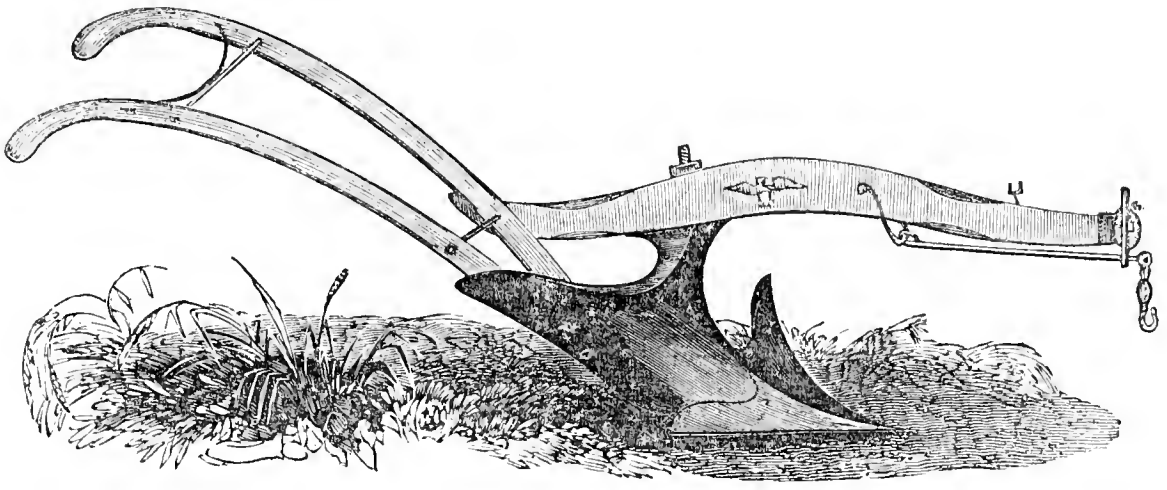
In manufactures, the display was not what it ought to have been. The dust, however, and the rough handling to which fine goods are occasionally subjected by the million, doubtless prevented manufacturers from sending in their best goods for exhibition. Mr. Barton, of Rochester, made a fine display of edge tools. Mr. White, of Buffalo, deserves notice for a similar exhibition. Stoves of every description were shown; and many of them were alike beautiful and useful.

The show of fruit we have never seen equalled. Messrs. Ellwanger & Barry exhibited over 100 varieties of pears, and a large number of apples. The nurserymen and fruit-growers in the vicinity of Rochester prosecute their business with a degree of talent, energy and success worthy of all commendation. Nor are those who reside elsewhere in Western New York undeserving of praise; but it is not our province to attempt a critical award of professional claims to each. There are several gentlemen from whom we should have rejoiced to hear public lectures on fruit culture, during the fair. The occasion should be improved to communicate orally to thousands, with specimen trees, both for root-pruning and top-pruning, and specimen fruits before the lecturer, a large fund of practical and scientific knowledge. We sought instruction, and got very little; and others fared no better. This business should be managed better in future.

Nothing pleased us so much as the sight of so many sober, intelligent and happy people; of whom 100,000 or more visited the exhibition.

The address of Senator Douglass was very well received, particularly by free-traders. It was mainly devoted to political, rather than rural economy. Independent of its political character, the discourse abounds in useful suggestions. It has been extensively circulated in newspapers.

There were over $15,000 received at the fair for tickets of admission, and for membership; and as the city of Rochester paid all the incidental expenses (some $6000) the society has saved a handsome sum after paying its numerous and liberal premiums.—*Genesee Farmer.*



NEW STUBBLE PLOW.

The many advantages of deep tillage and the numerous benefits resulting from breaking and thoroughly pulverising the soil to a greater depth than has usually been practised by the farmers of our country, have now become so apparent, that plows modelled and formed to work even twelve inches deep, are often called for by our better informed and scientific agriculturists.

The plow here represented is of Messrs. Ruggles, Nourse, Mason & Co.'s manufacture, and was one of four used at the late Show of the Hampshire County Society at Northampton; after a closely contested trial it was pronounced the best on the ground, on account of the ease in holding and the superior work which it performed. One of the contestants at that trial, who used Stubble Plow No. 38, of the same manufacturers, started his horses at one side of the field, set the plow, and then let it run to the end of the lot, a distance of 35 rods! Just guided to the next furrow, it *set itself*, and went through without being touched. This is certainly a most desirable point gained, and one that will commend the implement to all good plowmen.

The new Stubble Plows, Nos. 37 and 38, are of shorter construction than any good Sod Plow, and wider at the heel in proportion to the length, which with their peculiar form of the mouldboard, gives them great turning power, completely inverting the furrow-slice, and covering completely all stubble, weeds, long manure, &c., laying open a wide clear furrow to receive the next furrow-slice and for off side ox or horse to walk in. The beams are eighteen inches high above the sole or base of the plow, and are arching forward of the standard, both giving so wide a space as to entirely prevent all clogging or choking by collecting sods, stubble or long manures under the beam. The No. 37 works admirably at any depth from 6 to 10 inches, and the No. 38 from 6 to 12 inches deep.

☞ Truth is a hardy plant, and when once firmly rooted, it covers the ground so that error can scarce find root.

ACKNOWLEDGMENTS.

From Charles H. Perkins, Weathersfield, Vt., Jackson and Henderson Pears. It had been suggested that these pears were identical; and we are requested to give our opinion on the subject.

We have also received Jackson Pear of Mr. Lucien Jackson, Claremont, N. H., and his statement on the subject will explain this affair. He says:

"The originals, (for there are two kinds united) were a seedling grown on my place, and another grown by H. P. Henderson, of this town also. The former is a smallish pear, very juicy, and a remarkable bearer. I have counted twenty touching each other on one limb. This is the stock upon which the latter is grafted. The latter is a very thin skinned, juicy pear, but no great bearer. Upon grafting them together, the result was the 'Jackson Pear,' resembling both, but better than either. I claim for it a superiority in sweetness, thinness of skin, abundance of juice and great bearing. In the last quality I will challenge the world to beat them. They grow in bunches like the stock on which they are grafted. I counted 90, this year, on a limb four feet long and not more than three-fourths of an inch in diameter. I am obliged to tie up the limbs to prevent their breaking. They ripen best when picked quite green; about the first of September, I think is the best time. I can supply you with as many scions as you wish for."

The pears that Mr. Perkins sends, were procured from Mr. Jackson; of course they are identical with them. We find that the Jackson and Henderson Pears are identical; and that the former are fully equal to the latter in quality. And had they been modified by grafting on each other, that modification would be of no importance, as it doubtless would have been lost in propagating the fruit.

The Henderson and Jackson Pears in color, texture and quality are precisely the same as the St. Michael; in shape they differ slightly from the true type of the St. Michael, but we have seen the St. Michael of the same shape; they are little larger at the top, and taper more to the stem than the St. Michael. We think these pears are the St. Michael, or a slight modification of that cele-

brated variety from seed. In quality they are equal to the best St. Michael we ever saw; and better than any St. Michael we ever saw grown so far North.

From Capt. Amos Perry, South Natick, some seedling peaches of very good quality, considering they ripen late in the season.

Of Thomas Cushman, Bridgewater, some large handsome apples, of good quality, on which he makes the following remarks:

"I herewith send you some apples which I have not seen described in any publication. The scions were procured by Mr. Joseph Latham, I think from some part of Middleborough, and were set in his brother's orchard by my father, who also set some in his own orchard, which is now in my possession. These trees are probably eighty years old; and though very much decayed, are the best bearers in the orchard. These apples are known in this vicinity by the name of *Uncle Joe* apples."

From Samuel L. Powers, Cornish, N. H., some large, handsome sweet apples, of excellent quality, but he remarks they are shy bearers; the tree is hardy. Also some late russets.

From F. Clapp, Dorchester, very large, fair, sweet apples, called Hildreth Sweeting.

From Asa Burnham, Essex, very large and beautiful Baldwin apples from a tree five years from the bud.

Of John Raynolds, Concord, (one of the publishers) several varieties of apples. Among them is a beautiful sweet apple of good size and remarkably fair and perfect, having no defects of any kind. It is excellent for baking; it is probably a new variety.

From H. B. Wyman, Salem, a splendid specimen of Flemish Beauty pear in fine condition.

From Horace Collamore, Pembroke, so far decayed we could not judge.

From E. Hosmer, West Acton, a large beautiful apple for a name. We are not acquainted with it.

From Abel Butterfield, Lexington, a very beautiful specimen apple, large size. It is not among the kinds usually cultivated in this section; as it is hard, we have not tried its quality.

From J. L. Lovering, Hartford, Vt., Briggs pear, ripens fortnight earlier than St. Michael, medium size and very handsome. It is considered a seedling; the original tree, eighty years old, is in Woodstock, Vt., bears eight or ten bushel annually. Such is the account which we have of this fruit. We think it is the St. Michael; it is like it in form, color and quality, though the quality is not quite so high as the St. Michael usually is, but we have had specimens of the St. Michael in cool seasons from the North no better than these.

From Rufus Kittredge, Portsmouth, N. H., a bunch of native grapes, very good quality for the kind; also, fine specimens of the Moody Apple.

From Joseph Harris, Lynn, some very fine bunches of Catawba and Isabella grapes, raised on scions grafted on one native stock. The excellent success which some have had in grafting the grape should induce those who have failed to make further experiments. Will Mr. Harris please to give us an account of his time and mode of grafting the grape?

From Lyman Gay, of Walpole, Mass., apples and peaches, which we are unacquainted with; the apples are large and beautiful, of good quality; the peaches are a clingstone, and a valuable late kind for preserves.

N. Y. STATE AGRICULTURAL SOCIETY.

We have received the Tenth volume of the Transactions of this Society, through the politeness of its Secretary, B. P. Johnson, Esq., of Albany. It is a large book of between seven and eight hundred pages, handsomely printed on good paper, and in every way reflecting credit upon the society. The engravings of the animals represented—the drawings of grasses, and fossil remains—the geological illustrations, and meteorological records are all finely executed, and are highly interesting. The History of Agriculture, by Mr. Delafield, the President of the Society, is a work in itself of much research, and of great value to the whole country. The essay by J. J. Thomas, Esq., upon Agricultural Dynamics, or the laws of motion and force, as applied to the ordinary practices of farming, including, as it does, a consideration of the lightness, strength and durability of farm implements, is comprehensive and clear, and will supply a deficiency which has long existed among us. As the principles described in this essay are applicable every where, we hope to see it published by itself in a handsome and attractive form, so that it will become at once a book for the million. In the present state of inquiry in the farming community into mechanical principles, the laws of attraction, velocity, &c., something has been needed of a familiar kind to meet their inquiries. It seems to us that this essay will supply that want, if it can be published in a cheap form, and will prove an important help to all who have the spirit of progress in them.

Upon the whole, we consider this tenth volume of Transactions of the New York State Society as one of the most valuable books on agriculture that we have seen for a long time, and shall take occasion to refer to it again.

Peat in Vassalboro'.—Mr. Daniel Smiley, of Vassalboro', shew us last week some very good specimens of peat, an abundance of which he has found by draining a pond upon his premises. He will find this a valuable deposit for the purposes of manure or fuel.

If converted into charcoal by coating it in a coal-pit or in any other way, it will become valuable as a deodorizer if put into vaults, cess-pools, or such like places, where it is desirable to have the gases

and foul air arising therefrom absorbed and neutralized.—*Maine Farmer.*

For the New England Farmer.

YANKEE HENS.

I see your correspondent, Mr. Todd, goes in for the Yankee Hens, and like a man who knows what he is about, gives us some of the "*fowl facts*" I was asking for the other day. His memorable twenty-four biddies are certainly the smartest samples of that stock we ever heard of. The general average of the laying of native hens, in such accounts as I have seen, has not exceeded ninety or a hundred. The average of his twenty-four is 137 1-2. I have never had so happy experience with the natives. It has always been difficult to start them in laying early in winter, and they give out very early in the fall. As soon as the moulting season commences, their bodies are not large enough to produce both feathers and eggs at the same time. This is also the great failure of the Polands. They cease laying for some three months in the year. Good samples of the Shanghaes or the Chittagongs, that will weigh 18 pounds and upwards to the pair, are large enough to endure the large drain upon the system of moulting, without stopping the manufacture of eggs. At least this is my experience with the Shanghaes, and report speaks as well of the Chittagongs. I have the fowl facts for the former, and at the close of the laying year, shall be ready to report for the edification of all lovers of poultry. Though they have been moulting for more than a month, the eggs keep coming, and the average already exceeds that of "the right kind of fowls." As to hardiness, my experience is altogether in favor of the Shanghaes. Of the first litter of 11 hatched in March, 10 are now living. Of the last 22 hatched, not one has died. Of the intermediate broods not over ten per cent. have died. I counted myself happy if I raised fifty per cent. of the native chickens hatched. Of the Polands I have lost three out of every four hatched this season.

The expense of keeping I have not accurately determined, but should not put it so high as Mr. Todd has done. I think that three Shanghae hens will thrive upon the same amount of food that four natives will; that the former will give you more eggs and nearly double the flesh upon the same keeping. But I have not the facts for this opinion. The facts in this region are rather against Mr. Todd's propheey, that the imported races will run out in ten years. The Shanghaes have been in this vicinity since their first importation in 1846, and are now as large and prolific as when first imported. Careful breeding and good care will procure their good qualities. When the Durhams and the Devons, among the neat cattle, and the Suffolks and Berkshires among swine, run out among us with proper care, we shall look for the degeneracy of the Dorkings, and the recent Asiatic races of fowls that have found a home among us. Meanwhile let us have fair experiments and the facts. If any one has a native flock that will average higher than Mr. Todds, let him publish. As there is force in the remark of your correspondent that pocket interest has indited most of the articles on fowls, I feel bound to state, that though I have given away both fowls and eggs of the pure blood quite freely, and sometimes used a Yankee's privilege in *swapping*, I have yet to pocket the first copper for either fowls or eggs. I have an interest in determining "the right kind of fowls," and hope breeders will give us the facts carefully noted. If Yankee hens will give us most eggs and flesh for a given amount of food, I go in for them.

Your correspondent, Mr. Dimon, has hit upon the difficulty in the way of solving this fowl problem; it is accompanied "with no little expense and inconvenience to the experimenter." Yet is there any other way to determine the question? Mr. T. says the right kind of fowls are the Yankee hens, because they lay on an average 137 1-2 eggs annually. Mr. D. says the right kind for eggs are the Black Spanish, but fails to give the facts on which his judgment is made. If we only had these, and knew the cos tof keeping, we could judge for ourselves between the Yankee and the Spanish. A single experiment, indeed, would not determine the matter, but a sufficient number giving the same result would conduct us to right conclusions. How can a man determine for himself the relative merits of two breeds of fowls when he keeps no account of the expense of keeping or of the eggs and poultry they manufactured. If those who breed for profit cannot be induced to take the trouble, let amateurs make accurate experiments, and help each other to the right kind of fowls. Nothing would abate the fowl fever more speedily.

Stonington, Ct., Oct. 13, 1851. W. C.

THE MILK ESTABLISHMENT OF GEO. E. ADAMS.

When in the city of Boston a few days since, a friend invited me to ride out to Medford, some six miles distant, and look at Mr. George E. Adams' stock of cows, and at his management of the same for the production of milk for families residing in the city.

Mr. Adams has a well arranged barn, large enough to stable sixty cows, and to hold the hay annually consumed by them. The barn has a floor or drive-way extending through its entire length, with a bay on one side, and on the other side, stables for the cows and a scaffold over them. Platform scales are set in the floor near one end of it, for the convenience of weighing loads of hay, and other bulky substances, and for weighing anything else bought or sold. Underneath the barn floor and stables is a cellar, for the making and storage of manure. The cows are made warm and comfortable in winter, and by means of ventilators in the roof and upper regions of the barn, pure air can be furnished the cows, without subjecting them to currents of cold air. The barn can also be made cool and comfortable in summer.

The stock of cows varies in number from 40 to 60 head; they are mostly bought in the fall, milked 8 to 12 months, and then sold to the butchers for beef, at a price about $5 per head less than their cost as new milch cows. Some superior milkers are kept along for three or four years, producing calves each year; but as a general rule, it is considered better economy to sell most of the cows for beef at the end of 8 to 12 months, and purchase new milch cows fresh from the country, than allow them to be in calf, and incur the expense of keeping them while dry.

The cows are pasturing about four months of the year, commencing the first of June. They are stabled nights during the time, are milked at evening and morning in the stables, and have green feed, such as clover, corn stalks, &c., in their mangers, evenings and mornings. The rest of the year they are stabled night and day. Once a day they are turned into a warm shed erected over a well of water with a pump in it, the shed containing a long water trough, with stanchels in front of it, where the cows are fastened until the stables are cleansed, and until they have drank their fill. Aqueduct water was formerly brought to the barn for the cows, but was found to be inferior to the well water because of its greater coldness in winter. Experience has taught that the cows must be kept warm in winter, in order that they may be thrifty and give a good quantity of milk.

During the eight months that the cows are kept exclusively in the barn they are fed upon hay and meal. Twice each day they have a quart of meal apiece, (in the proportion of three-fifths oil meal to two-fifths corn meal,) sprinkled upon cut hay, and the whole moistened with water; they are also fed frequently during the day with a little dry hay at a time; twice a day they have a mess of "slops," or in other words, one quart of meal apiece, each time, (two-fifths corn meal to three-fifths oil meal,) with sufficient water added to make a mess of three gallons measure to each cow. The meal, an hour or two before being fed in this form, is put into a large box, set upon low truck wheels; the water is immediately poured on, and the contents are frequently stirred, so that the meal may become thoroughly soaked and swelled, in which state it is thought to be more digestible, and to produce more milk, than if fed as soon as mixed with the water. A little finely cut hay is stirred in with the meal and water, to give the mess greater consistency. When this drink is to be given, the box containing it is trundled along on the barn floor, in front of the stalls, and from a large ladle, holding just the right quantity, each cow receives her mess in a water-tight manger. The cut feed is mixed in the same large box, which is moved along from stall to stall, for convenience of feeding. A clock in the meal room indicates the times when the cut hay and meal, and the "slops" are to be given, and strict regularity of hours is observed in dispensing the same. More milk is obtained from the cut feed and the drink, than could be derived from dry hay and meal; more milk is obtained from feeding part of the meal in form of "slops," than could be realized by feeding all upon cut hay.

The meal keeps the cows in fine sleek condition, and in eight to twelve months from the time they are purchased, they are good beef. They are carded daily, and kept perfectly clean. A trench behind them, four inches deep, twenty inches wide, receives the manure and urine, so that the platform or floor upon which they stand, or lie down, is always dry and clean, and so is the walk behind them, beyond the trench, dry and clean. Mr. Adams says, that in consequence of keeping the cows clean, the barn well ventilated, and of dispensing the feed with great regularity, he is seldom troubled with a sick cow.

Exact regularity of time is observed in milking, and the cows average about eight quarts each per day. The milk, as soon as drawn, is taken to a room at the house, and strained into large tin coolers, set in a vat containing ice-water in summer, and cold water in winter, in order to take out the animal heat, so that the milk may be fresh and sweet when delivered in town. The morning's milk is cooled as speedily as possible, and mixed with that drawn the night previous; the whole is then taken immediately to the city in small tin cans, and delivered to customers in two hours' time. All vessels into which milk is put, are daily washed and scoured, and kept perfectly bright and sweet. The milk room is always neat and clean. The milk sells at five cents per quart in summer, and six cents in winter.

Mr. Adams, by keeping so many cows, and feeding them high with meal, is enabled to make a large quantity of very strong manure. In order to preserve its strength, to save all the urine, as well as for convenience of cleaning the stables, he has a cellar under the barn large enough to hold a year's stock of manure. It is thrown into the cellar through scuttles in the stable floor, and about once a month, the heaps accumulating underneath are spread evenly about, and a quantity of loam tipped in, sufficient to cover the manure four inches thick; or, in other words, three parts of loam are mixed with two parts of manure. Before carting the compost out to the fields, it is shovelled over from top to bottom, and so thoroughly mixed as to make it of uniform quality throughout. Without the addition of loam, and the thorough mixture of shovelling over, the manure would be so wet and heavy as to create great inconvenience in loading, carting, and spreading the same, as there is a great deal of liquid manure, in consequence of the cows receiving so much of their food in a wet state.

In addition to the stock of cows, Mr. Adams keeps four or five horses for the distribution of the milk and for work on the farm, and two to four working oxen. It is therefore a great object with him to produce a large quantity and a good quality of hay for the support of his numerous stock. He has 30 or 40 acres of sandy and gravelly land, 20 acres of salt marsh, all of which produce hay exclusively. Each field of the dry or upland soil is plowed every fifth year, in August or September. The land is smoothly turned over to the depth of eight or nine inches; thirty loads, or ten cords, of compost to each acre spread upon the furrows and harrowed in; one-half bushel of herds-grass, three pecks of red-top, and ten to twenty pounds of clover seed sown to the acre, and bushed in; and the surface is then smoothed with the roller. In July of the next season the new seeding is fit for the scythe; and the land produces good crops of hay for five years. For the first year or two the hay made from the new seeding is principally clover, which is mostly mowed and fed in a green state to the cows, in their stalls. For the remainder of the five years, the hay is red-top and herds-grass, with a mixture of white clover, which comes into the sward of itself. Twenty acres of moist land, lying upon a flat surface between the upland and salt marsh, are never plowed, but are kept in perpetual grass by a top-dressing of twenty-five loads of compost to the acre, every third year. Red-top and white clover are natural to this land, and at haying time a heavy, thickly matted swarth of grass rolls from the scythe, which makes remarkably milk-producing

hay for the cows. Thirty acres of the marsh produce a good quality of salt hay, and twenty acres lying low, and being subject to flowage, yield an ordinary quality of hay. In feeding cut hay to the cows, a mixture of salt and fresh hay is given, which is agreeable to them, and promotive of health and thrift.

Mr. Adams raises a variety of fruit. His orchards of the apple give, in good seasons, from five to six hundred barrels of fruit. There is an old orchard on the farm that contains some of the largest apple trees I have ever seen; they are very sound and thrifty, their tops spread over a wide surface of ground, and the trees are very productive. The soil in this orchard is kept open with the plow; it is manured with about twenty loads of compost to the acre every third year, no crop being put into the land; indeed the foliage of the trees is so dense and luxuriant that no crop other than the apple can grow. Among smaller younger trees corn is sown, in drills, for the production of green feed for the cows.

In a portion of one of the orchards the ground became badly infested with twitch-grass, which could not be killed with the plow. Last year the land so encumbered was fenced off by itself, several bushels of corn sown broadcast to the acre and plowed in, and fifteen or twenty hogs turned into the enclosure. They immediately began to root for the corn, and with the most untiring industry turned the soil over and over again. A few weeks after, corn was again sown and the land plowed, and the hogs again rooted it over. Then the operations were again repeated; and this year no twitch-grass is seen.

I had but an hour or two to spend with Mr. Adams. I should have been glad to have devoted at least a day to an examination of his farming, for I saw enough while there to convince me that he is a very enterprising, excellent farmer. I hope to call upon him again, at a time when I have more leisure; and if I do, I will give a more extended account of his farming.

Brattleboro', 1851. F. Holbrook.

AGRICULTURAL CIRCULAR FROM PATENT OFFICE.

The Commissioner of Patents has issued a circular desiring farmers to furnish answers to the following questions:—the replies to be forwarded before the 1st of January, giving the name of post office, county and State from which the answer is sent. The U. S. Census will furnish reliable data as to the quantity of grain and other crops, the number of domestic animals, &c., so that such questions are omitted in the circular.

Wheat.—Is guano used in the production of this crop? And, if so, what is the gain in bushels per 100 lbs. of the manure? What the average product per acre—time of seeding and harvesting—preparation of seed, and quantity used per acre—how many times and how deep to plough—your system of rotation in crops—best remedies for Hessian flies and weevils—average price at your nearest market in 1851.

Corn.—Is guano used in the production of this crop? If so, in what way is it applied? What is the gain in bushels per 100 lbs. of guano? State the average product per acre—cost of production per bushel—state the best system of culture—best method of feeding, whether whole or ground, cooked or raw. State, if you can, how much grain the manure formed by ten bushels of corn consumed by hogs will add to an acre, if carefully saved and skilfully applied, at or before the time of planting.

Oats, Barley, Rye, Peas and Beans.—Average yield of the several crops per acre—quantity of seed used—which crop least exhausting to land—are peas cultivated as a renovating crop, and, if so, with what success?

Clover and Grasses.—Quantity of hay cut per acre—best fertilizer for meadows and pastures—the grass seeds preferred in lying down meadows—cost of growing hay per ton.

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Dairy Husbandry.—Average yearly produce of butter or cheese per cow—comparative cost per lb. of making butter and cheese—treatment of milk and cream—mode of churning—of putting down butter for market—average price of butter and of cheese.

Neat Cattle.—Cost of rearing till 3 years old—usual price at that age—value of good dairy cows in spring and in fall—how many pounds of beef will 100 lbs. of corn produce—will a given amount of food yield more meat in a Durham, Devon, or Hereford, than in a native animal? How do you break steers to the yoke?

Horses and Mules.—Is the growing of these animals profitable? What is the expense of rearing a colt or mule until three years old? How should brood mares and colts be treated? What is the best way to break young horses and mules for service.

Sheep and Wool.—Is wool-growing profitable—cost per lb. of growing coarse or fine wool—how many pounds of wool will a ton of hay produce—are large or small sheep more profitable either for their mutton or for their fleece—how much more does it cost to produce a pound of fine Merino than of ordinary coarse wool? The proportion of lambs annually reared to the number of ewes.

Hogs.—What the best breeds — the cheapest method of producing pork and bacon—how many lbs. of meat will 100 lbs. of corn yield—the best method of putting up pork, and curing bacon and hams.

Cotton.—Average yield of clean cotton per acre—cost of production per lb.—what crops best grown in rotation with cotton—best preventives against rust, army and boll worms—how deep do you usually plough for this crop; have you any experience in subsoiling or deep tillage for cotton—your experience in the use of cotton seed as a fertilizer—how can cotton lands be best improved without resting them? Is guano used; and, if so, with what result?

Sugar Cane.—Is the cane losing its vital force and becoming more subject to premature decay than formerly—should not the seeds in place of rattoons be occasionally planted to produce new and healthier varieties—can you suggest any improvement in cultivation of the cane, or the manufacture of sugar—cost of producing sugar per lb.? Is guano used; and, if so, with what result?

Rice.—Can rice be successfully cultivated on upland—do you know of any varieties decidedly su-

perior to others which deserve increased attention—can you suggest any improvement in the management of rice plantations? Quantity grown per acre.

Tobacco.—Average yield per acre—cost of production per cwt. or hhd.—describe any new process of cultivation or curing—crops best grown in rotation to maintain the fertility of tobacco land. Is guano used, and with what result?

Hemp.—Is the culture of hemp on the increase or decrease. Describe any new process of culture or preparation for the market—average yield per acre—cost of production per lb.

Root Crops, (Turnips, Carrots, Beets, &c.)—Is the cultivation of these roots, as a field crop, on the increase—can you suggest any improvement in preparing land, seeding, after tillage and feeding? Average product per acre.

Potatoes, (Irish and Sweet.)—Average yield per acre—cost of production per bushel—most prolific and profitable varieties—best system of planting, tillage and manuring.

Fruit Culture.—Is the culture of fruit receiving increased attention—cannot apples enough be grown on an acre to render the crop a very profitable one to the farmer—comparative value of apples and potatoes for feeding hogs and cattle—what varieties to keep for winter use and for exportation—do you know any preventive or remedy for the "blight" on pear and apple trees, or the "yellows" on peach trees? The best method of transplanting, budding, grafting, &c. Make any suggestions on the culture of *grapes*, and other fruit—the manufacture of *wine* and on *forest culture.*

Manures.—What is regarded as the best plan of making and preserving manures from waste—are *lime* and *plaster* used as fertilizers—if so, in what quantity, and how often applied—is *guano* used, and with what success? Quantity usually applied per acre.

Meteorology.—Time and degree of highest and lowest range of thermometer—mean temperature of each month in the year—fall of rain in each month, and aggregate for the year.

FIRE---ARTIFICIAL HEAT.

The cool weather is reminding house-keepers of the necessity of artificial heat for keeping themselves comfortable. The multiplication of fires of course increases the danger of accidents from such cause, and in addition to greater care, some knowledge of the principles to be pursued in the management of fires is necessary. A writer in the Traveller, whose initials are those of a distinguished chemist of this city, calls attention to the causes of spontaneous combustion. Porous bodies, like pine charcoal, when perfectly dry, absorb rapidly oxygen from the air, and take fire at the temperature below 212 deg. F., or the boiling point of water. Light chaff of corn and shavings took fire at 300 deg. F., in a drying-room of a corn-mill. A drying-room of a chemical and color labratory took fire at 240 deg. F. Pine chips from oil of turpentine works, packed in a barrel, took fire at ordinary summer heat. The wood-work around steam-pipes never heated so high as 300 deg. F., becomes charred, or is converted into brown charcoal. Oiled cotton and rags imbued with any drying oil, when packed in a mass into a barrel, take fire at ordinary temperatures of a factory. Mixed lampblack and linseed oil take fire at ordinary temperatures, if the lampblack is in excess, or a portion of it is dry. Strips of new painted carpet, stowed away in a garret in a mass, took fire at the summer heat of our climate. A knowledge of these facts, with sufficient care, will prevent fires from spontaneous combustion.

Carpenters and masons in building should not bring any wood-work against those parts of chimneys that are likely to become heated, either from ordinary fires or from fires in the soot of the chimneys. The timbers get charred and the admission of air through cracks of the plastering, or in the chimney, will cause the destruction of such houses.

When the air-chamber or a furnace is small, a quantity of very hot air is delivered by the register. This is always dangerous, and it is also a most uncomfortable and unwholesome heat, drying up furniture and cracking the wood-work of the house. Straw carpeting and wood have been set on fire by the heat of a hot-air register. A furnace should deliver a very *large volume of warm air*, and thus secure good ventilation with air that is not so desiccating as to injure the house or impair health. The action of vinegar of wood, a pyroligneous acid, on the mortar of chimneys, removes the cement from between the bricks, and thus exposes the house to fire from the chimney, which, after the use of the so called air-tight stoves, is charged with the most powerfully inflammable matters. The mortar of new houses, not fully hardened, is most readily dissolved out by acids from air-tight stoves.

When a fire has taken in the furring of a house, do not cut a hole below or at the place of the fire, but always cut through *above* it, but not before you have a few buckets of water ready to pour down upon the fire. When a chimney with a fire-place gets on fire, and burns so as to endanger the house, the fire may at once be extinguished by throwing a pound or two of brimstone into the fire, and closing up the fire-place with a fire-board or screen. Stopping the top of the chimney by a damper is also a good way to extinguish the fire in it, for the carbonic acid formed soon puts an end to combustion. On board ships, it is very easy to extinguish a fire in the hold by means of carbonic acid gas.

TO PROTECT SHEEP FROM DOGS.

The general evil of dogs, which I see is claiming at present the most stringent legislation in our Northern States to protect the sheep, likewise exists with us. Our own legislature has done much, and will, no doubt, do more at the proper time, to eradicate this evil. In the mean time, let me publish to the sheep-raising world a remedy against the destruction of sheep by dogs, which was given me a short time since, by a highly respectable and valued friend, himself an extensive wool-grower. It consists simply in placing on one sheep in every ten of the flock a bell of the usual size for sheep The reasoning of my friend is this: the instinct of the dog prompts him to do all his acts in a sly, stealthy manner,—his attacks upon sheep are most frequently made at night while they are at rest, and the sudden and simultaneous jingling of all the bells, strikes terror to the dogs; they turn tails and leave the sheep, fearing the noise of the bells will lead to their exposure. The ratio of bells might be made to vary according to the size of the flock.

The importance of sheep preservation from dogs,

the writer hopes, will claim for this communication an insertion in most of the papers of the Union, that a remedy so cheap and simple may be fully tested.—*Richmond Whig.*

Mechanics' Department, Arts, &c.

BEAUTIFUL SPECIMEN OF MECHANICAL SKILL.

The foreign correspondent of the *Tribune* very graphically describes a beautiful specimen of artistic skill in Russia, being a magnificent coffer, prepared at the Emperor's command, as a present to the Empress. It is a large box of ebony, the top and sides of which are ornamented with clusters of fruit, of the natural size, all carved out of precious stones, immense quantities of each having been cut up in search of portions possessing the particular flaws which serve to produce the effect of the seeds, veins, and other natural peculiarities, which are imitated with such perfect truthfulness.

The writer remarks: Look at these purple grapes, cut out of amethyst; how exquisitely shaded the rich luscious berries, paler underneath, and seemingly covered with a soft bloom; it needs all the reiterated asservations of the Russian Commissioner to persuade us that all this shading is natural, and that no coloring process whatever has been resorted to; these berries of the mountain ash, carved out of coral; these plums, formed of one of the rarest and costliest stones, the onyx; these cherries, through whose transparent skin the juice seems starting; and these white and red currants, every seed and vein showing through the transparent pulp, all of red and white cornelian; these pears of agate, whose mottled and sun-browned rind might challenge competition with the finest Bergamont, the ripest Duchess that ever hung on sunniest espalier. All these fruits, except the grapes, which are whole, are in semi-relief only, and are seemingly embedded in the wood. The leaves are of jasper, and are fully as wonderful as the fruit—every little vein, withered spot, or slimy traces of caterpillar, being rendered with scrupulous accuracy. The rims and edges of the coffer are richly carved, and cost altogether thirty thousand dollars."

RAILROADS OF MASSACHUSETTS.

Massachusetts has constructed 1,150 miles of railroad, at a cost of $52,000,000; and the other New England States have constructed 1,799 miles more at a cost of $55,000,000. To these might be added the Northern New York (or Ogdensburg) Railroad, which is virtually a New England road, making a total of about 3,000 miles of railroad, constructed at a total cost of upwards of $110,000,000.

The gross earnings in 1850, of all the railroads in Massachusetts, and of those that are partly in Massachusetts and partly in adjoining States, were $6,903,328. The net earnings, during the same time, were $3,480,347. The cost of these roads was $53,264,000. The net income was therefore more than 6 per cent. on the total cost.

The number of passengers transported over these roads during the same time was 8,973,681, which gives an average of 28,754 a day for 312 days.—*Scientific American.*

NEW WINDOW SASH FASTENER.

Mr. J. B. S. Hadaway, of Uxbridge, Norfolk County, Mass., has invented and taken measures to secure a patent for a very ingenious and beautiful fastener for windows. Quite a number of window fasteners have already been brought before the public, but we have seen none like this: there is a small box cast, with a neat short handle in it attached to a small vibrating plate catch, and this is put on the window sash, with the lever handle at the inside and the catch acting on the window frame (out of sight) to retain the window at any point. A spring in the small box makes the catch self-acting, so as to keep it in its proper place and position, and all that has to be done is to touch the small handle spoken of, when it is desired to shove the window up or draw it down, when it becomes free and the window can be moved. There is one thing about it, catch it must; and moved out of place it cannot be, unless a force is applied to the handle: it is a sure and very neat fastener.—*Scientific American.*

Perforation of a Leaden Water Cistern by Insects.—At a recent meeting of the London Chemical Society, an account was given by J. H. Gilbert, of the depredations of an insect belonging to the order Coleopera and genus Anabianca, on a water-cistern that had been constructed of worm-eaten wood lined with lead. In a little more than three years the cistern proved to be leaky, and a number of small perforations were found in the metal lining, which on careful examination were ascertained to have been produced by the above named insect. Other instances were referred to in which similar effects have been observed.—*Ibid.*

☞ We can not practice deceit without that deliberation of purpose which constitutes the very essence of vice.

Ladies' Department.

MARVELLOUS REMEDY FOR BURNS.

Let the patient dip the part which is burnt into common washing fluid, letting it remain therein ten or fifteen minutes; if the burn is on any other part of the body than the feet or hands, the fluid may be applied with a piece of cloth rolled together with a string tied around it—dip one end into the fluid and apply freely on the burnt part. As there are washing fluids in market that are too weak, it may be well to add two ounces of pulverized pearlash to one pint of fluid. The great advantage of this remedy is, it relieves the pain instantaneously, and prevents the formation of blisters. In burns by which the skin is taken off, so that there is an open wound, the above remedy has not been tried. In such a case caution should be observed. I have used it several times in the course of two years.

VINEGAR ADULTERATIONS.

A correspondent in the *Newark Daily Advertiser* makes the following statement—no doubt correct—in regard to adulterated vinegar, which is of importance to housekeepers. He says—

"Great pains are requsite in purchasing vinegar, as it is now manufactured to a great extent through-

out the country. Much of that recommended for its whiteness of color and general purity, combined with great acidity, is made by adding sulphuric acid to pure water. This is sometimes colored by adding burnt sugar in order to conform to the appearance of ordinary cider vinegar, while the former is sold as white wine vinegar. This deception is a very important one. Sulphuric acid is an acid poison, and possesses corrosive properties very different from acetic acid, and other properties upon the stomach and blood which it is unnecessary here to mention; but which make it evident that the effect of this combination, used as a daily food, is highly deleterious to health. Sulphuric acid has moreover an affinity for lime and its compounds which renders it very destructive to the teeth. I have before mentioned that a travelling quack dentist in and about New York is persuading the ignorant to allow him to cleanse their teeth from tartar, &c., with his preparation, which is nothing but sulphuric acid, and is certain destruction to the teeth. I have not intended to give a thorough discussion of this subject, but only to put people upon their guard in respect to an article upon everybody's table."

A MOTHER'S LOVE.

"A mother's love! How thrilling the sound! The angel spirit that watched over our infant years and cheered us with her smiles! O! how faithfully does memory cling to the fast fading mementoes of a parent's home, to remind us of the sweet counsels of a mother's tongue! And O, how instinctively do we hang over the scenes of our boyhood, brightened by the recollections of that waking eye that never closed while a single wave of misfortune or danger sighed around her child! Like the lone star in the heavens in the deep solitude of nature's night, she sits the presiding divinity of the family mansion, its delight and its charm, its stay and its hope, when all around her is overshadowed with the gloom of despondency and despair."

THE LITERARY ATTRACTIONS OF THE BIBLE.

This is the subject of a pamphlet in England, and sent to America by our Minister, Hon. Abbot Lawrence, for circulation here. It has been republished by the American Tract Society. Rev. Jas. Hamilton, of London, is its author. The following is an extract:—

"But in giving that Bible, its divine Author had regard to the mind of man. He knew that man has more curiosity than piety, more taste than sanctity; and that more persons are anxious to hear some new, or read some beauteous thing, than to read or hear about God and the great salvation.

"He knew that few would ever ask, What must I do to be saved? till they came in contact with the Bible itself; and therefore he made the Bible not only an instructive book, but an attractive one—not only true, but enticing. He filled it with marvellous incidents and engaging history—with sunny pictures from old world scenery, and affecting anecdotes from the patriarchal times. He replenished it with stately argument and thrilling verse, and sprinkled it over with sententious wisdom and proverbial pungency. He made it a book of lofty thoughts and noble images—a book of heavenly doctrine, but withal of earthly adaptation. In preparing a guide to immortality, infinite Wisdom gave not a dictionary or a grammar, but a Bible—a book which, in trying to catch the heart of man, should captivate his taste; and which, in transforming his affections, should also expand his intellect. The pearl is of great price; but even the casket is of exquisite beauty. The sword is of ethereal temper, and nothing cuts so keen as its double edge; but there are jewels on the hilt, and fine tracery on the scabbard. The shekels are of the purest ore, but even the scrip which contains them is of a texture more curious than that the artist of earth could fashion it. The apples are gold; but even the casket is silver."

A Suspicious Mind.—It is difficult to tell who suffers most from suspicion, he who entertains it, or he who incurs it. There are few evils more intolerable in life than the coldness and distrust of friends and acquaintances. But the pain of discovering an unworthy trait or a vile deed in those whom we have trusted, is hardly less distressing. God has made us social beings, and the social instinct cannot be outraged without pain. There is hardly any habit more unfortunate, than that of readily taking up an evil report, or of easily imbibing a suspicion of the conduct or character of our fellow men.

Sweet Potato Pudding.—Take five eggs, half a pound of butter, a quarter of a pound of sugar, add as much sweet potato as will thicken it, the juice and grated peel of a lemon; beat it very light.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

The Farmer, under the editorial charge of S. W. Cole, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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S. W. COLE, SIMON BROWN, } Editors.

FRED'K HOLBROOK, HENRY F. FRENCH, } Associate Editors.

TO OUR READERS.

In consequence of an impaired state of health, I have found it necessary to relinquish some portion of the care and responsibilities of the editorial department of the Farmer, but shall still continue to give particular attention to the examination and description of such fruits as shall be forwarded to this office, and to such notices and discussions of fruit, management of nurseries, &c., as may be considered interesting and profitable to the readers of the Farmer. S. W. Cole.

Chelsea, Nov. 1, 1851.

INTRODUCTION OF OUR NEW EDITORIAL CORPS.

BY THE PUBLISHERS.

There is said to be a plant called the *Century Plant*, which blossoms but once in a hundred years. If it were to bloom in our day, every one would run to visit it, for its rarity merely. It is only once in a generation that the *Publishers*, without the aid of *Editors*, write an article, and the occasion being rare, must secure to their production corresponding attention. The *Publishers* are presumed to be modest, diffident men, who, distrusting their own powers, are obliged to invite in the abilities of others to their assistance. But although, like the boy who blows the organ, they are usually out of sight, they have an important part to play, and indeed without them there would be very little *music*.

The old dramatists introduced into their plays, between the acts, a *chorus*, by means of which the audience were let somewhat into the secrets of the plan, and facts were announced which could not with a good grace come from the mouth of the regular actors.

In a similar capacity, do the Publishers appear on this occasion, to present to our readers, our new Editors, whose names to-day, for the first time, appear at the head of our columns, and by whose aid we hope to make the New England Farmer the best agricultural paper in the country.

As will be perceived from the card at the head of this column, Mr. Cole,—the state of whose health has been such for several months past, that it has been difficult for him to attend to his editorial duties,—will hereafter confine his attention to a more limited department of the paper. Not only on this account, but believing that the time has come when the farmers of New England demand a paper which shall combine a greater variety of talent and learning than we have heretofore been able to offer, we have been induced to make the change now to be announced.

Mr. Simon Brown, whose services are secured as principal editor with Mr. Cole, resides on his own farm in sight of the Battle Monument, in Concord, in this State, having his editorial office in this city. From his early childhood, first, as a matter of necessity, and ever since as a matter of taste, and of late as an exclusive business, he has given his attention to agriculture. The many occasions which have induced him to labor in the cause, with his pen and voice, have also taught him habits of close and accurate observation, and years of experience as editor of papers devoted as well to agricultural as literary and political objects, has given him facility and ease in communicating his ideas to the general reader. A residence of ten years in Washington, after a tour of observation through most of the States of the Union, gave him opportunities of learning, through conversation with persons from all parts of the country, the different ideas of those engaged in his favorite pursuit of cultivating the earth. To those who have attended the Agricultural Fairs in this and the adjoining States, the present and last seasons, Mr. Brown has no need of a new introduction.

As Associate Editors, we are happy to announce the names of Frederick Holbrook and Henry F. French, who will furnish regular contributions to our columns, under their own signatures, having no further responsibility than their own names warrant, for what we may publish.

Mr. Holbrook resides in Brattleboro', Vermont, is a sound, practical farmer, and has a well-earned reputation as a writer upon agricultural subjects. He has been called by the farmers of his State to preside over their State Society, and is thoroughly imbued with a sense of the importance of rural occupations, and of the necessity of a more systematic and careful cultivation of the soil. His occasional public duties afford him opportunities for communicating with the best farm managers from every part of his State. With these facilities, combined with his judicious operations on his own farm, and with an accuracy of observation which retains whatever is useful, while it rejects mere fancies and theories with an equally sound discrimination, we believe him to be eminently qualified to contribute to the columns of the Farmer.

Mr. French resides in Exeter, N. H. As he informs us, he is by profession a lawyer, and is desirous that his *practice* may continue to correspond with his profession; that he devotes some time and attention to his farm, as an amusement to himself and as means of usefulness to those who are inclined to profit by an example of a thorough system of cultivation in some of its branches. He has been conversant with farm operations from his youth, still continues to take a deep interest in them, and especially to promote their advancement into well-defined scientific operations. All who have read his writings in the pages of the Horticulturist, and other papers, will find abundant evidence of his practical knowledge and ability, as well as of his easy and agreeable style. His articles upon "Fruit and Shade Trees," have not only been copied into most agricultural papers, but into many others. With the remark that he is Vice President of the New Hampshire State Agricultural Society, we consider him sufficiently introduced to our readers.

It gives us pleasure to say that we have made arrangements to receive occasional aid from Professor T. W. Harris, of Cambridge, the distinguished Entomologist, author of the excellent work on "Insects Injurious to Vegetation," &c; —from Dr. Charles T. Jackson, chemist, geologist and State Assayer, a gentleman most intimately acquainted with chemistry in all its relations to agriculture;—from Col. M. P. Wilder, of Dorchester, a celebrated Pomologist, and most zealous and liberal contributor to all that tends to promote agricultural interests;—and from Mr. Wm. Bacon, of Richmond, Berkshire County, whose articles in the Farmer, heretofore, have been extensively copied and are always plain and practical.

Messrs. J. W. Proctor and S. P. Fowler, of Danvers, and Dr. Silas Brown, of Wilmington, whose communications will continue to give value to our columns, are names already familiar to the reader. Dr. Geo. H. Dadd, editor of the "Veterinary Journal," and author of the "American Reformed Cattle Doctor," will write on subjects relating to his profession.

We have the assurance of occasional aid from Joseph G. Hoyt, of the Phillips Exeter Academy, (N. H.,) a gentleman of high scientific and literary attainments, who always knows well what to say, and says well what he knows, especially upon agricultural subjects. His grounds, which in a few years have become from almost a desert a delightful and productive garden, by the *labor of his own hands*, bear witness to his *practical* as well as theoretical knowledge.

Richard Kimball, Esq., of Dover, N. H., has also given us liberty to promise our readers an occasional article from his pen. He is well known as an ardent and successful tiller of the soil, and withal as a gentleman who holds a pen or plow with equal grace.

Many other gentlemen who have been occasional contributors, we trust will continue their favors. Among them in this State, are Messrs. Horace Collamore, and Morrill Allen, of Pembroke. The latter gentleman is an able writer, a thorough cultivator of the soil, and has justly received the title of *pattern farmer*, from excellent judges. In Maine, Rufus McIntire, Esq., Parsonsfield. In Vermont, John M. Weeks, Middlebury. With the talent thus secured every part of the *Farm*, the *Garden* and *Workshop*, will have a practical and competent teacher.

Having thus attempted the duty announced by us at the outset, we retire once more to our private position, leaving our friends, whom we have presented, *to speak for themselves*, with the hope that their intercourse with our readers may long be pleasant and profitable; and uninterrupted by any event which may require so unusual an effort as an editorial article by The Publishers.

POULTRY EXHIBITION.

The third annual exhibition for the improvement of Domestic Poultry will be holden over the Fitchburg Railroad Depot, Boston, on Tuesday, Wednesday, Thursday and Friday, the 11th, 12th, 13th and 14th of the present month. There will undoubtedly be a large collection of birds of every wing presented, and those interested in the subject will find opportunity to make such comparisons and examinations as they may desire. The regulations adopted by the Society are circulated in their bills, in which all who desire it may obtain further information.

☞ Sidney B. Morse, Esq., of Burlington, Mass., informs us that he has purchased one of W. W. Willis's Patent Stump Machines, and that it may be seen in successful operation, at his place, removing both stumps and large rocks. The important value of this machine has been previously noticed in our paper, with an accompanying cut.

FARM WORK FOR NOVEMBER.

Old Boreas, with all his attendant train of wind, hail, sleet and snow, will soon be along to take his turn to "rule the varied year." The farmer must be ready to give him a cordial reception, rather than shrink from his rough embrace. If all is tight and snug, and your preparations have been carefully made, winter will hardly approach with a gloomy and chilling aspect; but rather as a season for mental improvement and social enjoyments; for the interchange of civilities with neighbors, and for strengthening the cords of fraternal love.

Look well to your cellars,—point with mortar about the underpinning of both house and barn. Your house rooms will be more comfortable for it, and require less fuel—with a tight barn cellar you will prevent your manure from freezing, and thus gain two or three months in the process of decomposition in your coarse materials. See that your apples in barrels are kept dry in cool places, and house them before the cold is so severe as to touch them with frost.

Crops.—Finish gathering all your crops—corn should be thoroughly separated at the time of husking, allowing no ear that is not fully ripe to be deposited with the winter supply, however large and fair it may appear; gather roots as the leaves become dead—those with green leaves will continue to grow till late in the month with favorable weather—handle them carefully, and deposit them in moderately sized bins or heaps, in dark places, and they will escape mould and rot.

Stubble Ground.—Manure stubble ground with a liberal hand—green, coarse manures are excellent, don't spread them over too much surface, but manure liberally as far as you go, and plough in deep; during the winter they will decay, give out their ammonia, which will permeate the superincumbent soil, and in the spring you will find a light, porous, pliable soil, ready to return you an abundant crop; this work will save much time in the spring when your hours are more valuable.

Winter Grain.—Examine your fields where winter grain is sowed, and wherever it is practicable cut trenches sufficient to draw off the water which otherwise would stand in low places, and destroy the young plants.

Barn Yards and Cellars.—Bed your open yards well with refuse hay, weeds, straw and muck, ready to receive the droppings of the cattle—between the coarse herbage and the muck add a little lime. Store up meadow mud or loam in the barn cellar to be mingled weekly with the fresh droppings of the stall through the winter.

The Garden.—November is a good time to clean out and manure strawberry beds—cover them, if convenient, with coarse herbage or brush of evergreens—give the asparagus beds a rich coat of manure. Currants, raspberries and gooseberries may be transplanted this month with success if the work be well done. The red and white Antwerp should be protected. Throw out a spade full of earth from one side of the plant near the roots, and this will enable you to bend it down over the hole without injury, when it may be covered with straw, or such other materials as can be spared. This may be omitted until near the close of the month if the weather is mild. Trim and tie up native raspberries—cut out all of the present year that bore fruit, shorten in the tops of the new plants and tie the hills to a stake or trellises.

This month affords favorable opportunities to lay out the garden—that is, to arrange your beds, paths, make hot-beds, and decide where your young trees—shrubbery, beans, peas, early potatoes and other vegetables are to be placed—this may all be arranged upon paper during the winter, and thus give you a map of garden operations. This map will be found of service in the hurrying hours of planting and sowing, by showing at a glance the spot selected for the various trees and seeds it is intended to plant.

If not done before, examine your young trees, where you budded, and loosen the ties, or take them away altogether.

If the trees stand in a soil somewhat heavy and liable to be thrown up by the frost, scatter straw, refuse hay, corn butts, or the branches of evergreens about them.

Sow pomace if you desire to increase your nursery. See that your cherry, apricot and peach stones are well mixed with sand and deposited in the cellar.

No injury to the tree has ever been experienced by us in heading in peach trees in autumn. It may be done quite early in the spring; but the winds are cold and boisterous in March, and the ground covered with snow, or wet and muddy, so that the job then is altogether an uncomfortable one. Being annually headed in, by cutting off one-half of the previous summer's growth, the tree gradually assumes a round and compact form, produces larger and better fruit, and the branches will seldom break down when loaded with either fruit or ice.

Canker Worms.—Not a moment is to be lost in protecting your trees against these pests. They have already commenced their march up them, and will soon be out of your reach. If you have any better remedy than a circle of tar around the tree, use it; but if not, apply that at once. For a description of the modes of application, &c., see the Farmer for November, 1850, page 401, in an article by S. P. Fowler, Esq., of Danvers.

Around your newly transplanted trees raise a mound of the surface soil 12 or 18 inches high. This will prevent the rain from standing about their roots, and steady them through the winter, so that the winds will not rack them out of place.

These are but a few suggestions or catch words;

the systematic farmer or gardener, will find plenty of employment in all seasons of the year. Individual cases may appear trifling and unimportant, but in the aggregate these little matters are really what go far to distinguish the systematic and thrifty husbandman.

AN HOUR IN THE HORTICULTURAL ROOMS.

The towns in the vicinity of Boston produce as large, beautiful, and highly-flavored fruits, as can be found in any other portion of our country. The unfavorable influences of cold climate have, in a considerable degree, been overcome, and fruits which a few years since it was found very difficult to produce at all, are now grown in perfection and abundance. It was supposed that the best of our native grapes, the Isabella and Catawba, could not be successfully cultivated in the open air; but the exhibitions this fall show that some mode of cultivation has been found to produce them in a very high degree of excellence.

At the Horticultural Rooms on Saturday, we saw the Frogmore Grape, by Geo. W. Robinson, of Somerville. The branch weighed 3¾ pounds, and was made up of 6 or 8 bunches, very much resembling fine specimens of the Isabella, but all attached to one general stem. Several specimens of *Black Hamburg*, side by side, presented a very different appearance; some of them answering to their name by being very dark, and covered with bloom, while others were purplish, and almost transparent. A dish presented by B. D. Emerson, of Jamaica Plain, were very large, purple, and *looked* delicious. A plate of the *Diana*, with their pale greyish red, were very attractive—presented by G. H. Hutchings, Boston. Several lots of *Isabella* and *Catawba*, by C. E. Grant, Mt. Pleasant, Roxbury, gave plenty of evidence that they may be successfully cultivated in the open air.

A plate of *Peaches*, gathered on the 20th Sept., and preserved by the discovery of D. F. Curtis, were presented by A. W. Stetson, of East Braintree; they were quite plump and fair, being only slightly shrivelled on the stem end.

But the Pears afforded the chief attraction. The *Dix Pear*, from Josiah Stickney, Watertown, were very fine. This pear is one of the highest excellence. The *Glout Morceau*, by Jonathan Mason, Jr., is an excellent winter pear, and was nearly as fine looking as some of the more delicate autumn fruit. There were some exquisite specimens of the *Duchesse d'Angoulome*, by S. Downer, Dorchester, and beautiful samples of the *Buerre Diel*, by M. P. Wilder, of Dorchester. J. Fisk Allen, of Salem, presented a dish of the melting *Seckel*.

We noticed some large and fair *Quinces*, and one which weighed two pounds.

There was but one lot of *Apples*, and that was a basket of the *Hubbardston Nonsuch* from John B. Moore, Concord, and one of the handsomest specimens we ever saw. The fruit was large, clear, and very highly colored. This apple has been in demand in the market this fall, and brought a high price.

We advise all lovers of good fruit, and all who entertain doubts as to success in producing it, to call at the Horticultural Rooms in School Street and become convinced that the thing is thoroughly understood by the cultivators in the vicinity of Boston.

ACKNOWLEDGMENTS.

From H. J. Mead, Cornwall, Vt., some seedling apples, medial size, fair, handsome and of good quality.

From E. W. Bull, Concord, some native grapes from Scituate, large size and fair quality.

From Albert Bresee, Hubbardston, Vt., pears for a name. This pear strongly resembles the St. Michael, excepting it differs very much in color in having much cinnamon about it It is of the very highest quality. We think it is the Gray Doyenne, which resembles the St. Michael, but is a little later, of a higher flavor, more russett. Like the St. Michael, it fails on the sea-coast in New England, but flourishes well in the interior. Also, some fine apples, large size and fair, of excellent quality. We should think they were well worthy of cultivation. We think the russett is not the Boston or Roxbury Russett, but we cannot judge from a single specimen, as they vary very much on the same tree.

From Wm. O. H. Gwynneth, Portland, Me., a box of apples containing a variety of specimens for a name; mostly too hard for present use; that marked No. 7 is a very handsome variety, of excellent quality, and is probably the Gravenstein; but it is hard judging of fruit from single specimens.

From G. W. Harrington, Watertown, specimens of large, handsome apples, quality pretty good.

From S. W. Dame, Ludlow, Vt., apples for a name. They are probably the Queen Anne; it is cultivated in this region to a small extent, owing to its being a small bearer. As it is large, very fair and beautiful, it sells well in the market, though of medial quality.

HOVEY'S MAGAZINE.

The October number of this popular magazine contains descriptions and engravings of select varieties of Pears, an exceedingly interesting paper on Market Gardening around London, and a pleasant and useful variety of Miscellaneous Intelligence. It has now reached its two hundred and second number, and its old age is as green and vigorous as some of the beautiful plants which it discusses.

☞ There is no condition that does not sit well upon a wise man.

For the New England Farmer.

UNDER-DRAINING.

BY HENRY F. FRENCH.

There are parts of almost every New England farm, which might be improved at trifling cost, by under-draining—places, perhaps, in the mowing-field, on the hill sides, where the water, slowly oozing out upon the surface, produces a growth of wild flat grass, ornamented with an occasional bunch of brakes, and now and then a clump of alders, making an excellent cover for woodcock, and a pleasant summer residence for frogs, but giving no valuable crop to the farmer.

Often, this water has a mineral tinge, as if there were oil upon it, and sometimes it deposits a reddish sediment like iron rust.

When this is the case, it seems to act like poison, upon all valuable plants. This substance is *sulphate of iron*, and frequently, by digging two or three feet in such localities, the subsoil, even in sandy land, will be found cemented together like stone, and entirely impervious to water.

These wet spots are usually the outlets of *springs*, and springs are no more nor less than rain water, which, falling upon the earth, has encountered either rock or clay, or something else which checks its passage downward, and so passes along until it finds vent upon the surface.

And frequently we see on fields nearly level, *hollows* or *basins*, in which water stands in the early part of the season, preventing the proper working of the soil, and rendering barren, the deepest and richest portions of the whole farm. And then we have *swamps* and *bogs*, into which the uplands have for centuries, poured treasures of fertilizing elements, but which are given over to desolation, by reason of too much *cold water*, a liquid which is far more injurious to land, than to the owner!

To remove this surplus water, in the cheapest and best manner, constitutes the whole science of draining.

Before suggesting the mode of under-draining, it may be well to explain why water thus flowing *through* the soil, produces effects so disastrous, while, as is well known, nothing better promotes the growth of plants, especially of grass, than irrigation, or water flowing *over* the surface. All plants require *air*—atmospheric air, such as we breathe, and especially do they require that element of air, which is called *oxygen*. Without it, no seed can germinate, and no living thing can flourish.

If plants do not breathe like men, they, evidently, do something very similar.

Some plants require more air, while vegetating, than others. Potatoes and corn are *drowned*, if the ground above them is covered with water, for even a few days, after they are planted. Most farmers have lost their crops in this way. Now, rain water, or running water, by absorption from the atmosphere, is constantly supplied with oxygen, and readily imparts it to vegetation, while stagnant water soon becoming exhausted of this essential agent, excludes the air from the roots of the cultivated plant, and so *drowns* it.

Rain, falling upon land filled with stagnant water, produces no good effect, because it cannot penetrate, but is at once thrown off, while upon land properly drained, it passes downward through the soil, carrying the ammonia and other fertilizing agents, which it has collected in falling through the atmosphere, to the roots, while the pure fresh air is, as it were, *sucked down* to fill the place of the descending water.

The great object, in draining small tracts, is, to cut off the water, *before* it has done its mischievous work—*before it has come out to the surface*, and give it a harmless course from our territory. And here lies the great error, observable everywhere, among those who are inexperienced in draining, that instead of preventing the evil by meeting the enemy at his own head quarters, they suffer him to overrun their domain, and then give him a free passage onward.

Although one might suppose it quite unnecessary to suggest that water is inclined to run down hill, yet that circumstance seems to be often overlooked. It is a very common error to run drains through the *lowest* part of a meadow *only*, so that the water is taken off after it has worked its way slowly from the upland *through the soil*, and not before. Water usually runs down hill, and it runs down, on the subsoil of clay, or gravel, after the surface soil is saturated, precisely as upon the surface, though less rapidly, and no man in his senses, if he desired to turn from his land a visible stream, which ran through it, would turn it at the bottom instead of the top of his field.

The water which creates the bog or spring comes, of course, from higher land. Usually, the under hard stratum, or subsoil, has the same dip or inclination over a large extent, so that water will be found to flow but in one direction. Even in deep valleys, springs will be found to come principally from the hills on one side only.

Having observed out of what upland or hill, and from what direction the surplus water proceeds, it is necessary next to ascertain by digging how deep lies the stratum of clay or gravel, or other subsoil, upon which the water rests. Some such subsoil there must be, unless, indeed, the level of some stream or pond is reached, or the water would follow its natural course down into the earth, and not appear on the surface. Drains should be laid *across* the course of the water, and opened deep enough to cut a few inches *into* the hard subsoil, so as to intercept the water flowing upon it; otherwise the water may continue its course across the drain. Three feet is a convenient depth for under-drains, and by digging a few holes, at different distances from the upland, before staking them out, the subsoil may be reached, and the flow of water cut off at any desirable depth. It is, sometimes, found necessary to ditch entirely round a meadow or run, and if it be extensive, to open a drain also, through the centre or lowest part. Sometimes a spring bursts up from below, the fountain of which cannot be cut off by a drain near the upland, and which may require to have merely an outlet; but a little thought must satisfy us, that draining through the low parts *alone* cannot effect the object in view.

An under-drain may be opened as narrow as is convenient for the workmen, and with perpendicular sides. It should have a fall of three or four inches to the rod, that it may not so readily clog. As tiles of brick are not yet in use with us, we must make use of the best materials at hand.

Small stones of any form, are perhaps the best substitute for tiles, and if the drains have a proper fall, they will answer the purpose very well, thrown in at random.

But it is a safer method, if stones of proper size are to be found, to place two rows of them, with some care, at the bottom, so as to leave an opening of three or four inches between them, which may be covered with another course. Or if *flat* stones are at hand, they may be set on edge on the bottom, with the tops resting together, leaving a triangular opening. When the bottom course is properly laid, the drain may be filled to within eighteen inches of the top, with stones of any size, and levelled up with earth. It is advisable, before throwing in the earth, to cover the stones with turf, straw or small bushes, to prevent the surface water from breaking in.

If Providence has not bestowed upon you this *doubtful* blessing of plenty of stones, *bushes* may be used as a substitute. Place at the bottom of the drain *poles* of two or three inches diameter, to the depth of six inches, then fill with any bushes which it is desirable to put out of sight, treading them in as compact as possible, that they may not afterwards settle; and cover and fill up as when stones are used. I have laid drains in this manner, which have operated perfectly for eight years, and bid fair to be serviceable for a generation to come.

The obvious advantage of close or under-drains over open or surface drains, is, that they offer no obstruction to the cultivation of the land. You may team, plow, subsoil, mow and rake, precisely as if no drain were below.

Besides, there is no waste of land, and no labor of clearing out is required.

The few hints which I have thrown out may, it is hoped, be of some service to those who are making their first experiments in this essential branch of improved husbandry.

Having given some attention to experiments in draining, I shall be happy to reply to any inquiries which may be made on the subject, through the columns of the New England Farmer. In this, as in all other operations upon the soil, success depends upon understanding in the outset, the *theory* as well as the mere *hard labor* of the process, and a free interchange of opinions, among those engaged in kindred pursuits, is the best means of diffusing useful knowledge. H. F. French.

Exeter, N. H., Nov. 1, 1851.

For the New England Farmer.

PEARS ON QUINCE STOCKS, &C.

Mr. Editor:—Will you be so kind as to answer a few questions in the Farmer?

1st. Mr. Barry, in his catalogue of fruit trees, says the *common* quince is entirely unfit for pear stocks. What kind does he refer to? Do you think any kind of quince unsuitable? Which kinds do you consider best for this purpose?

2d. How are Paradise stocks raised? If from seeds, where can the seeds be procured?

3d. If the seeds of the Siberian Crab Apple are sown, will they produce trees smaller than other apple trees? B. Marston.

Hampton, N. H., Oct. 10, 1851.

Remarks.—The quince is only fit for stocks for the purpose of making dwarf trees. The trees usually bear young, and are short lived; and are not well adapted to extensive culture, but rather for the garden and small lots. The Portugal is considered the most vigorous grower in stock; but some nurserymen say the apple grows just as well and is adapted to the pear stock. There are other nurserymen who make no distinction and consider the pear quince as good as either of the other two. If any of our readers have made definite experiments upon this subject, and can communicate useful information to the public, we should be pleased to receive it for publication.

Paradise stocks are raised in Europe from seed. It is a native of that country and the seed cannot probably be procured here.

As to the size of the trees from the seed of the Siberian Crab Apple, we do not know; but it is a general law of nature, that like produces like. In most all cases, seed from slow-growing fruit trees produce slow growers; and seed from small or dwarfish fruit trees produce trees comparatively small. We have confirmed this fact in numerous cases.

For the New England Farmer.

ACORN SQUASH.

BY PROFESSOR HARRIS.

Gentlemen:—Permit me to recommend a winter-squash, which is new to me, and probably is but little known in this vicinity. The seeds came from Shrewsbury, where the fruit was raised in the summer of 1850, and was there called the acorn-squash. Of its origin and history nothing further is known to me. Its characters, as grown in my garden this summer, are these. The vine runs prodigiously, throwing out strong tendrils and even roots from its joints, and enormous leaves, many measuring twenty inches in length, and as much or more in breadth. These leaves are unlike those of the pumpkin and common kinds of winter-squash, being of a rounded heart-shape, and not divided into lobes, but marked with five rounded scallops on the outer edge, and ending with a very short point in the middle of the largest curve. The smaller leaves, however, which are produced late in the season, near the extremities of the vines, are five-angled, or slightly five-lobed. The flowers are wide in the throat, where they grow out of the young fruit, and have at least four and sometimes five stigmas; whereas, in the common pumpkin and winter-squashes, the stigmas are rarely more than three in number. When the flowers and the five narrow calyx-leaves drop off, they leave, at the place of their origin, a depressed ring-like scar, of a large diameter, in the centre of which ring there is a little tubercle, formed by the adhering base of the style. In this stage, the fruit somewhat resembles a huge acorn surrounded by its cup, which seems to have suggested the name it bears. As it increases in size, the circular ring enlarges also, and, in the full-grown fruit, measures four inches, or more, in diameter, the part within the ring forming the apex of the fruit, growing equally with the rest, and being marked with dark green lines radiating from the little knob at the summit. At maturity, this squash weighs from eight to ten pounds or more, and measures about two feet and eight inches in circumference, and five inches in its shortest diameter, or from the stem to the blossom end. It is depressed at the stem-end, and from

its squat shape, and the singular formation of the upper end, it may be compared to an old-fashioned tea-kettle, the blossom-end with the ring representing the lid. The color of the rind, at first green, subsequently varies from slate-blue, mottled and striped with yellow, to deep yellow. The surface in some is perfectly smooth, or only furrowed and puckered round the top, in others more or less rough, with slight elevations like a nutmeg-grater. The flesh is very thick, firm, and fine-grained, and of a rich orange-color. The carpels or seed-cavities, four and sometimes five in number, contain double ranges of large plump seeds like those of the marrow squash. The fruit-stem, like that of the latter, is short, thick, more or less obliquely inserted, nearly cylindrical, and not five angled, nor deeply furrowed. A good idea of the form of this squash may be got from the middle figure on page 283 of the volume of the "Library of Entertaining Knowledge," treating of "Timber-trees and Fruits;" and this figure may have been designed to represent our acorn-squash. In cooking, both when plainly boiled and when made into puddings or pies, this squash fully equals the very best of the marrow squashes.

The vines, like those of the marrow and other delicate squashes, are liable to be attacked by borers at the roots, before the fruit is half grown; and, if neglected at this stage, will almost certainly perish. The remedy, after extracting the borer with a wire, or killing them in their holes, consists in pegging down the vines at the joints with forked sticks, and drawing a little earth around these joints, which will encourage the formation of roots there, whereby the whole vine will be sustained, even after its original roots have been nearly destroyed. Yours, truly, H.

For the New England Farmer.

WATER CISTERNS---OLD ORCHARDS.

Mr. Editor:—In your paper of Sept. 20, there is an article taken from the Germantown Telegraph, on "water cisterns." I wish to build one for myself which will hold some 800 to 1000 gallons for storing rain water. The writer directs to excavate a hole in the ground of sufficient capacity, then to coat the sides with cement, &c. What I wish to inquire for through your valuable paper, more particularly is, in regard to the manner of working the cement, thickness of the wall, putting it on, &c. (*a.*) The writer states the cost of a barrel of cement or water lime, to be $1,30 at that place. (*b.*) I wish to know the cost at Boston, where it can be procured, the manner of making the mortar, and what other materials to use with it.

(*c.*) I have an orchard which has been set out some 30 years and has been grafted some four or five years. It is a very good one, but about one-fourth part of it is dead, or has been thinned out in the course of the last twenty years; the soil is in a good condition and it bears well. I wish to inquire if it will be profitable to fill it out with young grafted trees, provided I manure according to Mr. Cole's Fruit Book. An answer to the above inquiries will be thankfully received. E. Camp.

Chelsea, Vt., Oct. 18, 1851.

Remarks.—*a.* The cistern may be made in a clay soil by laying the cement, coat after coat, on the bare sides of the excavation. We know of many made in this way which have been in use a number of years, and stand well. It may also be stoned up, and cemented. But the neatest and surest way is to use bricks. The cement should be mixed with two parts sand, and a little at a time, as when properly tempered it sets very quick. Cover the bottom of the hole with two or three coats, and lay the bricks flat; upon reaching the sides, set the bricks forward so as to leave a space of half an inch between them and the earth, and after raising a foot fill in with cement mixed with six or seven parts of sand, and so thin as to be turned in from a bucket—what is called puddling. The cement should be applied to the walls in thin coats, until it reaches the thickness of common plastering in the walls of houses. If the top is turned, leaving a hole the size of a flour barrel in the apex, the cistern will be neater and stronger than if left flat. This may be done by laying planks across the top of the walls where the turn commences, filling with shavings, and building upon them until the barrel is reached which is placed in the centre at the top. The whole may then be covered with earth so as to prevent freezing, and be walked upon and driven over without injury.

b. The cement may be purchased of the lumber dealers in this city, at from $1,50 to $1,75 a cask. It is the common hydraulic cement, and no other materials are used besides the sand and water.

c. Your old orchard may be improved by filling up the vacant spaces with young trees if the old ones are some twenty-five or thirty feet apart, and setting them as we have suggested in another column. You would be compensated by cultivating the whole orchard—at any rate the young trees will do nothing without it. Trim, scrape and wash your old trees, apply manure plentifully this fall and plow it in—keep cattle and borers from your young ones, and you will soon find an ample reward for your labors.

For the New England Farmer.

AGRICULTURAL SCHOOLS.

Mr. Editor:—Thinking you would be likely to know about the agricultural schools, in different States, where situated, and by whom governed, I take the liberty to ask of you through your columns, or otherwise, for any information it may be in your power to give. And I do not doubt but it will be agreeable to other of your readers as well as myself. Could I hear from you in your next number it would be very gratifying.

Yours, truly,

G. Tillinghast Hammond.

Newport, R. I., Oct. 6th, 1851.

Remarks.—There is not, to our knowledge, an Agricultural School in the country. We believe there is a school in Pennsylvania, called "The Mount Airy Institute," where the practical part of

Agriculture is taught, in connection with the common branches of education. We earnestly hope to be able to give a better account than this of agricultural schools before our legislature closes another session; so far, at least, as to see some of our men of practical, as well as mental, acquirements, in a situation to impart their information to the thousands of hungry minds waiting to be fed from their fountains of knowledge. Will the editor of the Germantown Telegraph give us some information in relation to the Mount Airy, or any other school where agriculture, as a science, may be learned.

For the New England Farmer.

THE POTATO---ITS PROCESS OF VEGETATION.

BY J. LEE.

Mr Editor:—When digging my potatoes, I have observed, with special care, the manner in which the vines, roots and tubers grow from the parent potato. The planted parent tuber I find has, in all cases, propagated vines, roots and tubers from only one end, that from which the first sprouts start in our cellars, at the return of spring; and it is the end or section of the tuber opposite that to which the original stem grew, connecting the tuber with its parent. The whole growth from a single potato I find also joined to it, sometimes only at one point, sometimes at two, and never at more than three, and these in close proximity. The whole propagation has proceeded from one, two, or three *eyes*, as they are usually called. The old tuber, in some hills, is found wholly decomposed, except its pellicle, and in such instances the yield is greatest. Some old tubers are partially rotten, through natural decay, and others remain in their original shape and form, but light and watery. *From one to three eyes only* actually vegetate from the largest potatoes I have thus inspected, the others remaining inert. At these single points the parent tuber has expended its strength, and the substance of it has been exhausted, and doubtless the whole tuber has had an important office to perform in the product resulting. If the parent tuber has been decomposed and lost in the progress of vegetation, through the season, I am convinced that it has not been useless, and therefore, that the practice of cutting apart potatoes before planting is unwise and unphilosophical. And the corky, or rotten, or watery, lifeless state of many parent tubers, indicates that they must have parted with important qualities in the vegetating process, necessary for the healthiest and fullest production of the new tubers.

There are two kinds of roots propagated in the growth of the potato. The first is fibrous, and shoots downwards and laterally, and loves to find a deep, friendly subsoil, allowing them to penetrate beyond the reach of droughts. These are sustaining, absorbent roots, essential to the life and growth of both the vine-stalks and of newly formed tubers. The other kind of branching roots propagate tubers, and shoot out from the main root, near its junction with the parent tuber, and grow to different lengths sometimes in good soil to the distance of twelve and even eighteen inches, and always terminating in a tuber which they feed. Frequently, a young tuber sends out a root from its extremity, and this propagates one or more tubers, or else the root protrudes from the ground and forms a vine. This demonstrates that *the tuber-producing roots are of exactly the same nature as the vines.*

Last May, I planted a potato which had been dug in the fall of 1849, eighteen months before, and which had been under a box during the summer of 1850. In that position it had propagated several small branch-like vines, upon which were formed a large number of little tubers, of the size of small peas. It had been exposed to the air of the cellar, through the preceding winter, in that germinant state, and thus was planted the parent with its offshoots. The vines grew thriftily, and upon digging, I found *forty-two* tubers had grown in the hill, all small, and yet differing in size, proportionally to the size of the small tubers planted. They were evidently the same tubers that I planted, only expanded by vegetation. Thus the *suspension* of growth did not prevent them from resuming the original process of vegetation when placed in the ground, and in a condition favorable to the vegetating tendency, which began to be developed twelve months before the time of planting: I infer that the principle, that the rot of potatoes arises from the decay of vegetable life in the parent tubers, is groundless. I also infer that the small growth of these tubers, was occasioned by the exhaustion of the parent tuber, in its vegetating efforts in the cellar, during the summer of 1850. It had become cork like and dry when I planted it, and therefore its offspring depended for their aliment upon new fibrous absorbent roots, shooting into the soil from the tuber roots.

My observations upon the depth to which the absorbent roots of potatoes are inclined to penetrate, convinces me that they demand a deep permeable rich soil for their greatest productiveness. The number of tubers is greatly aided by a soil best suited to the extension of tuber roots, and by broad, mellow hills. One peach-blow potato's tuber root penetrated, in my garden, six or eight inches below the parent, and there formed the largest tuber of the whole crop. Why? On inspection, I found a quantity of loose limestone sand just around and beneath it. A fact I hope to remember for future experiment. J. L.

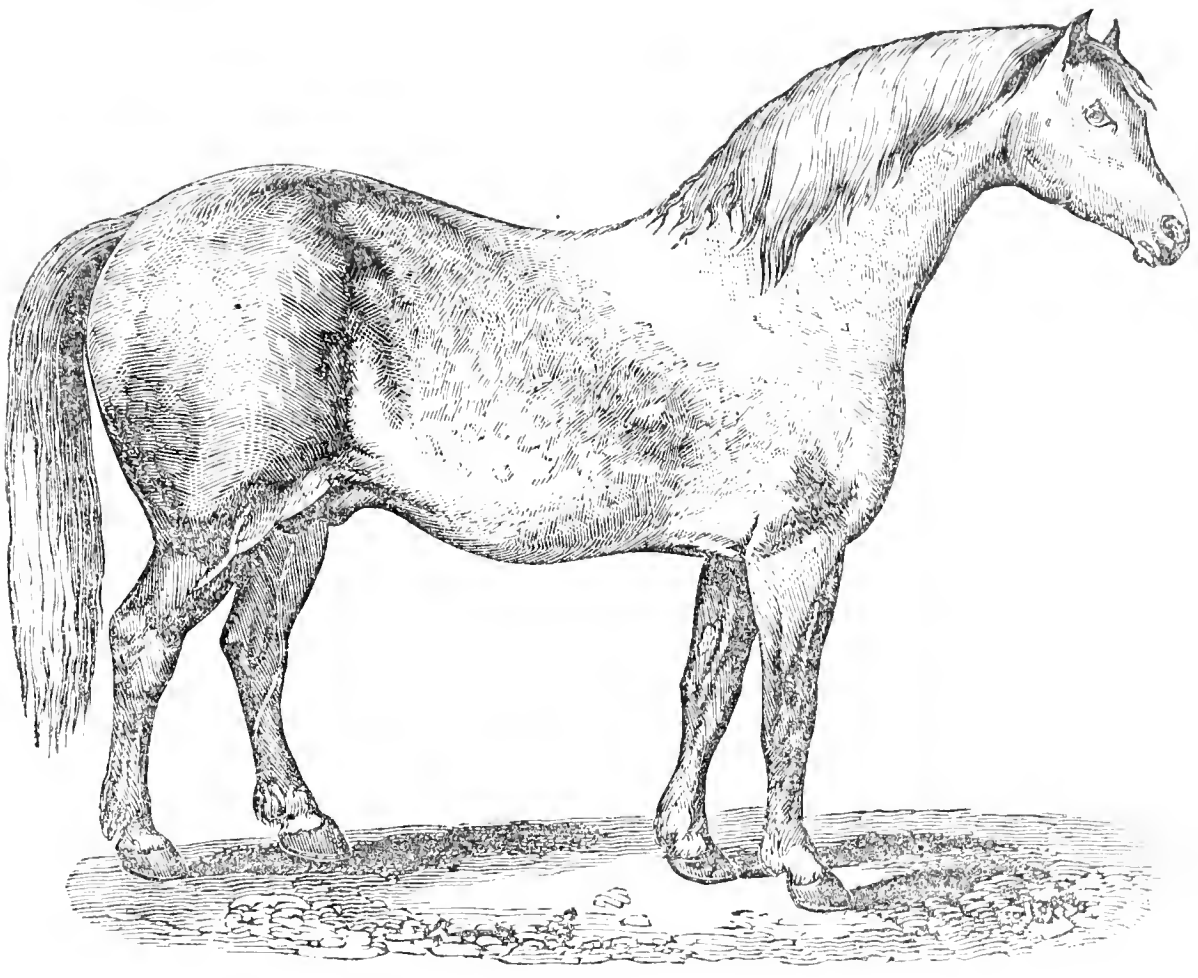
Salisbury, Conn., Sept. 27, 1851.

Remarks.—We bespeak the especial attention of our readers to this communication, and beg of our correspondent a continuance of his favors.

EXTENSIVE FARMING.

The most extensive farming operation probably ever entered into in any country, has been successfully carried through in California during the past autumn and winter. We allude to the speculation of Horner & Co.

Day before yesterday the last sack of the potato crop was sold, and the gross proceeds of this crop have amounted to $178,000—yield of 130 acres! There have been eighty hands employed on the rancho, and the total expenses of carrying it on, during the season has been $80,000. The sacks (gunny bags) in which the potatoes have been shipped cost about $8,000, while the gross receipts for the total crop of the rancho have amounted to $223,000—*Sacramento Transcript.*



THE ENGLISH DRAFT HORSE.

The engraving of this noble animal has been procured by us at considerable expense, expressly for the columns of the Farmer. This is a perfect portrait of the animal to which was awarded the first prize of the Royal Agricultural Society at Derby, in England. He is considered by Colman as the horse best suited to agricultural purposes; of middling size, a compact form, short, strong and muscular limbs, full-breasted, and with round buttocks, of which the above plate affords a favorable representation. At the time the prize was awarded, it was said, by some person present, that he claimed to have some knowledge of the animal, having long been in the habit of witnessing his performances on occasions when strength of limbs and compactness of form were alone to be depended upon for heavy drafts; often having seen five such in a team, striving at a stalled load, so that the driver has stepped over their backs, as they lay almost extended on the ground; when, if the load would not *come*, it was only necessary for him to say "try again," which they would do ten times in succession.

There is yet much room for improvement in our breeds of horses, and it is hoped that more attention will be given to the subject. The expense of keeping an indifferent animal is as great as that of keeping a good one, while his services are only of half the value.

APPLES — MARKETS.

Of all fruits produced in New England, the apple is the most easily raised, the cheapest, the most durable, is capable of being used in more ways as an article of food, and is, probably, the most wholesome and nutritious. There is no family where they are not used to a greater or less extent, and very few families, where three or four times the present quantity would be consumed, if they could be purchased throughout their season for about fifty cents a bushel.

Sweet apples, where they can readily be obtained, and at low prices, have become as common an article of food upon the table, as the potato; and since the high prices of potatoes have prevailed, have been more extensively used in some districts than the potato itself. In one of the small towns of this State, but one which produces much more than the average quantity of fruit, a gentleman states that the amount of apples produced is about ten thousand barrels, and that this product is not more than the inhabitants of the town would conveniently use themselves. The farmer, however, must turn some of his produce into cash, and finding the apple in demand, sells a large proportion of what might profitably be consumed in his own family at home.

The population of the State of Massachusetts is 994,000 persons; allowing five persons to each family, that being the usual allowance by statisticians,

and that number would give 199,000 families. The average quantity of apples consumed by each of these families would be at least five barrels—some families consuming three or four times that number, and others, less. This would run the number of barrels required for home consumption in this single state, up to *nine hundred and ninety-five thousand barrels.* Now we have no means of ascertaining, with anything like accuracy, how many apples are annually produced in this State, but have no idea that it is anything like that amount. If each town in the State should produce three thousand barrels, it would still fall short of the amount required to meet the demand for home consumption. If these suppositions are correct, no fears need be entertained that the supply of apples for many years to come will be greater than the demand for them.

Allowing one barrel of cider to each family in the State for the various purposes in which it is used, for cooking, vinegar, &c., and it would give 199,000 barrels—which at eight bushels to the barrel would make one million five hundred and ninety-two thousand bushels, or one hundred and ninety-nine thousand barrels, making the amount demanded in this State alone, for home consumption, at the very lowest estimate, *one million, one hundred and ninety-four thousand barrels of apples a year!*

So far we have only spoken of what may be used at home—the demand for exportation may, and unquestionably will be, much greater. Baldwin apples are selling in San Francisco for *twenty-five cents each*, and at *thirty-five dollars per barrel!* The orchards of New England will soon be required to meet the demands of this widely-extended and rapidly-peopled country; then the friendly relations and the frequent communications between this country and Mexico, will naturally open a market for our apples there, in exchange for her oranges and other commodities. Indeed, the whole continent, down as far as people congregate in cities, opens a boundless outlet for this cheap and wholesome article of human subsistence. If they attempt its cultivation, and the climate should prove favorable at any point, it will long be an experiment with them, and they must pass the ordeal of borers, blight, accident, want of system and knowledge, and a thousand other difficulties which it is hoped we are about emerging from. All these will have their effect upon them, as they have had upon us, so that the youngest planter here can have no cause of anxiety in relation to a demand for his apple crop.

New England is the great manufactory of ice, and her railroads are the avenues through which it passes to the nations of the East. Since this article of export has been produced, a way has been opened to export our apples with it. Shipped with ice, where the temperature is kept low and equal, apples are transported into the far regions of the East, and sold at handsome profits. It is said that in hot climates they are preferred to any other fruit, and are eagerly sought for wherever they have been introduced. The ports of the Mediterranean alone will require a large supply, after the trade at them is once opened. At this moment a vessel is being loaded with apples and ice, at Charlestown, for Alexandria, in Egypt.

In England, our apples are highly esteemed, selling at from $8 to $12 and $16 a barrel, and by the hucksters at tenpence, and sometimes a shilling each. The rapid communication between this country and that afforded by our steamships and packets, enables the exporter to get them there in perfect condition; consequently they are fast becoming an important article of trade, and are destined to become one of the principal sources of profit to the farmer. An increased supply increases the demand. Apples are *higher* in market in the full-bearing year, than in the odd years when the supply is much less, paradoxical as it may seem. When the crop is large, the natural supposition is, that the price will be low; and shippers entering into the business largely, keep the prices up. A gentleman in New Hampshire informs us that when his orchard came into bearing some 30 years ago, the best market he found for his apples was at Portland. This year he refused $125, for the product of less than an acre and three-quarters, to be taken *on the trees!*

While, then, we would not advise the farmer to neglect his corn and grain crops, to invest extravagantly in apple trees, we *would* recommend to him to plant a few trees of the best varieties every year; but not more than he can manure and cultivate with care.

FALL TRANSPLANTING.

Apple Trees may be transplanted in autumn with perfect success, if they are treated properly. If a hundred trees are planted, that number ought to be expected to live. We have never yet lost an apple tree transplanted in the fall, which was moved and set again under favorable circumstances.

The holes to receive them should be six feet in diameter, the soil thrown out upon the right and the subsoil upon the left, making a depth of eighteen inches, and the bottom of the hole dug and pulverized a spade's depth more. Then, as the surface soil is returned to the bottom of the hole, mingle with it a small wheelbarrow load of well rotted compost; this will fill the hole nearly to a level with the surrounding ground, and prepare it for the tree. If this part of the work is done a week or two before it is intended to set the tree, it will be something better.

The next step, and one which requires the utmost care, is, to take up the trees from the nursery,—and this never should be entrusted to inexperienced

hands; or even to *experienced* persons, if careless and in a hurry. No care of preparing the soil, or of placing the tree in it, will atone for cracked stems or mutilated roots. After removing the surface of the earth, the tree should be gently raised, which will indicate the direction of the roots, and enable the operator to remove them carefully by hand. When out of the ground it is better that the sun and wind should never strike them, though, they may be exposed for many hours without material injury. In transplanting, set them on a level with the surrounding ground, spreading the roots in every direction in the hole. The tree ought to be placed on a slight mound with the roots slightly dropping around it, rather than in a cavity. Placed in this position, with the pulverized earth sifted about the small fibres or spongioles, and all other matters in relation to it managed as we have suggested, there is no more difficulty in making your apple tree live and flourish, than there is in producing any common farm crop. Two persons are required to do the work with ease.

This is all that is necessary in transplanting apple trees—there is no other secret about it. No beginner need anticipate a failure if he adopts these plain suggestions.

For the New England Farmer.

NEW ENGLAND AND THE WEST.

A COMPARISON BETWEEN THEM, IN AN AGRICULTURAL POINT OF VIEW.

BY AGRICOLA.

The question whether the Western States possess, for the farmer, superior advantages to the Eastern, is often asked, and notwithstanding it may seem strange that there should be any doubt in relation to the answer to so simple a query, yet there seems to be a division of opinion; some maintaining that the advantages of the West, everything being considered, greatly outweighs those of the Atlantic States, while others are equally as confident that the advantages of the latter preponderate.

Although I may differ from a majority of my *Yankee countrymen*, yet I think I have sufficient reason for planting myself upon the broad ground, that, all things being taken into consideration, the Western country is *very much* better adapted to agricultural purposes than New England; nay, that a *vast many* of our New England farmers would greatly better their condition by removing westward, although they have what is generally called a "pretty good farm," and are "out of debt."

When it is realized that farmers in this part of the country are obliged to work one-half of the whole time in providing for their neat stock, and when it is considered that cattle at the "West" almost entirely supply their own wants, that they need scarcely any care from their owners, as some winters they receive nothing from the barn, while in most cases hay need not be given them only during an occasional storm,—it must be admitted that the Western farmers possess a vast superiority over those of the East as regards one invaluable "*item*,"—the saving of time. Perhaps it may be said, that to assert that six months are employed in taking care of cattle is all "gammon," as to do this during the cold season takes but a small part of the time, and that he has an abundance of time for other work. Now it must be admitted that our farmers go to the barn, to attend to their cattle, on an average of five or six times each day for five months; but suppose it does not employ more than a third of the time, the state of the farm is such, being covered with snow for at least several months every year,—there is little else necessary to be done, except *to provide fuel and take care of the fire.*

Here is another disadvantage to which the Western farmer is not subjected only in a measure; for it being generally moderate weather there, much less fuel is needed, and of course as much less labor is rendered necessary.

And also our hardest month's work, haying, is almost unknown among the farmers of the West. As in proportion to their cattle they do not need perhaps one-tenth of the hay which is necessary for us.

Thus the farmer of New England is employed during five or six months, in doing that which the farmer in the West can almost entirely dispense with. And of course the latter has so much longer time to make improvements upon his farm; or else to acquire property, in the same proportion as he gains the more time, the more rapidly.

But it seems to me that even if the Western farmer could have no more time to cultivate his land than his Eastern brother, he would possess a decided advantage over the other.

Our farmers here in New England cannot, perhaps, with their other work, "carry on" each with hiring extra assistance,—more than five acres of corn, and at the same time raise other provision sufficient only for his own consumption. We do not, I think, raise in general above thirty bushels on an acre. Five acres at thirty bushels per acre would be 150 bushels, which at 75 cents, the average price, perhaps, would make $112.50. A man who clears by means of his crops $112,50, above what is necessary for his own use, does as well as farmers generally in New England.

In many parts of the Western country a man can cultivate and harvest, as well as market the proceeds of, *thirty acres* of corn, which may average fifty bushels per acre; which will give 1500 bushels. And this at one-third of a dollar per bushel would make $500. Hence in this one item he would gain in one year over his Eastern brother, $387,50; for the Western man could, perhaps, raise enough for family consumption, "over and above" the 1500 bushels corn. And again, it is not uncommon for farmers in the West to possess from 30 to 100 head of cattle, which are worth from a third to half as much as here; while farmers here do not in general own more than from 12 to 20 head. Here is another source of considerable profit with little expense.

Much has been said against the climate of the Western States, but I believe I am safe in saying that many parts are healthy—almost equal to New England.

I know that it has been often intimated that the state of society is such at the West that a "virtuous" man would be disgusted to reside there; but if the Western people are as bad as some have represented, it is the duty of many of our *upright* citizens to take up their residence among them, that

by "precept and example" they may work a reform among that "deluded people." But if, as I maintain, the character of the people of the West will well compare with those of many parts of our "happy New England"—then there need be no fears on that ground. Thus, Mr. Editor, I have given you a few brief, disconnected thoughts; and if I have said enough to elicit a discussion on the subject in your columns, and induce you to give your opinion in relation to it, my wish is accomplished. AGRICOLA.

REMARKS. Our correspondent opens a broad field for discussion. We have always considered it a safe maxim to "let well enough alone." If a farmer is comfortably established, owns the house over his head, and the land under his feet, is acquiring a good living, and making "both ends cleverly meet," he had better ponder well some of Dr. Franklin's wise sayings before he breaks up his home and severs all his early associations in order to go to the West, or anywhere else. Take away our rugged hills, hard fields and rough climate, and supply them with the broad prairies and milder skies of the West, and our thrifty, energetic, New England character, would gradually die out. We have always supposed that the *necessity* for labor has been the philosopher's stone which has subdued the rough nature about us and turned our ice and granite into gold. As we go down South, we find people less and less inclined to labor, until we come to a climate where the spontaneous productions of the earth are sufficient to sustain life, and there we find very little labor performed.—Civilization is in a low degree, there being, at first, no exciting cause to impel man to action in order to provide himself with food and shelter. Wherever the necessity for exertion exists, and man enters at once into active fields of labor, his ambition is aroused, and he earnestly strives for distinction among the active beings around him. This spirit of emulation increases as it rolls onward; improves every science and art, and makes what is called a high state of civilization.

We have had some experience of Southern and Western winters; they are damp, with cold, cutting winds; the roads are mud and water, or rough with frozen ruts, and we found them more trying than our steadily cold and dry atmosphere.

For the New England Farmer.

BLOODY MILK.

GENTLEMEN:—My cow has been giving bloody milk since July last. Will you have the goodness to let me know through the columns of your valuable periodical—the New England Farmer—the cause of this disease, and inform me how to cure it; and thereby confer a great favor on the public, and very much oblige,

Your obedient servant, J. E. UPHAM.

Harvey, Albert Co., New Brunswick, Sept. 8, 1851.

REMARKS.—It is somewhat doubtful whether we shall be able to make a satisfactory reply to the queries of our correspondent. We have examined all the books to which we have had access, both American and English, and do not find the subject of "bloody milk" alluded to, in any of them. Most of the experienced farmers with whom we have conversed, state it as their opinion that bloody milk is occasioned by some external injury to the udder, either by a blow, being trodden upon by other cattle, or perhaps, by sudden cold. Either of these may be sufficient to produce a rupture of some of the small blood-vessels, or induce inflammation in such a degree as to prevent a natural secretion of the fluids. Milk is so nearly allied to blood, that a slight disarrangement of the secretory glands might suffer the juices to pass off *together*, before being elaborated either into pure blood or milk. It is not impossible, however, that the difficulty may be occasioned by injury upon some other part of the body, or by some general disease.

The Garget, we believe to be a disease unlike the one in question. In that disease the milk usually coagulates in the bag, and causes local inflammation where it lodges, and is attended with more or less fever. The udder becomes hard, and filled with lumps, and the teats enlarged and sore. Cows give bloody milk without any of these symptoms, and even without any soreness of the udder; still, we are not certain that it is not the same disease in another form.

As the cause of bloody milk is not given in the best works upon the cow and her diseases, we are led to suppose that no certain knowledge exists on the subject.

The remedies suggested by experienced men, are, careful treatment and feeding, fomentations of the udder with cold water; if fever is apparent, a dose of physic, and the milk drawn off gently, but completely, twice a day.

We hope some of our friends intimately acquainted with the physiology of the cow, will enlighten us on the subject.

For the New England Farmer.

FARMERS' FESTIVAL AT AMHERST.

BY P.

It was my privilege to witness the movements of the farmers of the County of Hampshire, on the 22d of October. I say interesting, for such has been the organization of societies in this section of the county, that hitherto they have felt themselves in a measure, one side of all accommodations—although, in fact, very centrally situated.

The rain of the night previous probably checked the ardor of many, who would have added to the show; nevertheless, early in the morning, the assemblage commenced, and before ten o'clock, A. M., the entire area of the extended common north of the college eminence was covered with strings of cattle.

Our attention was particularly arrested by a magnificent team of 96 yoke of oxen, drawing 180 of the farmers of Belchertown, accompanied by a

band of music. When a spirit like this is awakened, it is not difficult to make a show. Many other towns sent in large numbers of working cattle, so that we should estimate not less than 200 pair present. Of other animals the display was good. Among them fat cattle from Deerfield, one pair of which weighed 4500 lbs., about 30 pair of steers, 8 bulls, 7 milch cows, swine, 5 calves, sheep many, and a *twin family*, of which a story was told at table, that particularly arrested the attention of the ladies present; what may be the effect upon their imaginations, can only be determined hereafter. Some 70 or 80 horses were displayed, in vehicles of every form; many of these appeared to be superior animals. The plowing match was well contested with about 20 teams. Two plows of peculiar structure were seen in the fields—one the plow that cuts two furrows at the same time, leaving the earth in a highly favorable condition for cultivation; the other moving on a large *iron roller* on the land side, which was said to lessen the power required to move it, and to facilitate the operations in stony lands. These facts are noticed, because any improvement that leaves the land in better condition, or relieves the team in plowing, is worthy of particular attention.

In the halls there was a very handsome exhibition of fruits and flowers, considering the lateness of the season. Rarely have we seen a better show of apples. The bread and butter, too, spoke well for the ladies who made it; and what was still better, the ladies themselves were there with neatly arranged locks and smiling faces. When it shall be fully understood, that these agricultural fairs are to be *arenas* for ladies to display themselves, and the works of their hands, we cannot doubt there will always be spectators enough present. It was particularly gratifying to find learned professors and reverend divines, and gentlemen of other professions, lending a helping hand. In fact, all were ready to contribute. The hospitality of the citizens was without limitation. When such a spirit prevails, the show cannot be otherwise than good.

The address was by that distinguished cultivator and friend of the farmer, Hon. M. P. Wilder, of Dorchester. It is enough to say, that it was worthy of his well-earned reputation. Born in this mountain region, the impressions of his youth have been constantly vivid in his mind, and now favored with a prosperous career in the city, he is happy in contributing to make the laborers on his own hills in easy condition, and to teach them how their sons may, by their own well-directed industry, become independent.

The dinner hall was entirely filled, and so were all that entered it. Here the intelligent President of the society acquitted himself with much modesty and propriety. Among the guests were several gentlemen of distinction from the vicinity and other societies;—al. of whom appeared highly gratified with what they had seen and heard. If their first exhibition by this newly incorporated society is to be taken as a sample, of what the farmers of Hampshire intend to do, other societies will have to be looking about, or they will soon be in the back-ground.

We have heretofore had some *query* in our mind about the expediency of multiplying societies of this kind; but so long as we can be well assured of such exhibitions, as have been the present year at Barre, at Fitchburg and at Amherst—we say to them go-ahead, and God bless the farmers in their efforts to improve. May our Legislators be wise enough to understand that it should be no less their pleasure than their *duty*, to provide for the well-being of the farmers. If they do not *voluntarily* take this lesson—they will find others duly authorized to take *their places*. P.

October 21, 1851.

A GOOD GARDEN.

No branch of husbandry is more neglected than the garden. Those farmers who live too far from market to indulge often in the luxury of fresh meat, are still content to dine on salt pork or beef, with the addition of potatoes only, rather than devote a few hours to a kitchen garden. Both health and good taste demand that a farmer's table should contain a full variety of vegetables. Radishes, lettuce, cauliflowers, beans, peas, tomatoes, beets, turnips, and indeed many others, should be found there in the proper seasons, while melons and the small fruit will furnish the evening's board with healthful luxuries.

Raspberries, strawberries and blackberries, may be grown almost without labor, and with due attention, their improvement in quality will fully compensate for the pains taken.

If farmers wish their children to be fond of home, they should at least furnish them with such luxuries as every journeyman mechanic would purchase in the large cities for the use of his family, particularly when he can do so at comparatively little cost.

☞We copy the above from the *Journal of Agriculture*, and commend its teachings to all who like a good garden—and who should not? As a general thing, farmers underrate the value of a garden, supposing that their time may be devoted to the heavier crops with more profit. But a plentiful supply of vegetables, such as early potatoes, peas, beans, beets, &c., together with an abundance of small fruits, will require but little time and labor, will keep conveniently low the butcher's bill, and add greatly to the health and comfort of the family.

AGRICULTURIST'S ALMANAC.

Beside telling us how fast Time and the Tide flies, and the timely admonition to "look out for thunder and lightning about this time," with sundry other sage advices, there is no predicting how much good an Almanac may do. It is caught up a thousand times in the year, while waiting for dinner, resting during a rainy hour, or for consulting its wise pages for the *moon's influence upon fresh pork*, and thus being consulted so much, it ought to enforce its precepts as with a forty horse dower! An Almanac *is* a good thing—that's certain—one of them makes us laugh, another teaches us how to reckon our *interest money!* while others are full of comforting prognostications of wind and weather, and the operations of the elements in the skies. But this, that we speak of now, has more to do with the lower world, and discourses wisely

of the things most intimately connected with the particular duties and interests of the farmer; such as his health, mental development, moral improvement, the economy of farming, classification of soils, management of soils, winter employment, and care of farming tools.

We consider this almanac as a valuable hand-book, or text-book, for the farmer, and if widely circulated, will lead the minds of many young men into the pursuits of agriculture in a more thorough and systematic manner. With this introduction to the reader, in a few extracts, we let it speak for itself:—

Botany.—This science, whether contemplating the systematic arrangement of plants, or the mutual relations and uses of their parts, is intimately connected with agriculture. Indeed, some knowledge of this science is implied in the rudest condition of this pursuit. The habits, structure, and qualities of plants, the soil and climate best adapted to them, the best mode of culture, and the power of that culture to change and improve them, are all questions in which the farmer is interested.

Chemistry.—This science teaches us that the whole material world with which we are acquainted is made up of varied combinations of from fifty-six to sixty simple substances, and that about twelve or more of these enter, more or less commonly, into the constitution of those vegetables with which the farmer is acquainted, as well as into the constitutions of all those animals which feed on those plants.

Mechanics.—The farmer needs carriages, various tools, especially for cultivation and seed-sowing, reaping, excavation, etc. In the construction of these, reference should be had to the persons using them, the quality of the soil to be cultivated, the facility with which they may be used, and their durability. In nothing does the enlightened agriculture of some nations appear more than in the wisdom of their machinery.

FLAX SEED AS FOOD.

Will you allow me to communicate to the readers of your valuable paper the result of my little experience in the use of flax seed for feeding a saddle horse. I was induced, from reading Mr. Sproule's articles in the *Gazette*, on Flax, and Warner's Systems, &c., for farm horses, to try the experiment with my saddle horse, which has now been fed twelve weeks upon the following diet, and is in excellent condition, with a good coat, notwithstanding the severe weather to which it has been a good deal exposed; for being a surgeon, I am obliged to leave it standing at the doors of my patients continually:—

6 stone (of 20 lbs.) of wheat straw, at 6d	3s. 0d.
½ stone good hay, at 13d	0 6½
½ score bran,	0 6.
7 lbs ground linseed, at 3d	1 9.

These are retail prices, and include straw for bedding, which, however, is economized by being put under the manger during the daytime. Upon this my horse has, of course, done easy work; it has, however, only been four days in the stable, and has averaged eight miles a day for the last twelve weeks. I have also a drawback on the manure, which, at the price here, will, I think, reduce the cost of keep to 5s. a week. I should state that my apparatus is neither extensive nor expensive. I boil in a five quart pan a gallon of water, with a half pound of good linseed and a little salt, a common butter firkin being filled with the chaff, (straw and hay) mixed with the proportion of bran: the boiling linseed is poured over it, and well mixed with a broomstick, more chaff being added as it settles after standing an hour or two; this is given at night, and a second supply (the operation being repeated with a little more chaff) stands all night, and affords the animal as much as he can eat the whole of the next day; the salt increases her relish.—*The Plow, Loom and Anvil.*

Potato Digger.—Among the implements of farm labor exhibited at the Manchester Fair was a wagon with machinery attached for gathering potatoes—the recent invention of a New Hampshire farmer. The wagon is placed at one end of the potato field, with oxen or horses attached, and as it passes down the rows, digs the potatoes, separates them from the dirt, and *loads them in the wagon.*

Not Much Trouble to Try It.—To raise an orchard of grafted fruit without grafting! How can it be done? Select the kind of fruit you desire, then take a linen string and tie it as near the top as may be. Let it remain one year, then you have above the string one year's growth. Over the string will form a bulb; cut off just below and set in the ground, and from the bulb will start out roots, and soon trees of a dwarfish size will be seen growing under a burden of fruit.

Mechanics' Department, Arts, &c.

For the New England Farmer.

TO HARDEN STEEL WITHOUT SPRINGING.

Mr. Editor:—I read with much interest in your last paper a short article under the above head. I agree with the writer in the main—that steel should be heated as uniformly as possible, and at the lowest heat at which it will harden—that it should be dipt into the water perpendicularly, for if obliquely, as he justly remarks, the under side will chill first, and as it contracts, will draw the upper side which is still soft. We are also cautioned to prevent springing to dip it into the water *slowly.*

It appears to me that reason and experience are against that. I prefer to put it into the water instantly, the quicker the better, more particularly when the piece is to be hardened all over. By this method the sides chill as equally as by the slow process, and the entire surface more so, thus giving it a more even temper, and at the same time, it is less liable to crack in consequence of hammering or from any other cause. Whether this view be correct or not, I cannot see why placing it in the water slowly should prevent its springing in any degree. Yours, &c.,

C. Winslow.

Springfield, Sept. 23, 1851.

☞ Every virtue carried to excess, approaches its kindred vice.

FLAX COTTON.

It is pretty well ascertained that flax can be prepared by cheap chemical action, to be spun and woven with as much facility as cotton itself. Every thing in regard to it must have an interest for all. The following remarks relate to its exhibition at the World's Fair:—

"The flax is exhibited in all stages, from the full grown plant and stalk to the change into cotton, then in yarn, thread, then woven and knit, and mixed with wool in white flannel and satinet cloth, also bleached in purest white and dyed of various colors. It is a perfect achievement. There it is in all these states. If flax can thus be converted into a material capable of being carded, spun, woven, colored, bleached and used in all the ways that cotton can, and the assurance is given that it can, and be a better fabric, and all this at an expense so as to cost much less than cotton—and its estimate is but half of the present price of cotton—it is instantly seen that the discovery is of boundless value. Of there being the conversion, there is no doubt. Here it is exhibited both by the French and English. That it can be converted effectually, at a cost to make it compete with cotton, is stated with strong vouchers. There is little room to doubt it.

Boy's Department.

THE COUNTRY BOY IN THE CITY.

A country boy's first visit to the city is a most momentous occasion; one fraught with more of interest and vivid impressions than most he has to recur to in after years; an occasion never to be forgotten.

Before these days of steam travelling boys not unfrequently attained the age of ten or twelve years before they had beheld the "wonders of the town," and perhaps is the case even now in some instances.

Everything not common to the country, all articles not found in the village grocery, and countless objects which the city lad passes by as hardly worth his notice, he looks upon as wonderful. The noise of wheels upon the pavements, the crowded streets, the gilded signs, and flaming lights in the windows of the druggists, all serve to excite and bewilder him. Objects of interest first noticed after the initiate finds himself within the borders of the city, seem to be most impressive.

A clergyman of my acquaintance said that when a boy of seven years, on returning home after having made his debut, in answer to the numerous interrogatories from his sisters as to what he had seen, &c., much to his surprise and mortification could think of nothing in the confusion of the moment, out of the vast fund of which he supposed himself possessed, but a huge sign, projecting over the street, painted in large letters, "Cash paid for Tallow." I knew a lad once to exhaust his entire stock of the needful, amounting, all told, to sixty-two and a half cents, in the purchase of a small brass kettle with which to surprise and gratify his mother on his return home. This he saw in the door of the first shop he came to, and carried it about the whole of a hot summer day, perfectly satisfied with his investment until he saw the rich display in windows farther up; and then, alas, too late, looking sorrowfully at his kettle, bemoaned the premature disposal of his funds.

As the rustic youth arrives at a proper age, he is sought by the merchant for his counting-room, for it is well known they always have the preference, and I think will be conceded on all hands that in a majority of cases they make the most enterprising and valuable citizens. And many there are who are yearly metamorphosed into city bucks. Various are the causes which may influence him to quit the vocation of his father and seek in the metropolis another, and form new tastes and new associations. He has, perhaps, become tired of the dull routine of country life, and seeks excitement. He has heard of wonderful speculations, and wealth accumulations. His cousin from the city has spent a month with him, whose fashionable attire and delicate complexion he contrasts with his own homespun apparel, and sun brown visage. He has observed with jealous watchfulness the partiality of the village beauty for his formidable rival and is resolved to stand on an equal footing with him. A situation is obtained, and he enters upon the duties of a clerk. He now finds himself in a different atmosphere. For the pure air of the mountain, and the fragrance wafted from fields rich with clover and honey-suckle were his; now a bilious smell of docks, coal gas, and foreign spices, is substituted. The round jacket is exchanged for the premature, long-tailed coat; the open shirt-collar for the starched cravat and perpendicular linen, which places his ears in imminent peril. He must be polite when he wishes to love, and smile when he used to laugh aloud.

Poor boy! Long moments of toil are before thee. Weary, homesick and discouraged shalt thou lie down to rest at night, to dream perchance of the time long passed, when thy days glided peacefully away under the mild sceptre of an indulgent daddy. The morrow cometh, and as yesterday the same detested routine goes on. To open and close the store—numberless menial offices to be performed—bearing the insults of older clerks, and made the scapegoat of all their blunders. But courage, my boy—nerve thyself up to the work—keep down that something which is rising in thy throat and threatening to choke thee—and thy name shall stand on gilded letters over the door from which thou sweepest!—*Portland Transcript.*

Ladies' Department.

THE RIGHTS OF WOMAN.

BY MRS. L. H. SIGOURNEY.

There is much clamor in these days of progress respecting a grant of new rights, or an extension of privileges for our sex. A powerful moralist has said that "In contentions for power, both the philosophy and poetry of life are dropped and trodden down." Would not a still greater loss accrue to domestic happiness, and to the interests of well balanced society, should the innate delicacy and perogative of woman, as woman, be forfeited or sacrificed?

"I have given her as a helpmate," said the voice that cannot err, when it spake unto Adam, in the cool of the day, amid the trees of Paradise. Not as a toy, a clog, a wrestler, a prize-fighter. No, a

helpmate, such as was fitting for man to desire, and for woman to become.

Since the Creator has assigned different spheres of action for the different sexes, it is to be presumed, from his unerring wisdom, that there is work enough in each department to employ them, and that the faithful performance of that work will be for the benefit of both. If he has made one the priestess of the inner temple, committing to her charge its unrevealed sanctities, why should she seek to mingle in the warfare that may thunder at its gates or rock its torrents. Need she be again tempted by pride or curiosity, or glowing words, to barter her own Eden!

The true nobility of woman is to keep her own sphere, and to adorn it; not like the comet, daunting and perplexing other systems, but as the pure star, which is the first to light the day, and the last to leave it. If she shares not the fame of the ruler and the blood-shedder, her good works, such as "becomes those who profess godliness," though they leave no "footprints on the sands of time," may find record in the "Lamb's Book of Life."—*Selected.*

HOUSEHOLD RECEIPTS.

Orange Cheese Cake.—A quarter of a pound of butter,
A quarter of a pound of sugar,
Three eggs,
A wine glass of milk or cream,
Two ounces of sponge cake,
The rind of one orange grated,
Half a nutmeg,
One table spoonful of brandy, or two of rose water.

Pour the milk or cream over the sponge cake to moisten it. Then stir together your butter and sugar, whisk your eggs, mash the cake very fine, and mix all together with the liquor and spice.

Line your pie plates with paste, fill with the mixture, and bake in a moderate oven.

Lemon Cheese Cake.—A quarter of a pound of butter,
A quarter of a pound of sugar,
A wine glass of milk or cream,
Two ounces of sponge cake,
Three eggs,
The grated rind of one and juice of half a lemon.

Slice the cake, and pour over it the milk or cream. Beat the butter and sugar together, and stir into it. Mash the sponge cake very fine, and add to the above. Grate the yellow rind, and squeeze the juice of half a lemon and stir in.

Cover the pie plates with paste, fill with the mixture, and bake in a moderately hot oven.—*National Cook Book.*

The Apple.—This is both nutritious and wholesome, and deserving a more prominent place in the catalogue of table fruits than is generally assigned to it. Sweet apples contain a large amount of saccharine matter and are probably more nutritious than the sour varieties. The apple, however, like all other fruits, should never be eaten in an unsound or unripe state, and the fairest and most perfect fruit should always, if possible, be selected for use.

To Bake Apples.—Sweet apples properly baked and eaten with milk are excellent. The best method of baking tart apples is, to take the fairest and largest in size, wipe them clean, if thin skinned, and pare them if the skin is thick and tough; cut out the largest portion of the core from one end, and place the fruit on well glazed earthen dishes or pans with the end which has been cored upwards, and fill the cavity with refined powdered sugar. Then place them in the oven or other apparatus for baking until sufficiently cooked. Take them out, and when cold they are perfectly delicious.

"OUR DAILY BREAD."

A beggar-boy stopped at a rich man's door—
"I am houseless, and friendless, and faint, and poor,"
Said the beggar-boy, as the tear-drop rolled
Down his thin cheek, blanched with want and cold.
"O! give me a crust from your board to-day,
To help the beggar-boy on his way!"
"Not a crust, not a crumb," the rich man said—
"Be off, and work for your *daily bread!*"

The rich man went to the parish church;
His face grew grave as he trod the porch;
And the thronging poor, the untaught mass,
Drew back to let the rich man pass.
The service begun; the choral hymn
Arose, and swelled through the long aisles dim—
Then the rich man knelt, and the words he said,
Were—"*Give us this day our daily bread!*"

☞"No enjoyment," says Sydney Smith, "however inconsiderable, is confined to the present moment. A man is the happier for life from having made once an agreeable tour, or lived any length of time with pleasant people, or enjoyed any considerable interval of innocent pleasure."

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

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The Farmer, under the charge of Messrs. S. W. Cole and Simon Brown, Editors, Frederick Holbrook and Henry F. French, Associate Editors, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

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Terms, $2,00 per annum in advance. At the close of the year, the publishers will bind the semi-monthly Farmer gratis for any person who subscribes for both publications, paying one year in advance for each.

☞ The Semi-Monthly Farmer contains nearly the same matter as the Agricultural department of the weekly.

☞ Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy for one year.

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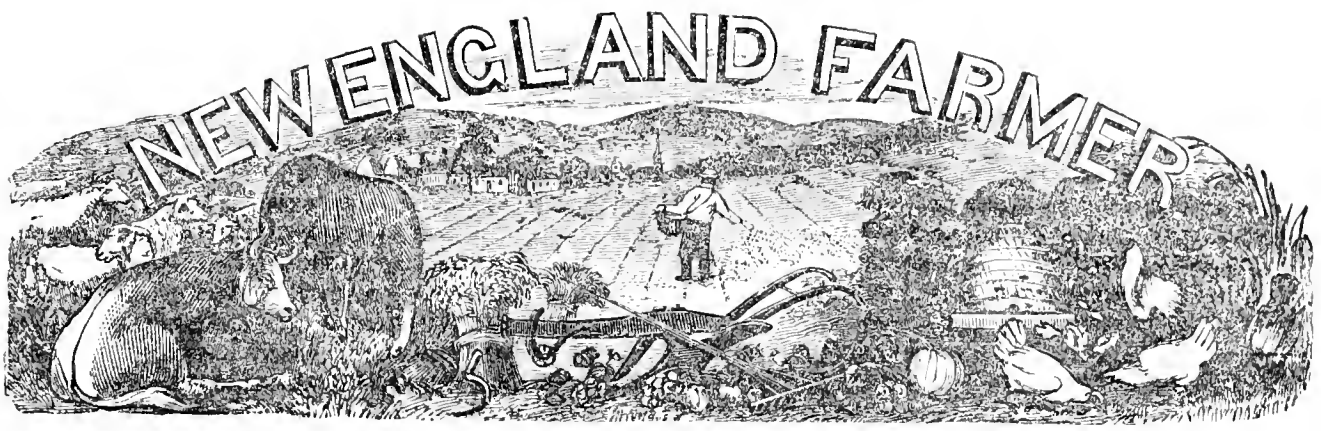
☞ When subscribers wish to change the direction of their papers, or when they return a copy to this office, they will please be *particular* to name the Post Office, and State, to which it has been sent, as well as the one to which they wish it directed; as it often happens that two or more of our subscribers are of the same name, and annoying mistakes have occurred in consequence.

☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. BOSTON, SATURDAY, NOV. 22, 1851. NO. 24.

RAYNOLDS & NOURSE, Proprietors. Office....Quincy Hall.

S. W. COLE, SIMON BROWN, } Editors.

FRED'K HOLBROOK, HENRY F. FRENCH, } Associate Editors.

FALL PLOWING AND MANURING.

The practice has prevailed with most farmers to be satisfied if they could get their fields plowed and manured in season to receive the seed, without much regard to any particular time, whether it be in the fall, or early or late in the spring. If lands are plowed quite early in the spring, they are frequently settled by heavy rains and their own gravity, so that by seeding time they are too compact to be easily and pleasantly cultivated. If left until about the time for planting, and the manure is then plowed under, it will not have time to become decomposed so as to impart to the crop its full benefit the same season. Beside, time is more valuable in the spring, when there are but a few days between the cold storms which have continued so late for several years past, and the proper moment for sowing and planting.

For these reasons, and for the most important one of all, that the manure applied in the fall becomes decomposed through the winter months, and yields to the surrounding soil most or all its fertilizing elements, we think favorably of applying green manures and turning them under in the fall. Not green *crops*, as is sometimes done, but coarse materials mingled with the droppings of the stall, and unfermented. In this condition it is applied to the ground in its full strength; and under the ground it goes through the process which prepares it to supply the food which the roots of plants are in search of. When animal or vegetable substances containing nitrogen are decomposed, ammonia is always produced, and carbonate of ammonia is found, which is a very volatile salt, and consequently is carried away by the air as fast as it is formed. It makes a great difference, therefore, whether this manure lays upon the surface, or even in heaps, or covered up in the soil where your plants are expected to grow. Experiments show that crops growing the same season do not get the full benefit of unputrefied manures, when they are applied in the spring. But place them in nature's crucible in the autumn, and she sets her agents to work and prepares them for the first germ of the unfolding seed.

By applying the manures which have accumulated during the summer, to the tillage land in the fall, and plowing them in, great losses are prevented *by evaporation*—losses which have scarcely been realized, because imperfectly understood. It should be remembered "that there is no part of any decomposing vegetable manure but what is, either in its gaseous or solid state, the natural food of plants; thus the gases emitted by the putrefaction of a dunghill are so much lost to the vegetable matters of the soil, and such an injury should never be submitted to by the cultivator. Hence the value of green manure; for in these cases every portion of the decaying and fermenting fertilizer is gradually absorbed by the roots and leaves of the succeeding crop." There is always more or less loss by evaporation in composting manures, especially if the heap is placed in the open air. It is generally overhauled two or three times, and the escaping gases during such operations give sufficient olfactory evidence that they are taking their flight.—This waste takes place rapidly at first, and in a less degree at all times, from the surface of the heap during the whole time of its exposure; and when this is extended through several months, the loss must be considerable. Arthur Young says the advantage of using fresh long dung appears very strong.

These seem to be the opinions entertained by very many of the best practical farmers. In speaking of this subject, Mr. C. W. Johnston says, "the controversy which once so keenly existed, as to the state of fermentation in which dung should be used on the land, has now pretty well subsided. There is no doubt but that it cannot be applied more advantageously than *in as fresh a state as possible*, consistent with the attainment of a tolerably clean husbandry, and the destruction of the seeds of weeds, grubs, &c., which are always more or less

present in farm-yard dung. These are the only evils to be apprehended from the desirable employment of this manure in the freshest state; for otherwise the loss of its most valuable constituents commences as soon as ever fermentation begins.

"Great waste is often made in putrescent manures after they are carted on the land; instead of being immediately covered or incorporated with the soil, we not unfrequently see them exposed for days together in the hot rays of a scorching sun, or to the injurious influences of a dry wind."

Upon plowing land in the spring which was manured and plowed the previous autumn, it will be found light, porous, and looking black, with a soft, greasy touch. Seeds placed in such a soil are in a suitable condition to receive the light, air and warmth which they require, and will sprout and grow much more readily than in a more compact soil. This is the first advantage, and the second is, that the plants springing from the seeds in such a soil will grow faster and larger afterwards.

PATENT OFFICE REPORT FOR 1850--51.

This is another volume from the Patent Office at Washington, sanctioned by the government, and chiefly made up of communications from persons residing in various parts of the country, in reply to queries propounded from that office early in the year. Among the contributors, we find the names of many gentlemen competent to give valuable information on the subjects which they discuss. The work, large as it is, sustained by the fostering care of the general government, and receiving abundant materials upon all subjects connected with agricultural interests, ought to be one of sterling excellence. But it is arranged with so little regard to order—the paper is so mean and miserable, and the printing executed so abominably, that the work is a disgrace to the Commissioner, the Government, and all others who have had any control over it.—If the communications were worth printing, they were worth a proper arrangement, and references by an index. Instead of that, the index is somewhat worse than useless, as no reliance can be placed upon it. For instance,—we were desirous to see what Dr. Lee said upon agricultural education, and were referred to page 145. Upon turning to that page, Dr. Lee was not there, nor even in "those parts;" but we were more than half consoled by finding ourselves in the presence of our excellent neighbor, the Hon. M. P. Wilder.

The title-page of the volume informs us of its contents, and that they are classified under seven different heads; but the index makes no sort of reference to this classification. If the reader desires to look under the fourth head, that of Sheep Husbandry, for instance, he may put on his spectacles and patiently turn over the leaves one by one till he finds it—he will get no aid from the index.—There seems to us to be no arrangement whatever in the contents of the volume, and the index only makes "confusion worse confounded." If the Commissioner would request his correspondents to reply to his queries on separate pieces of paper, (and he should take no notice of those who did not,) they might be arranged with little labor, under their respective heads. He should then make an alphabetical and analytical index, and in addition to this, an alphabetical list of the names of the contributors to the volume.

There is really a great deal of valuable information collected in the work, which would be exceeding useful if it were properly arranged. But in its present state it is nearly worthless. We are out of all patience with the miserable "botch-work" in the way of printing at the seat of government. The public documents are printed and bound in such a slovenly manner that they are a disgrace to the nation. The public printing might be done in the city of Boston at a cheaper rate, including cost of transportation, as most of the paper is taken from the north, and in an infinitely superior style than it has been done in Washington for the last ten years. The Patent Office reports are published at an annual expense to the people of over a hundred thousand dollars, and they have a right to expect a better volume from such a liberal investment.

A BENEFACTOR.

The committee on Fruit, Forest and Ornamental Trees of the Bristol County Society, in their late report state that "a wealthy inhabitant of Middlesex County, recently left a legacy of several hundred dollars, for planting trees by the road-side. And they ask—what future wayfarer, as he seeks rest and shelter under the welcome shade, will not pronounce blessings on this benefactor of his race." We wish they had revealed his name, that it might be uttered in gratitude when we hear the wind booming through leafless branches, or softly breathing in the yielding pines. Young men should carve it on smooth beeches, and maidens weave it in green garlands to deck their marriage feast. Blessings on the man who decorates the earth and protects us from winter's blasts and summer's smiting heats. His memory shall be as fresh in our hearts as the flourishing tree which his benevolence has planted.

Grating Horse Radish—Celery.—*D. C., Lowell.*—The Shakers reduce their horse radish in a machine operated by a crank. It has large graters similar to the common nutmeg graters, but we do not know how they are constructed. Celery for winter use is preserved in various ways. We have seen it placed in raised beds in a sheltered position, and covered with alternate layers of straw and earth. This is a good way where the climate is not too severe. With our cold winters, the best way, probably, is to lift the plants on the morning

of some pleasant day and allow them to stand until three or four o'clock in the afternoon, by which time they will become wilted a little. Then cut off the roots, and tops, and pack the edible part in barrels in dry sand, not allowing the plants to touch each other. The barrels may be placed in the cellar, if it be rather dry; celery thus prepared will keep fresh and sweet through the winter.

LATE WORK IN THE NURSERY.

All seed not sown in the fall should be mixed with fine loam, a little moist, put in kegs or boxes, and buried in a light soil, a short distance below the surface. If the kegs or boxes are tight at the bottom, holes should be made through them to let off the superfluous moisture. In this way the seed will keep perfectly good till wanted for sowing in the spring.

Seedling trees, of this year's growth, on wet land, had better be taken up and laid in by the heels, on high light soil; otherwise they will be liable to be thrown out and winter-killed. Tread early snows down around trees, to prevent mice from marking them. A few trees may be conveniently protected by putting bands of tea-chest lead or yellow birch around them; where many nursery trees are laid in by the heels they may be protected from the mice by scattering the earth full and high around them.

If the nursery is very liable to wash, it should be prevented by drains and dams, else the finer soil will wash into the low land,or worse still, into the streams, where it will be lost. It is very important to guard against this loss, which in some nurseries is very great. The water that cannot be drained from the nursery should be scattered over it as evenly as possible, that it may not run in channels and wash away the fine land.

ACKNOWLEDGMENTS.

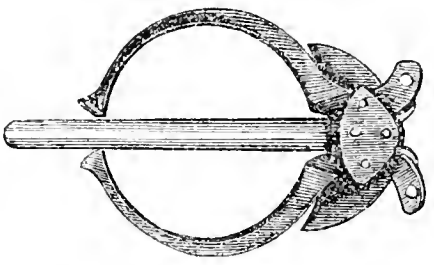
From Joseph Hains, Lynn, Diana and Catawba Grapes. We find in these two varieties nearly the same distinctive properties, but the Diana is much superior for being earlier and better ripened. The Diana is about ten days earlier than the Isabella, and ripens well in this climate, but the Catawba is several weeks later, and seldom comes to perfection in this climate. The grapes which we previously noticed from Joseph Harris, should have been Joseph Hains.

From John Fatler, gardener to George Hittenger, Watertown, two very splendid Cauliflowers, remarkably large and excellent quality.

From Col. Henry Little, President of the Bangor Horticultural Society, a large, fair and very beautiful apple, of excellent quality. We do not recognize this variety as cultivated in this country.

From Enoch A. Wiggin, Malden, specimens of apples for a name, from October to February. These apples are large, remarkably fine and beautiful, but not sufficiently ripe for us to judge of their quality.

SPRING BOW PINS.



Where's the bow pin, John? Don't know—I put it in place after I unyoked the steers. Come, boys, we must contrive some way to get over this trouble; this having no *bow pin* when a shower is coming up is bad business. Well, father, I saw the very thing the other day in the newspaper. Here it is now. It is made of what they call malleable iron and won't break, and you can buy them for 25 cts. a pair. By pressing the little thumb and finger pieces on the right of the engraving, the circular part flies open so that the straight pin passes through the hole in the bow, and then the circle springs back and keeps the pin in place. Ah, that looks well, my son; now find the advertisement and see where they are for sale, and send at once for two or three sets. Be sure to put a leather string in the hole made for it in the pin, and tack the other end to the yoke, then you won't have occasion to ask John again *where the bow pin is.*

For the New England Farmer.

THE SEASON OF 1851, AND OTHER NOTIONS.

BY SILAS BROWN.

GENTLEMEN:—Many people feel an interest to know the state of the weather, and the influence it has had on the crops, in different locations throughout our great country. We have had reports of severe drought in some places, and deluges of rain, tornadoes, earthquakes and other disastrous irregularities, in others, which have a powerful influence upon the agricultural interests in those places where such dreaded dispensations take place. In the eastern section of this State, the sunshine and rains have been dispensed with uncommon uniformity: we have had rains in such quantities that at no time in the growing season the most strenuous fault-finder could have wished them distributed differently. Nothing like a drought has caused apprehensions of short crops among us, or a profusion of rain deranged our regular farming operations. Our rivers and small streams have remained quiet, not disturbing or injuring our bridges or public roads; such a season seldom happens here, and ought to remind us of the obligations we are under to a benevolent Providence. Seed time was delayed beyond the usual period, the weather being cold; the fruit trees were late in opening their blossoms. June was cool till the 21st; there was frost on the mornings of the 6th and 17th, enough to injure the cranberries, and tender plants and vines. From the 21st to the last of the month the weather was extremely warm, evaporation was rapid, and

the low wet land began to feel the salutary influences of summer heat, and vegetation started up with renewed vigor. Grass was well grown and of a good quality, rather more forward than field and garden vegetables; the haying, however, commenced in good season, and the weather was very favorable for drying and securing the crop.

The different kinds of grain and vegetables yielded fair crops of a good quality. There was a medium crop of the different varieties of fruit, except cranberries, which were probably injured by the frost in June. The crop, I believe, is generally light; ours had the appearance of growing upon shoots which sprung from the old vine after the June frosts. They were uncommonly late in blossoming, and had not time to arrive at the usual size, and like "small potatoes," it took a great many to make a bushel. The natural cranberry is such a capricious character that our efforts to improve the crops are all in vain; mowing and burning old vines which are past the bearing state, is labor, with me, thrown away. Manuring will exterminate them instead of increasing their disposition to yield fruit; the meanest gravel and sand appears to be most congenial to their natures; finally, they delight in growing where nothing else will, and precisely to do their own business in their own way. It has been said that a variety had been discovered which will grow and produce upon upland, if that should prove practically true, and the cranberry should become subject to cultivation, it would open a field of enterprise very encouraging to the fruit-grower; but as yet, for more than 30 years, I have never gathered a bushel except on land which has been inundated during the winter. Of all fruit, apples claim the pre-eminence. There is no other fruit which can be kept the year round, unless preserved in some antiseptic preparation, and they are a universal favorite wherever they are known. Whether the first apple tree was a production of the garden of Eden, is a question I leave to the decision of theologians, not having a definite knowledge of its natural history. Within five years all my old apple trees which had the signs of life have been grafted with scions from various sources, many of them furnished by the editor of the New England Farmer. The present fall, our apple trees have begun to reward us for the labor bestowed upon old trees, partially winter-killed 20 years ago, which have produced but little or no fruit since till the present year; some of them have produced remarkably fine apples, which I considered in a hopeless condition, supposing resuscitation out of the question. It is remarkable how old apple trees may be revived by pruning, scraping, plowing, mulching and manuring, when apparently in a dying state. I have no doubt, but a great proportion of our old apple trees, which, to appearance, have arrived to a period of fruitless old age, might be restored to a producing state, and be in advance of those lately transplanted some 10 or 15 years; the advantage of renovating old trees is readily seen. Waiting for young trees to grow and bear has been a discouraging circumstance to many a man, and has been the cause of the almost unpardonable neglect, in past time, of planting orchards. Our ancestors set out orchards for the purpose, mainly, of making cider, which, at a certain time, was a profitable branch of farming. But since cider-drinking has been on the decline, many farmers have treated their orchards with total neglect, or made fuel of the trees, not thinking that they might have been used for a better purpose than furnishing an article, to say the least, which was liable to abuse. With a little labor, those neglected trees might have been grafted with scions taken from good varieties, and now afford a better income from the sale of their fruit, and with less labor than it required to make cider for the market. I believe all our refuse apples, not fit for the market, might be converted into vinegar of the best quality, and the business would well compensate the farmer, and furnish a profitable article of trade.

On the 15th, 16th and 17th of April, the most destructive gale came upon us that has happened since 1815; many of the old forest trees were prostrated in this and the adjoining towns, making quite a stir among lumber-men. In other places the lightning has been destructive to life and property to an unusual degree; and, a full share of earthquakes, tornadoes, railroad collisions, car smashings and other desolating irregularities in "divers places" have reminded us of the instability of some of our buildings, the carelessness of conductors and engineers on railroads, as well as all sublunary projects of man here below. S. B.

Wilmington, Nov. 4, 1851.

For the New England Farmer.

CHARCOAL AND THE POTATO.

BY M. H.

Gentlemen:—In the last number of the Farmer I noticed an article in relation to the potato plat of Mr. Lane, of Chester, N. H. It was stated that a portion of his potatoes—those grown on the beds of charcoal kilns, and those manured by the bottoms of those beds—were more or less affected by the rot according to the quantity of charcoal in the soil, &c. This result accords, somewhat, with my own experience, the present year. Last spring I cleared a hedge of about two rods by forty, on the side of a field, and burned the brush upon the ground. The dense mass of combustible materials made an intensely hot fire, and left a large quantity of coal and ashes upon the ground. After a thorough plowing and harrowing, I planted three different varieties of potatoes on this land. No manure was used. The land had never been manured, or plowed, before. The potatoes grew very large, and *very rotten*. By the side of the hedge, on the grass sward plowed at the same time, manured by spreading and harrowing in green stable manure, with little plaster in the hill, as good sound potatoes grew as I ever saw. The soil of the whole is a sandy loam, rather dry.

I might add that striped, speckled, green, gray and "small black bugs," of which there were any desirable number, evinced no particular partiality for either portion of the field for their operations.

Pelham, N. H. M. H.

Remarks.—Such clear and *concise* statements of facts as the above, may lead to valuable information. The writer states in a note that he has usually found plaster the best preventive of the plague; thinks the disease atmospheric, that the malaria gathers with the dew, and adhering to the vine, deseends through it to the tuber. The plaster, being an absorbent, and having a greater affinity for the poison than the potato has, receives and re-

tains it, and thus, in a measure, preserves the tuber.

Three years ago we plowed an acre and a half of upland sward ground—subsoiled so as to make the whole depth 14 inches, then sowed one pound of saltpetre to each square rod, and over the whole one ton of plaster. Hoed them twice and pulled the weeds afterwards. The acre and a half yielded two hundred and twenty-five bushels of good-sized and finely-flavored potatoes. Potatoes planted *and manured in the hill* within ten rods of this field, rotted almost entirely, while in the crop with the plaster and saltpetre not a bushel was found rotten. Whether a similar result would follow in other years we do not know—but we have no doubt that manuring in the hill always has a tendency to induce the rot.

For the New England Farmer.

MAKING COMPOST.

BY FREDERICK HOLBROOK.

The soils of New England are at best but of moderate fertility. Too much of our land has been worn out, has been thoroughly skinned, by a long and exhausting tillage. To increase the fertility of lands not yet worn out, to restore fertility where it has been exhausted, and to gather crops that will remunerate labor, we must be diligent and persevering in the making and application of manure.—Our case is such that we cannot rely simply upon the refuse of our crops and the excrements of our farm-stock; we must add thereto the riches of our swamps and forests, the washings from our fields that have centered in hollows, and all those waste or unemployed vegetable or animal substances, wherever available, that contain the principle of fertility Thus we may cause now desert-places to blossom again, and make the cultivation of New England soil a remunerating business.

Experience has taught me that compost-manure is valuable very much in proportion to the care with which the various materials have been mingled. One man will take certain materials, all suitable for being converted into a rich compost, tumble them together without care or calculation, apply the mass to his fields with as little care or thought, and finding its operation upon his crops very variable and uncertain, or that it is quite inoperative, will denounce the whole system of composting manures as an idle theoretical notion, unworthy the attention of a *practical* farmer. Another man will take precisely the same materials, mingle them minutely and perfectly, and in due proportions, apply the compost properly to his fields, obtain fine crops wherever it is applied, his lands will steadily improve under such treatment, he will add barn to barn, and will fill his barns.

In the business of making manure, I for one have found it for my interest to be always awake and ready for improvements—to learn whatever others can teach me, and to discover new and effective methods myself. I have various ways of making good compost, according to circumstances and the season of the year. It would be a long story to speak of them all; but I have one method in particular, not very generally practiced, yet which I like much, and it shall be my present purpose to describe it.

The floor of my stables is just long enough for the cattle to stand or lie down upon comfortably, and no more. Five feet and three or four inches, from the mangers or standards to which the cattle are tied, back, is a suitable length of floor for cows, or for young cattle generally; for larger animals, the floor should be proportionately longer. Immediately back of this floor, I have a water-tight plank trench, four inches deep and twenty inches wide. Between the trench and the side or boarding of the barn, there is a walk or passage-way, two feet in width. This trench is the place of all places for manufacturing compost-manure. Some winters, muck is put into the trench, and others, leaves and vegetable mould collected in the woods. Last winter, muck was used. It was dug in August previous, and piled on dry ground near the swamp to drain and lighten; a part of the heap was carted to the barn as soon as the cattle were to be stabled in the fall, and the remainder was hauled by the first sledding, and piled near the stable door under a shed open on the south side. In the coldest weather of winter, the frost penetrated the pile pretty deeply; but the muck was easily cut up with a sharp pick-axe, and it thawed very soon after being deposited in the trench. I could readily have put the muck in a place mostly free from frost; but preferred to have it frozen; for that operated mechanically to break down the lumps, to divide, pulverise and improve it. A bushel basket full was put behind each animal, every morning. The solid and liquid manure-droppings of the day and night fell into the trench, upon the muck, the liquid droppings completely saturated it, and the contents of the trench, thus mingled, were thrown out in the morning. In the very coldest days of winter, a thin sprinkling of straw or other litter was placed over the bottom of the trench, before putting in the muck, which prevented the latter from freezing to the trench. There were but few days, however, cold enough to make this precaution necessary.—The cattle always had a bedding of straw or other coarse litter, which was daily thrown out with the contents of the trench, and served to swell the manure-heap, to keep it up light, and to promote fermentation. The compost was minutely and nicely mingled every day by this mode, and no shovelling over was afterwards necessary. The solid and liquid droppings, falling upon the muck fresh and warm from the animals, and coming in contact with every portion of it, produced an immediate and powerful action upon it, so that a much larger quantity of muck was well prepared for use in the spring, than could have been properly prepared with the same stock and by ordinary modes of composting.

I have two men now at work in the woods, gathering up the leaves and vegetable mould accumulated in the little hollows, which material is to be passed through the trench in the stable during the approaching "foddering season." They have stout heavy hoes, made expressly for this business, with which they grub up the leaves and mould that in these hollows have formed a bed from two to six or eight inches deep. In the afternoon, with dung-forks and wheelbarrows, they collect into one heap what has been loosened up with the hoes in the fore part of the day, locating the pile in a convenient place for making it a large one, and near some sled-road through the woods, so that it may be accessible at any time in the winter. The men have

been thus employed four days; and in one day more they will have a heap collected of at least fifty cart-buck loads. A portion of the heap will soon be carted to the barn for early use in the trench, and the remainder will be hauled by sledding, and piled under the shed. During the time the cattle are stabled, through the fall, winter, and early spring, the trench will be daily filled with the leaves and mould, and thus will be made from four to six times as much manure as is ordinarily made by farmers from an equal number of cattle wintered. The liquids and gases of the cattle-manure, by too many suffered to waste, will be absorbed and held by the vegetable mould; and in the spring I shall have a black free mass of compost, fit for all sorts of crops. Having often used precisely such a compost, I know that this will be most refreshing and invigorating to a hungry New England soil. It cannot be excelled as a dressing for orchards, and for all kinds of fruit or ornamental trees; and wherever it is applied, satisfactory results will follow. It is the easiest of all composts to handle, and the lightest to haul. A pair of horses or oxen will carry by sledding three-fourths of a cord of it, well trodden down. The leaves and mould heaped in the woods for future compost are so light and warm, that the pile never freezes more than two or three inches deep: if covered by snow, it will not freeze at all; so that it is always ready for handling and for hauling to the barn in winter. A larger proportion of the leaves and mould may be daily used in the trench than of muck, because, being free from acids, and composed of light vegetable matter in all stages of decay, a powerful fermentation commences very soon after it comes in contact with the urine in the trench.—Even if thrown out of stable-windows, provided the heaps are on the south side of the barn, the compost will generate so much heat that a fall of snow upon it a foot deep, will generally melt off in two or three days.

The mould formed by a growth of hard wood, is of much better quality, and is more in quantity, than that made by a growth of hemlock, pine, or spruce. Having a plenty of the former, I have made no use of the latter. Of the hard woods, the walnut, maple, blackbirch and ash make the best mould; that from the beech is good, but thin, and difficult to grub up, because the roots of the trees run very near the surface of the ground. Very good mould is found around butternut trees, and that around chestnut trees is pretty good.

It has been nearly an annual custom with me, for several years, to collect from ten to twenty cords of this material, composting it variously with the excrements of animals, and applying it variously for the improvement of the tillage-fields; and I have not yet seen cause to abandon the custom. True, it would not be advisable to remove this mould indiscriminately from the forests; but if taken from the hollows and places where it gathers in extra quantities, it probably soon accumulates again in sufficient quantities for the wants of the trees; and if it be taken only from these places, leaving the knolls and plains undisturbed, the injury, if any, to the forests, will be more than balanced to the owner by the benefits imparted to his tillage-fields and crops.

To any one who may chance to read this communication, and who is desirous of making good compost in large quantities, I would say—try the method I have now detailed, and so ascertain whether it will do for you or not. If you winter say fifteen to twenty head of cattle, you can rearrange your stable-floor and construct a trench in it at an expense of about twenty dollars; and this well done will answer the purpose for years. Then gather materials to put in the trench for compost. If the leaves and mould of wood-lands are conveniently accessible, heap them up in November, and draw the heap to the barn, a few loads at a time, in the winter, or if there is spare room in a shed near the stable, pile it all there. It will not freeze much in the pile. If swamp-muck is most convenient, dig it in August, or earlier, and provide a dry warm place for it, in or about the barn if you choose, though I should pile it under the shed and let it freeze; for the frost will improve the muck, and with a sharp pickaxe, one can easily cleave it from the pile from day to day, as wanted.

If neither vegetable mould and leaves from the woods, nor muck, can be conveniently procured for the trench, then turf dug and piled in season to rot before being used, rich loam from the road-side, head-lands about the fences, or the wash centering in rich hollows, may be provided; and in case such materials can be used, they should be piled in a place pretty much free from frost; for frozen loam is quite a different substance from frozen muck: the latter is spongy, and easily operated on; the former is almost as hard and unyielding as stone. Whichever material is used, it will be well to put straw, swamp-hay, brakes, or other refuse litter under the cattle, for bedding, thereby promoting their comfort and swelling the manure heap. If swamp-muck is put into the trench, these light bulky vegetable substances used for bedding the cattle, and daily thrown out with the contents of the trench, will cause the heap to lay up lightly, will promote its fermentation, thus expelling the acids of the muck, and preparing it for more immediate use.

If it is inconvenient or unpracticable to provide oneself with a barn-cellar, the compost will work well thrown out at stable windows, only let there be a roof over the heaps, (a cheap one will do,) to protect them from sun and storms. Even with a cellar, it would still be well to mix the compost in the trench, that being the nicest way, the way to make the greatest quantity of effective manure from a given number of animals.

The method of composting here detailed may be objected to because of the labor involved. The reply is, that most things of value in this world come to us only as the result of diligent unintermitted labor. He who is content to see around him barren fields, scanty crops, and lean starving animals, may pass along without devising ways for changing such a condition of things, growling at all propositions of amendment pointed out to him, and reaping such returns as an exhausting, skinning tillage will give him. But it is far better to be up and doing in the manufacture of manure for the invigoration of the soil; it is both pleasanter, and more profitable, to be pursuing an improving, rather than an exhausting mode of farming.

F. Holbrook.

Brattleboro', Nov. 1, 1851.

☞ Joshua Upham, of Salem, has taken out a patent for "an improvement in compounds for extinguishing fires." A new fire annihilator, we suppose.

For the New England Farmer.

COLONIZING BEES.

BY P. L. CONVERSE.

Gentlemen:—I saw in a late Farmer, a communication from J. Brown, in relation to colonizing bees, which he seems to think is the best way of managing them; and as I differ with him in opinion, permit me to state my objections, hoping it will lead able pens to give us more light on the subject.

In the first place, he says, "they did very well till he got six or eight hives, then the stronger swarms would often rob the weaker." In reply, I would say, there is no necessity of having weak swarms; if instead of the prevailing fashion of dividing swarms, and crowding out weak swarms and casts, (that are good for nothing themselves and only weaken the parent stock) it should be the fashion to take exactly the opposite course, and double weak and moderate swarms, (which is very easy and practicable) and prevent their swarming as much as possible, there would be no occasion to complain of so much robbing as is common.

Bees will sometimes, under the best management, engage in fighting and robbery, and if your correspondent is troubled that way, I will tell him the means by which I escape the most of the evil, never having had a swarm robbed and but very little fighting. In the latter part of summer, as soon as flowers begin to fail, I commence closing up the entrances of all my hives by degrees, by means of a slide, *before fighting is likely to take place*, until in the height of the robbery season, I leave scarcely an inch open, and if they need air I give it to them inside the house. I have found by experience that they will rarely attack a very small hole, with a moderate number of guards around it, unless excited by previous success.

In the next place, as to smothering them with brimstone, killing the bees and spoiling the honey, I think there is a better mode. The method I use is as follows, viz :—I enter my bee-house, close the doors and windows, take the hive from the shelf, smoke two or three whiffs of tobacco smoke into the hive, keep it closed a few minutes, turn it bottom upwards, cut out the comb, knocking the bees on to the floor—(they cannot fly because they are drunk,) as I proceed, I take the queen bee away from the swarm, collect the whole in a box, put them over another swarm, and the operation is completed, having saved your honey free from smell, and your bees from death, to be useful to you the next spring. In the next place, as to colonizing, he says, "in the summer of 1836, he put a swarm into a house, and took 145 pounds from them in one year," without saying how much he took in the other years.

Let us examine the case. Bees under good management will usually average one good swarm each year, from each hive, and each such swarm usually swarms the next season. Suppose the swarm of 1836 had been put into a common sized hive, and been suffered to swarm once a year afterwards, how would the matter stand now in point of profit!

In 1840 they would have increased to 16 swarms; allowing those 16 swarms to afford only 8 swarms per year to keep the stock good, he would have 4 swarms each year to sell, worth $5 each, without the hive, and as each stock hive will make at least 10 pounds per year, which will amount to 160 pounds, worth one shilling per pound, at wholesale, worth say $26,00, he would get yearly $16,00, instead of 145 pounds, worth $24,00, and no swarms, and that, too, without running the risk of losing the entire stock by any single casualty that might happen.

It will be recollected, that this calculation, (which I believe from experience is below the average) is made near Boston, where probably not one-half the honey can be made per swarm, that can be made in Maine, where the other method is tried.

One of my neighbors has tried this method in the way your correspondent describes, and the result is as follows:—

The bees have been colonized 8 or 10 years, and the yearly profit is about 15 or 20 lbs. of honey, and of course no swarms, while the bees have not increased beyond the size of a good strong swarm.

Writers on bees are almost invariably against the practice, and certainly my own observation and experience teaches me that it is not profitable.

Yours, P. L. C.

Woburn Centre, Nov. 1, 1851.

Remarks.—In order to a full understanding of his operations, our correspondent should state how his Bee House is constructed, how he gets light to work by to find the Queen Bee, &c.—These minute particulars are important to those who wish to adopt a new mode of procedure.

For the New England Farmer.

POTATOES AND POTATO ROT.

BY A. G. COMINGS.

In my last communication upon the subject of the disease among potatoes, it was my aim to set forth distinct peculiarities which I had observed, hoping thereby to render some service to cultivators of this root. I have no confidence that any man can search out the cause of it, entirely. Like the numerous diseases to which man is subject, predisposing causes may be ascertained; but the producing cause will yet, in a great proportion of cases, remain a mystery. The wind blows where it pleases, but its course is known only by the effects produced by its progress. So, in a measure, are pestilences; whether the animal or the vegetable kingdom furnishes the victims. The diseases of vegetables are not more within the power of man's knowledge than diseases which afflict animal life. But to the subject.

At the time of writing my last communication, where the tops of my potatoes remained so green and fair that no one would suppose them to be diseased, the tubers had been diseased for more than three weeks. At the expiration of about four weeks from the time I first discovered any in the second stage of disease, that is, the decayed part dark colored, there came a shower of rain upon them; following which, in less than forty-eight hours, the tops began to turn dark colored, and in a very short time not a green leaf could be found. The shower was so light that it did not wet the soil to the depth of an inch. By a full and critical examination, I found that the tubers were not affected injuriously by the shower, while the tops *appeared* to have been killed by it. It is my opinion that the disease was in every part, tubers, stalks

and leaves, before the rain. My examinations have fully satisfied me that the fibrous roots and tubers of the potato may be subject to disease for some length of time, and the stalks and leaves give no indication of disease. In some cases the fibrous roots only are diseased, the tubers remaining entirely sound. In some instances the tubers alone are diseased, and the fibrous roots and the tops all in an *apparently* healthy state. The fact, however, that such tops die suddenly after being wet with rain, shows that they were not in a healthy state.

All ideas of stopping the disease by cutting off the tops, or by sowing lime over them, after they begin to change color, appears to me to fall short of the cure. The more my researches have been extended, the more evedence do I see to confirm me in the opinion that the disease commences when the soil is in a fermented or fermenting state; and that whatever is applied to the soil which will prevent this fermentation, during the latter part of summer and early in the fall, will prevent the rot in potatoes, so far.

Things Ascertained.—It has been ascertained by observation, that potatoes growing in an open, gravelly soil, are less subject to disease than those growing in a close and very rich soil. It has been ascertained that potatoes planted in the midst of dry and thick turf are less liable to rot. It has been ascertained that salt, lime, ashes, charcoal and plaster, add much to the healthy condition of the growing potato. From what we have ascertained, let us improve for the future.

Upon receiving the last number of the "Farmer," I observed and read with much interest your remarks under the head of "Charcoal, and the Potato Rot." The account of your visit to the farm of Mr. Lane, of Chester, will convince many that charcoal is injurious to the health of the potato.—Very different will be the conclusion of others, when they take into view a certain fact, of which it is evident to me that you did not think, at the time of writing. If you take the dust from a new coal-bed, you will find it highly impregnated with carbonic acid. During the burning of a coal-pit, an immense quantity of carbonic acid gas is thrown off, while the wood is becoming carbonised. This, being confined within the pit, in seeking to escape, enters the ground beneath the pit, and into the covering, where it combines in large quantities with the earthy matter, and remains with the "fine coal" you speak of, which we commonly call coal dust. This coal dust, and the soil beneath where the pit is burned, is charged with a very different property from charcoal, which you know is not carbonic acid, but carbon.

I believe that in every instance which I have observed of potato rot, where they rotted in the ground, I could discover evidence of a large amount of carbonic acid in the soil. In the hot season of the year manures applied to the soil undergo a change by fermentation, and during the progress of this change a large quantity of carbonic acid is disengaged: and if the soil is porous or open, like gravelly soil, or sandy, it escapes into the air; from which the leaves of plants take up what they require, for the formation of woody fibre, or other uses. Where the soil is fine and close, or wet, less will pass off into the air, and of course more remain in the soil. The deeper you go into a soil that is filled with manure, the more carbonic acid will be retained, and the soil will naturally be in a more moist state. If frequent and heavy rains occur during the season of the usual fermentation, which is generally during dog-days, the less of the carbonic acid will escape from the soil, although, in fact, more of it will be generated in warm, wet weather than in any other. This is true of all decaying vegetable matter. During the progress of its decomposition, when by fermentation it is transformed to vegetable mould, carbonic acid is given off.

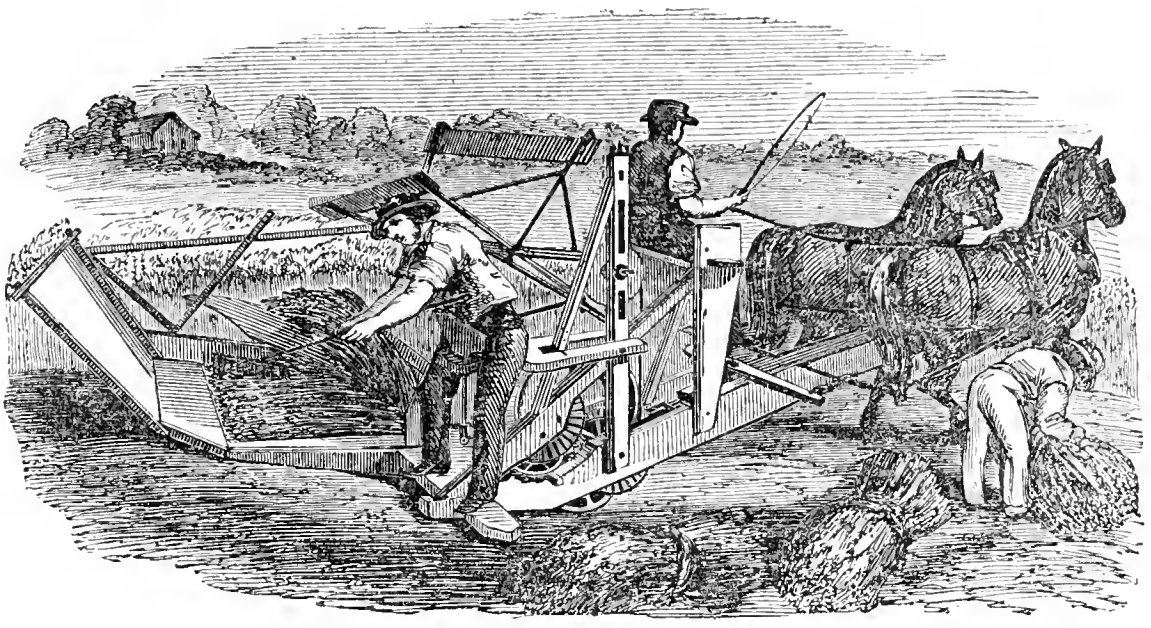
The primary cause of the disease among potatoes may be in the effect of some certain position of the heavenly bodies, whose power of attraction does doubtless affect living things in this world of ours. It may be in something else. Certain it is, that while no different properties can be discovered in earth or air than has been known before this disease commenced, yet, to me it has become quite a settled matter that in the presence of a large quantity of carbonic acid, the potato cannot now live and enjoy health. Whatever, therefore, will prevent the generation of large quantities of it in the soil, or afford it an opportunity to escape, will be gratefully acknowledged by the afflicted potato.

Mason, N. H., Oct. 27, 1851. C.

Remarks.—We are under obligations to our correspondent for his favors. His reasoning is plausible, to say the least, and shows attentive observation, and this will eventually help us out of the difficulty that besets us. Did not the potato grow with perfect soundness on coal-pit grounds twenty years ago? Does it not grow well now, on new land, where a thick mass of dry grass and roots are turned under, which would be the materials to give out carbonic acid in large quantities? Does it not grow far better on such land, than on old land, though the old land may have received no manure for many years? Such is the fact in our experience. If this holds good, the carbonic acid would seem to be favorable to the growth and protection of the crop, rather than an injury to it.—The finest potatoes have been raised the past season where the ground was manured in the hill, while near by, and on ground not manured at all, they have rotted badly. We are still of opinion that an absolute uncertainty exists as to the cause of the disease. The suggestions of our correspondent are somewhat new, and worthy of consideration.

HUSK BEDS.

Mr. Editor:—One of the best articles that can be used for filling under beds, is the husks, properly prepared and stripped, of Indian corn. Only the fine, interior husks, or those which are white and soft, should be used. Owing to their superior elasticity and durability, they make the very finest beds, and are much more comfortable in hot weather, than straw or stripped hazel, willow or any other kind of wood. A bed of stripped husks will not need refilling for years. It may be well however to remark, that the husks should be well and carefully dried, before placing them in the beds, as the smallest degree of humidity will cause them to mould, and emit an unpleasant odor, for weeks. —*Germantown Telegraph.*



THE PRIZE REAPING MACHINE.

This machine was patented in 1845, by C. H. McCormick, of Virginia, and has been found one of the best labor-saving machines ever introduced to the farmer; but particularly to the wheat growers in the South and West. It requires but two hands to work it—one man to rake off the grain and a boy to drive the horses. When the machine is in good order and on fair fields, it will average cutting about two acres an hour. The grain is cut cleaner, and more even than it can be cut with the cradle or sickle. The raker rides on a seat attached to the machine, as will be seen by the cut, and takes the wheat off at the side in gavels, ready for binding. The knife has a sickle edge, and plays horizontally; and is represented to cut one hundred acres without being sharpened. The reel gathers the wheat for cutting, and lops it over on the table for the reaper. Mr. Rives, of Virginia, states that his harvest hire had cost him $200 per year with the sickle and cradle, and $30 per year with the machine! This is certainly an important saving in a single item of the plantation. There is also a considerable saving in feeding a less number of hands,and he thinks that half a bushel to the acre is a moderate estimate in the saving of the wheat itself. The machine is simple in its construction, and therefore not liable to get out of order. We have seen a field of twenty-two acres cut in one day with this machine, and on passing over it found less scatterings than are usual when the straw is cut with the cradle or sickle.

☞ One of the worst things to fat on is Envy. In our opinion, it is as difficult for a grudging man to raise a double-chin, as it is for a bankrupt to raise a loan. Plumpness comes not from roast beef, but from a good heart and a cheerful disposition.—*Albany Dutchman.*

THE PRINCIPLES OF BREEDING.

When we undertake to enforce upon farmers the importance of attention to the breeding of pure stock, that is to say, of stock whose blood has been known to be good for years, we are often met by a question something like this—"Don't you believe that I can produce a dozen of as good cows, or a dozen as good yokes of oxen from our native stock, as you can produce of what you call thorough bred animals, your Devons, and Ayrshires, and Durhams?" Editors are bound to be patient and answer the same question many times, and we will attempt to reply to this, which is considered by many as unanswerable consistently with truth, and at the same time, with our high estimate of the value of thorough bred stock.

Perhaps in New England, we may have one animal in ten or twenty thousand, which may be regarded as of pure blood, the remainder being crosses of all descriptions, having the mixed qualities good and bad of forty or more accidental generations, and we may, without affecting the general subject, concede the fact, that a given number of *accidentally* fine animals may be selected from the whole, which may be *as individuals*, of as much pecuniary value, as any equal number of thorough bred animals that can be found in the country. Among the various matters of interesting speculations upon the principles of breeding, many of which are, like the colors of flowers, the circulation of sap, and the *fact* of vegetation, mysteries beyond our comprehension, there are some results of observation so constant and uniform, that we venture to call them *principles*. One of these, and the leading and familiar one is, that *like produces like* throughout nature. We do not expect to gather grapes of thorns or figs of thistles, nor do we expect our horses to breed cattle, nor our cattle

swine. And we all go much farther than this, for we expect the young to resemble the parent—we believe that qualities are transmitted. as the old Divines expressed it, by "ordinary generation." This is all very well so far, and indeed it is rather going too far, than not far enough, on the principle in question; and the error lies in the idea that qualities are derived only from the *immediate* progenitors. Now every thorough breeder of stock *knows* this to be an error. He knows, what any observing man may easily satisfy himself to be true—that the young often bear a stronger resemblance to some remote ancestor than to the immediate parent. Especially is this the case in violent crosses—by which we mean crosses of breeds very dissimilar.

A pure Durham bull introduced into a region of mixed stock, which, for want of a better name, we term *native*, will produce a race which will be very diverse, some individuals manifesting strongly the peculiar traits of the Durham, while in others scarcely a trace of the blood is seen. Even stock from first rate *native* cows, bred by such a bull, often proves worthless, although the *chances* are certainly great for improved grades. Where breeds are thus crossed, occasionally an animal is produced as we have said, bearing a striking resemblance to some ancestor, two or three generations back, and perhaps very little to its immediate parent.

In a word, the difference between breeding pure and mixed stock is this, that the one is matter of certainty, the other of accident. The principle *that like produces like* is maintained in both cases. There being but one blood and that of ascertained qualities, the progeny can have no hereditary taint which may come out and disappoint us. The young *must* resemble the immediate parents, because they are of the same blood, and so was their progenitors. Hence we find in thorough bred stock, as the Devons, a striking resemblance in form and size and color, and may calculate with certainty, that every animal will be good—the *average* of the stock being far above that of accidental crosses.

Of course, we do not mean to countenance the idea of breeding *in-and-in*, nor to disapprove of judicious and systematic crosses of improved animals.

We merely wish, at present, to insist on the importance of attention to breeding, upon some principle, and to suggest matters for reflection to those who have given no serious attention to the subject.

In our future numbers, we hope by our own or some other hand, to pursue this subject more in detail, and give it the attention which its importance demands.

☞ A drop of water has the properties of the sea, but cannot exhibit a storm.

COAL-TAR FOR APPLE TREES---CAUTION.

A writer of high authorship, a few years since, recommended the use of coal-tar, to prevent injury to apple trees, by mice gnawing the bark. The directions were, to apply it with a brush, in autumn, directly to the body of the tree, near the surface of the ground. We have heard of several persons who have ruined their trees by this application. One gentleman in New Hampshire killed more than a hundred young trees, by this means, about three years ago. He is inclined to the opinion that the tar acts chemically on the bark, to its destruction.

It is not improbable, that the injury might result from the greater absorption of heat by reason of the *black* color of the substance applied. It is quite probable that mice may dislike tar with their food, but the risk of injury from them is far preferable to this destructive remedy.

If trees are liable to injury from mice, carefully remove all straw, turf, and rubbish, make the surface smooth around the tree in the fall, leaving no comfortable hiding place for the rascals, and throw up sand, or light soil about the trunk, to the height of a foot or more, and there is little danger. Manure likely to ferment at all, must not be heaped up in this way about trees in autumn. We have known the bark peeled off of young trees by the action of the heat and cold of spring upon manure thus applied, so as to destroy them utterly. Thoroughly composted manure would probably have no such injurious effect.

WORK AT HAND.

Review.—Before the snows fall, and the earth is closed with frost, take a careful survey of the whole farm and its occupants. Remember that the comfort of all your animals is in your keeping, and that if you expect them to return you a profit for the care and labor bestowed upon them, they must be well fed and comfortably sheltered.

Fences.—Visit these, and when out of line, straighten them up, so that the winter winds and snows may not snap the posts and rails. Where a few stones are leaning in the wall, reset them, or the heavy frosts in spring will be likely to throw down many feet.

Stones that have been turned out of the earth, or blasted, should be laid upon other small ones, so that they will not become frozen to the ground. A single horse hitched to a stone boat fitted with shafts, will draw off almost any quantity in a day, when the ground is covered two or three inches deep with snow. Or the drag may be chained to the hind cross bar of the sled, and used in that way.

Implements.—Place all your wagons, carts, plows, harrows and all other implements under cover. If any of them need repairing it may be done during the boisterous days of winter. Tools

thus cared for will last twice as long as those exposed to the elements, or used when needing repairs.

Order and neatness in everything are essential to profit. Broken posts and rails, old wheels and parts of carts, sleds and small implements scattered about the yards and road-side, are indicative of anything but system and true economy.

The House.—Before the fierce winds blow about your ears and benumb your fingers, look well to all your buildings. See that every clapboard on your house is tight in its place; that the doors shut easy and closely; that the broken panes of glass are replaced by whole ones; that the roof is examined and made tight,—then, while around the cheerful winter fire, no fitful blasts will howl reproachful requiems in your ears.

The Cellar.—The temperature of the cellar should be kept as low as is convenient for the better keeping of the roots. Ventilate it often. If the heavy rains find their way, or the springs flow in, dig a trench all round the outer edge and fill with stones or brush, gradually sloping to the outlet or drain.

The Barn.—Make the barn all tight; batten the cracks about the horse and cattle stalls. Comfortably stabled and bedded, your animals require much less food than when shivering with cold. There is more profit from working cattle and milch cows, young stock grow faster, and there is a greater gain every way in the careful treatment of your animals.

The Orchard.—Take away dry grass and weeds, or old mulching from young trees; mice will rarely gnaw them unless there are substances near suitable for the construction of their nests. If these animals are troublesome, it will be better to throw half-rotted leaves, or old peat-mud, about your nursery seedlings, than to use any coarse litter, as we have suggested before.

PROTECT YOUR FRUIT TREES.

A great many fruit growers buy good and handsome trees, and get them growing well, and then frequently, by neglect, allow cattle to injure or destroy them. Cattle are very fond of browse in winter, and when they cannot have convenient access to it they will chew up suculent shoots if they are nearly an inch in diameter, and break down and disfigure the tree.

A little attention to walls and fences will prevent this great evil, and bring forward the promising trees to be a profit and an ornament. Sometimes a fruit-grower pays fifty cents for a tree, and fifty more in taking care of it, and then, from its fine, promising appearance, he would not take two or three dollars, and it is richly worth it; yet, for the want of a few minutes' time, in fastening a board, or fixing a nail, this beautiful and valuable tree, and perhaps many more, are destroyed by some unruly animal. Now is the time to attend to this business, and let it be well done, that the trees may be safe through the winter.

AN OLD SETTLER.

The Gentleman's Magazine for 1762 contains an account of the age of a chestnut tree then growing at Tamworth, in Staffordshire. This tree, it is said, was, at that period, probably the oldest, and certainly one of the largest, in England, being fifty-two feet in circumference. Its period of rising from the nut may be fixed at the year 800, in the reign of King Egbert. From that date to the reign of King Stephen is 335 years, at which time it was fixed on as a boundary or landmark, and called by way of distinction, "the Great Chestnut Tree of Tamworth." From the first year of Stephen (anno 1135) to 1762, is 627 years, so that its entire age at that period was 962 years. It bore nuts in 1759, from which young trees were raised.

For the New England Farmer.

WHAT'S IN A NAME?

It appears to be a matter of some considerable importance with many, to have a name appended to every newspaper article. I have begun to be in doubt whether it were best or not to write again for the "Farmer," without deciding to put my name to whatever I should write. I have, however, resolved to write *this once*, and I must inquire, "What's in a name!"

I sometimes take up a paper and observe an article from the pen of some well known and popular writer. Immediately I engage in reading it. It is upon the subject of agriculture. The writer gives an account of a very large crop which he has obtained, and tells us what he applied to the soil before planting. All that is fine—it is first rate. Now any man can go and do likewise, for this very popular writer has told us how it has been done (!). Well, here is a case, which, were it not for the popularity of the writer, would have been closely criticised by one part of the readers; and passed by like other things by the rest. There is a great omission in it, and one which throws the whole story into a state of worthlessness. The writer has omitted to describe the soil upon which he was so successful. It might have been rich in certain properties not found in soils generally, and these properties were brought into action by the agents employed to change the condition of the soil. Such is, in fact, the character of articles which occupy the columns of agricultural papers. They serve to get people into a great many experiments in imitation of those of which they read, which prove highly injurious to them.

For myself, I reason that a man who depends too much upon another, will find his case a bad one. Were I known as familiarly as I could find it pleasant to be, with all who read what I write; and as popular with them as my vanity could desire, yet I know that *truth*, and *knowledge*, not my name, should guide them. I should therefore wish them to scan every article I should write for them, closely and critically. If an important omission is made, the chain is thereby broken

In some respects an agricultural paper appears better to us, where each article has a full signature. But is none of that *fancy?* A man's name is his own property, in a sense that useful truth can hardly be said to be. Those who write for papers are with much propriety called "contributors." The editor holds a contribution box for them to give what they may be disposed, for the good of his readers. Some men give a large sum. Take such a man as writes for the religious press, for the agricultural, the moral, the scientific, &c. Let him write for a half dozen or more papers, two or three articles for each every month, and when time and study, stationary used and postage paid on his letters to editors, all come into the account, it will swell to an enormous tax. I am not guessing about it. Besides, to pay for all the papers he is somewhat under necessity to patronize, counts up again.

For one, I must urge that a man has a right to keep his name to himself, if he commits no assault upon any man who wears a name. A writer who fires his shots at other men's names, certainly ought to expose his own as a target. But one who, like me, meddles with no other man's name, cannot be supposed to need a label upon him to keep him "right side up with care."

The editor will perhaps balance his head upon his thumb, in the style of Benjamin Franklin, and say, "If you won't sign your articles, I don't care if you stop writing."

All we have to say to it, is,—the world is full of notions, and ours must have a place in the world's budget. C.

Mason, N. H., Oct., 1851.

Remarks.—Name, or no name, our correspondent is most heartily welcome to our columns. We hope to hear from him often.

For the New England Farmer.

DOMESTIC POULTRY.

BY G. TILLINGHAST HAMMOND.

Main says, "the breeding and rearing of domestic fowls includes two special, though different objects. The first, is that of rearing poultry for amusement; and the second, doing the same with a view to profit."

In France, poultry forms an important part of the live stock of the farmer. And we see no reason why it should not be of the same relative importance in this country. Most farmers have paid very little attention to this part of their profession. Of late, however, it has begun to assume more importance. Farmers in general manage their poultry in not the best way, for them or the fowls.

They are permitted to run where they please; to lay, and sit at any time they may wish. And when the hen comes off with her chickens, she is suffered to ramble about, exposing the young brood to cold and wet, which thins them off rapidly.

It is left with them to find a place to roost where they can, probably in some exposed situation, such as a tree, or out-house.

They are allowed to go half starved; no attention being given to feeding them.

And who would wonder if few eggs were produced, and the spare and sickly chickens which are hatched seldom yield much profit.

Try it, farmers, give your hens a chance to return all the profit they are able to. And after one such effort, in which they have been well cared for, if they do not change, then discard them from the farm and introduce stock that will be profitable.

Brooklyn, N. Y., Nov. 12, 1851.

For the New England Farmer.

A RAPID GROWTH.

Gentlemen: — On the 8th of April last, I purchased a pig weighing 136 pounds, at six cents a pound, making $8,16. I killed him on the 8th inst., and he weighed, dressed, 560 pounds. I sold him for seven and a half cents a pound, for which I received $42 in cash.

Truly yours, Thomas D. Bond, *Baker.*

Wilmington, Nov. 8, 1851.

Remarks.—The above is the greatest gain we have ever heard of in an equal amount of time; the increase being four hundred and twenty-four pounds in 214 days! nearly two pounds a day for the whole time. Our friend Bond must possess a secret that has never found its way into our pig trough. He signs himself a *Baker*, and we suspect the secret of his success passed through the baker's oven or kneading trough. Whatever fed upon, (if it were not bank-notes,) there must be profit in making pork with such a rapid gain.

For the New England Farmer.

ICE HOUSES.

Mr. Editor:—I have taken the liberty of writing, for the purpose of giving you my plan of filling an ice house, hoping it may benefit those who live a long distance from any river or pond where ice may be obtained. My ice house is made by setting a frame ten feet square into the ground, and plank set up on the outside, and dirt thrown in to hold them up to the frame. The sides and top of rough boarding, the floor made of loose plank, and filled by letting a part of my surplus water run in during the coldest weather, which freezes up solid and keeps well. The plan was ridiculed at first by some of my friends, but the experiment for the last two winters has changed their opinion.

Respectfully yours, C. S. Hamilton.

Hartford, Oct., 1851.

PLOWING BY STEAM.

Lord Willoughby d'Eresby, an opulent and practical cultivator of the Grimsthorpe estate, near Bourne, England, has recently made several most successful experiments in opening and pulverizing the soil by an engine. A writer in the London *News*, describing them, says that steam plowing is now no longer a problem. The field selected for the last experiment had grown a wheat crop, and was of good tillable soil. The engine was placed on a moveable train at the end of the field. By way of testing the relative powers, the plow, a double one, with reversed shares and coulters, was drawn in one direction by horses, and contrarily by steam. The horses, four very powerful animals, had much labor to drag the implement, and that only at a slow pace; whilst the engine, of

26 horse power, hurried it back as fast as a man could fairly walk to conduct the plow. After several "bouts," a subsoil plow was attached to a gage of nine and afterwards twelve inches. This additional burden, which the horses could not possibly have drawn, evidently steadied and improved the motion, and left the work in a most satisfactory manner. Harrows were afterwards appended with an equally pleasing result. The plowing took place across old land, which showed in some places considerable dips. Two engines placed parallel at each end of the field would, without difficulty, with only a double plow, complete four acres of land in ten hours, and, if required, subsoil it too. The relative expense of plowing 24 acres of land is given as follows; by horse £9 12s, by steam £6 16s. By steam power the twenty-four acres would be completed in a week. It would require at least ten horses to plow it in the same period.

VALUE OF PHOSPHORIC ACID IN AGRICULTURE.

BY DR. C. T. JACKSON, BOSTON.

The importance of phosphoric acid, as an ingredient of soils, is not sufficiently appreciated by practical agriculturists. They do not seem to be aware of the fact that this acid is essential to the healthy growth of all plants, and that its presence in food is absolutely necessary to render it capable of sustaining animal life.

It does not exist in the soil in a free or uncombined state, nor is it so found in either plants or animals, but it is always combined with the earths and alkalies, in all three of these kingdoms.

In the soil, the comparatively insoluble salts of phosphoric acid are found, and it is evident that they are the only ones that would be retained; for water would dissolve the soluble salts, and soon transport them into that great reservoir of all soluble salts of the earth—the sea, from whence they would not return, since they are not in any degree volatile.

The wisdom of this law of nature in making the most precious saline manure a fixed and difficult soluble salt, is at once obvious; for it is thus kept always ready in the soil for the plants to act upon according to their need.

By their action, little by little the earthy phosphates are dissolved, taken into the circulatory vessels of plants, and, by the most curious laws, undergo changes of composition—exchanges of bases and acids taking place with the other saline matters absorbed from the soil. Thus we find phosphate of lime is partly changed into phosphates of potash; and soda, another acid, taking possession of the lime, while it yields up its alkali, with which it was formerly combined, to the phosphoric acid, and new salts are produced, in such proportions as the plants need, and adequate to the wants of animals feeding upon them. It is a curious law, also, that when the fruit or seed form, the phosphates mostly leave the stem and go into them, so as to become concentrated where they are most needed for food. If we cut the plants down before the seeds form, we have all the phosphates the plants contain, diffused throughout them, and if we allow the seed to ripen, the phosphates, as before observed, will be found mostly in the seed. We find them in the shape of phosphate of potash, phosphate of soda, phosphate of magnesia, and phosphate of lime, and probably, also, phosphate of ammonia.

Now, all these salts are essential to the growth and sustenance of animals, and without them grain would cease to be sufficient food.

When the farmer raises crops for sale, and removes his grain and grasses from the soil, he SELLS A PORTION OF HIS SOIL; *and if he does not renew in some way, the saline matters taken away in his crops, he invariably impoverishes his soil.* The work of exhaustion is now going on to a most alarming extent, and prolific wheat lands are to be searched for farther and farther westward as the operation proceeds.

Every one knows the superiority of wheat grown on newly cultivated lands, and most farmers are aware of the fact that soils become exhausted of something, they know not what, but of something essential to the most favorable production of grain —*Western Agriculturist.*

THE PROPER TIME FOR PRUNING.

A correspondent makes some inquiries relative to the proper time for pruning apple trees, and remarks it has been the general practice to prune in the spring. Very small limbs may be safely cut off at any season whenever it is convenient; and when the trees have proper care and attention, it will seldom be necessary to remove any large limbs. But there are many trees which have been badly neglected, and large decaying and profitless limbs should now be removed from them; and where this is necessary, the fall is a more suitable time than the spring, for the reason that the wounds made in autumn will remain dry and sound for years, and until the bark closes over them, while wounds made in spring turn black and decay, leaving holes which frequently ruin the tree. Mr. Cole, the author of the American Fruit Book, prefers October, November, or even December, to the spring, which he says is the worst season.—"Thirty-two years ago, in September," he remarks, "we cut a very large branch from an apple tree, on account of injury by a gale. The tree was old, and it has never healed over; but it is now sound, and almost as hard as horn, and the tree perfectly sound around it. A few years before and after, large limbs were cut from the same tree in spring; and where they were cut off the tree has rotted, so that a quart measure may be put into the cavity.—*Maine Farmer.*

PLOWING.

The Amherst (N. H.) Cabinet, recently published the Report of the committee on plowing, which was made to the Hillsborough County Agricultural Society in that State. It may be found profitable to compare the opinions of individuals from various, and widely extended districts; we therefore give some extracts from the report of the committee mentioned above.

"In the first place, in breaking up most kinds of sward land, a depth of at least eight inches, in our opinion, is necessary to the successful cultivation of the soil. The old-fashioned mode of merely skimming the surface, and half doing that only, finds no advocate in your committee. We are not

afraid of the sight of a little yellow dirt, which has laid undisturbed and been trodden too far under foot, by man and beast, for a series of generations. We believe that this substance, when exposed to the action of the atmosphere, will imbibe all the elements of fertility which are to be found in the surface soil, and that the growth of all crops will be greatly promoted, and by enabling the water more rapidly to disappear from the surface in time of excessive wet weather, and by more ready absorption, to resist the action of severe drowth by attraction and retention of moisture from the atmosphere and the bosom of mother earth.

In the next place, we believe a complete inversion of the furrow slice to be essentially necessary to good plowing. This mode gives repose, in some measure, to the exhausted surface, and brings into action all the latent powers of production of the under soil that have accumulated from time to time by the leachings from the surface, and otherwise.

We consider it, also, as indisputably necessary that all the soil should be moved. We have no faith in the hog rooting, cut-and-cover system practiced by many.

To effect good plowing, then, these things are absolutely necessary, to wit: a good plow; a competent, well-disciplined team to draw, and a skilful plowman to guide it.

DISCOVERY OF WOODPECKERS' STORES.

In stripping off the bark I observed it perforated with holes larger than those which a musket bullet would make, spaced with most accurate precision, as if bored under the guidance of a rule and compass, and many of them filled most neatly with acorns. Earlier in the season I remarked the holes in mostly all the softer timber, but, imagining they were caused by wood insects, I did not stop to examine or inquire; but now, finding them studded with acorns firmly fixed in, which I knew could not have been driven there by the wind, I sought for an explanation, which was practically given me by Captain S——'s pointing out a flock of woodpeckers busily and noisily employed in the provident task of securing their winter's provisions, for it appears that that sagacious bird is not all the time thriftlessly engaged "tapping the hollow beach tree," for the mere idle purpose of empty sound, but spends its summer season in picking those holes, in which it lays its store of food for the winter, where the elements can neither affect it or place it beyond their reach, and it is considered a sure omen that the snowy period is approaching when these birds commence stowing away their acorns, which otherwise might be covered by its fall.

I frequently paused from my chopping to watch them in my neighborhood, with the acorns in their bills, half clawing, half flying round the tree, and admired the adroitness with which they tried it at different holes until they found one of its exact calibre; when, inserting the pointed end, they tapped it home most artistically with their beaks, and flew down for another. But their natural instinct is even more remarkable in the choice of the nuts, which you will invariably find sound; whereas it is a matter of impossibility, in selecting them for roasting, to pick up a batch that will not have half of them unfit for use, the most safe and polished looking very frequently containing a large grub generated within. Even the wily Indian, with all his craft and experience, is unable to arrive at anything like an unerring selection, while in a large bag full that we took from the bark of our log, there was not one containing the slightest germ of decay. They never encroach on their packed store until all on the surface are covered, when they resort to those in the bark, and peck them of their contents without removing the shell from the holes.—*Kelly's Excursion to California.*

GARDEN MANURE APPLIED IN FALL AND WINTER.

Frequent complaints are made by those who are limited in their gardening operations that whatever manures they do apply to their gardens, burn up their crops when the heat of summer comes on. We have felt this inconvenience too, and in looking around to find a remedy, have come to the conclusion that whenever a garden requires active stimulating manures, they should be applied in the fall, or winter; in this way rank stable manure may be applied, and spaded or ploughed under immediately. It will have become by spring the proper food of plants, and as all manures leech upwards, the surface soil will be in fine condition for the growth of vegetables; whereas if the manure is applied at planting time, especially the crude manures generally applied here, just as vegetables are most required, they are fired by action of the sun on the manure, and the gardener has the mortification to find his labor and money thrown away. Whatever manures are applied in the spring should be well rotted, or of a cooling nature. There are many families that annually waste a barrel or two of leeched ashes, when had it been applied to the garden patch, they would have had "yearly yorks" as well as their neighbors.

The soap-suds from the wash tub is a manure that may be applied with safety and with profit in the spring, and yet how few ever use them except to enrich the earth around their kitchens, and make loathsome mudholes, when perfumed flowers, luscious fruits and mammoth vegetables, might have been made by them. We do not yet properly appreciate the importance of a garden. The bearing it has upon the happiness and health of a family is plainly perceptible whenever we find a well conducted garden; how highly important, then, that we should understand the proper food of plants. He would certainly be a mad physician who would give his fevered patients stimulants to raise the fever higher and higher, until vitality was consumed. So with the gardener, plants are frequently stimulated to death, for the want of proper cooling food. Our garden soils can scarcely be too rich, but it must be a richness retentive of moisture, and not as would be the case if the stable manure was applied in the spring, be a richness which burned everything in contact with it. Ho, then, for your wagons and wheelbarrows, load them up, and cover your gardens quickly; plow them up, turn the manure under; and when the early seed-time comes, you need not fear but a harvest will follow.—*Columbus Enquirer.*

☞ The laboring man in the present age, if he does but read, has more helps to wisdom than Solomon had.

Mechanics' Department, Arts, &c.

PAPER FROM FLAX.

A great part of the printing paper used in this country is made from foreign rags—the nations of cultivated Europe having more of the raw material than is needed for the very limited amount of paper which their despots permit them to enjoy. These rags often come to us freighted with filth, infection and disease. Repeatedly has an extensive district been scourged with the small-pox, or other pestilence, derived through a paper-mill from these infectious rags. Our paper is inferior to the English because its stock is mainly cotton, while that of the English is linen.

A little enterprise and inventive genius might effect a happy change here, in the substitution of flax lint for cotton rags as the basis for paper.—Flax may be grown profitably at ten dollars per ton for the unrotted straw or stalk, of which six tons yield a ton of lint or fibre, making the cost of growing the fibre three cents per pound. This can be broken out and dressed for about one cent per pound more. We think Clemen's Machine, now on exhibition at the Castle Garden Fair, will do this, and we do not consider that perfection. A mere trifle—say half a cent at the outside—will defray the cost of bleaching and softening that fibre so as to fit it admirably for paper-making.—These are but approximations, yet we feel confident that, on an extensive scale, and with the best machinery, flax lint, suited to the manufacture of paper, may be produced for less than five cents per pound, which is certainly less than an inferior article of clean white rags can be bought for. Will not our great paper-makers look into this matter? —*New-York Tribune.*

FIRE VARNISH.

The Paris correspondent of the St. Louis Republican says:

"An important discovery, even better than Mr. Phillips's famous extinguisher, is the fire varnish recently brought out by a Spaniard, Don Jose Gueseda. It was first tried at Matanzas in the presence of the Governor and city authorities, and succeeded to the admiration of everybody. It has since been tried at Madrid. Five small frame houses, covered with tar and turpentine, were erected in an open square. Two of these houses were covered with the varnish and the others were not. The latter were reduced to ashes almost as soon as they were set on fire, whereas the former, in spite of the tar and turpentine, remained perfectly uninjured to the end of the trial, which lasted two hours. The trial was the more severe as the five houses were close together, and all of them were on fire in the inside, but the flames did not break forth at all from the varnished houses; besides this, in the midst of the conflagration, two gallons of some strong essence was thrown upon the varnished houses and they were immediately entirely enveloped in flames; but when the liquid was exhausted, the walls appeared perfectly intact as before. Don Gueseda is about to get out a patent for this wonderful varnish, which he says will become as cheap as it is valuable, and he can put it within the reach of everybody."

Boy's Department.

REMEMBER THIS, BOYS.

Will the young men whose evenings are now spent on store boxes and other places of idle resort, or in idleness even at home, read and reflect upon the following?

"I learned grammar," said William Cobbett, who became an eminent printer and writer, "when I was a private soldier on sixpence a day. The edge of my guard-bed was my seat to study in, my knapsack was my book-case, and a board lying on my lap was my desk. I had no money to buy candles or oil; in winter it was rarely that I could get any light but that of the fire, and only my turn even at that. To buy a pen or a sheet of paper, I was compelled to forego a portion of food, though in a state of starvation. I had no moment at that time that I could call my own, and I had to read and write amid talking, singing, whistling and bawling of at least half a score of the most thoughtless of men, and that too, in hours of freedom from control. And I say, if I, under circumstances like these, could encounter and overcome the task, can there be in the whole world, a youth who can find excuse for non-performance?"

LION CATCHING IN SOUTH AFRICA.

Mr. Lemue, who formerly resided at Motito, and is familiar with the Kalliharri country, assured me that the remarkable accounts sometimes circulated as to the people of that part of Africa *catching lions by the tail*, and of which I confess I was very incredulous, were perfectly true. He well knows that the method prevailed, and was certainly not uncommon among the people. Lions would sometimes become extremely dangerous. Having become accustomed to human flesh, they would not willingly eat anything else. When a neighborhood became infested, the men would determine on the measures to be adopted to rid themselves of the nuisance; then forming themselves into a band, they would proceed in search of their royal foe, and beard the lion in the lair. Standing close by one another, the lion would make his spring on some one of the party—every man, of course, hoping he might escape the attack—when instantly others would dash forward and seize his tail, lifting it up close to the body with all their might; thus not only astonishing the animal, and absolutely taking him off his guard, but rendering his efforts powerless for the moment; while others closed in with their spears, and at once stabbed the monster through and through.—*Rev. J. J. Freeman's Tour in South Africa.*

HONOR AND PROFIT OF INDUSTRY.

The greatest of men have been trained up to "work with their hands." If there is an encouraging sentence in the English language, it is the above. God ordained that man should live by "*the sweat of his face*," and intelligence can breathe and live only in a being of an active life. Aikenside, the author of "The Pleasures of Imagination," was a butcher until twenty-one, and first took to study from being confined in his room, by the fall of a cleaver. Marshal Ney was the son of a cooper; Roger Sherman, Allan Cunningham, and Gifford, were shoemakers; Sir William Herschell was a

fifer boy; Franklin, a printer's devil; Ferguson, a shepherd; Ben Johnson was a bricklayer; James Monroe, the son of a bricklayer; General Knox was the son of a bookbinder; General Green, a blacksmith; General Morgan, a wagoner; Burns, a plough-boy; Bloomfield was a farmer; Frazier, a stone-cutter, Crabbe and Keats, apothecaries; Sir Wm. Blackstone was the son of a silk mercer, and a posthumous child.

Ladies' Department.

DR. CLARKE AND HIS WIFE.

All conference business is not allowed to transpire before the public; and had not the question just expatiated on, not been a public one, it would have been sooner and more summarily dismissed. At the conference to which reference is now made, a subject was about to be introduced, which the preachers were not to disclose even to their wives. Dr. Clarke, who was seated in one of the front seats on the floor of the chapel, partially sheltered from the eye of the president, was in the act of slipping out unperceived, when a voice was heard, "Dr. Clarke is about to leave the conference, Mr. President." President—"You must not go out, Dr. Clarke." Dr. C.—"I must, sir." President—"You must not, Dr. Clarke." Dr. C.—"I will, sir." President (more peremptorily)—"You must not." Dr. C.—"You state, sir, that we are not to tell our wives the subject that is about to be brought forward; I want to hear nothing that I cannot tell my wife; I tell her everything. Those who have talkative wives may refrain from telling them; but mine is not such; what is deposited with her is kept safely." President—"Very good, doctor; you may stop, as your wife can keep a secret." The question was not so much one of delicacy as one respecting which it was necessary to guard against premature disclosure; and subjects frequently escape from a second person thoughtlessly, when out of the pale of the first interdict, as though the responsibility rested solely with the first hearer.—*Rev. James Everett.*

Washing Lace.—I have lately used the following method of washing lace, lace collars, or crochet collars, and find that it not only makes them look well, but saves much of the wear and tear of other washing:—Cover a glass bottle with calico or linen, and then tack the lace or collar smoothly upon it, rub it with soap, and cover it with calico. Boil it for twenty minutes in soft water; let all dry together, and the lace will be found to be ready for use. A long piece of lace must be wound round and round the bottle, the edge of each round a little above the last, and a few stitches to keep it firm at the beginning and end will be found sufficient, but a collar will require more tacking to keep it in its place.

Indian Bread.—An exchange gives the following recipe for making the celebrated St. Charles Indian Bread, as prepared at the St. Charles Hotel, New Orleans:—

"Beat two eggs very light, mix alternately with them one pint of sour milk, or buttermilk, and one pint of fine Indian meal, melt one table-spoonful of butter and add to the mixture, dissolve one table spoonful of soda and saleratus, &c., in a small portion of the milk and add to the mixture the last thing, beat very hard and bake in a pan in a quick oven.

HEAVEN.

BY MRS. SOUTHEY.

O, happy, happy country! where
There entereth not a sin;
And death, who keeps its portals fair,
May never once come in.
No grief can change their day to night—
The darkness of that land is light.
Sorrow and sighing God has sent
Far thence to endless banishment.
And never more may one dark tear
Bedim their burning eyes;
For every one they shed while here,
In fearful agonies,
Glitters a bright and dazzling gem,
In their immortal diadem.

Meekness.—How difficult it is to be of a meek and forgiving spirit, when despitefully used. To love an enemy, and forgive an evil speaker, is an higher attainment than is commonly believed. It is easy to talk of Christian forbearance among neighbors, but to practice it ourselves, proves us to be Christians indeed. The surmises of a few credulous persons need not trouble that man, who knows his cause is soon to be tried in court, and be openly acquitted. So the evil language of the times need not disturb me, since in the day of judgment "my judgment shall be brought forth as the noonday."

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

The Farmer, under the charge of Messrs. S. W. Cole and Simon Brown, Editors, Frederick Holbrook and Henry F. French, Associate Editors, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

☞ Also published at the same office *every* Saturday, on a large handsome folio sheet, the New England Farmer, an independent Journal, devoted to Agriculture, Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and the usual variety of Literary and Miscellaneous matter, adapted to family reading. Letters from Home and Foreign Correspondents will appear from week to week, together with a variety of contributed and selected articles of a Literary, Scientific, Historical, Biographical, Humorous and Juvenile character, short Moral Tales, &c.; containing more reading matter than any other Agricultural Family Newspaper published in New England. Every thing of a hurtful or even doubtful tendency will be carefully excluded from its columns.

Terms, $2,00 per annum in advance. At the close of the year, the publishers will bind the semi-monthly Farmer gratis for any person who subscribes for both publications, paying one year in advance for each.

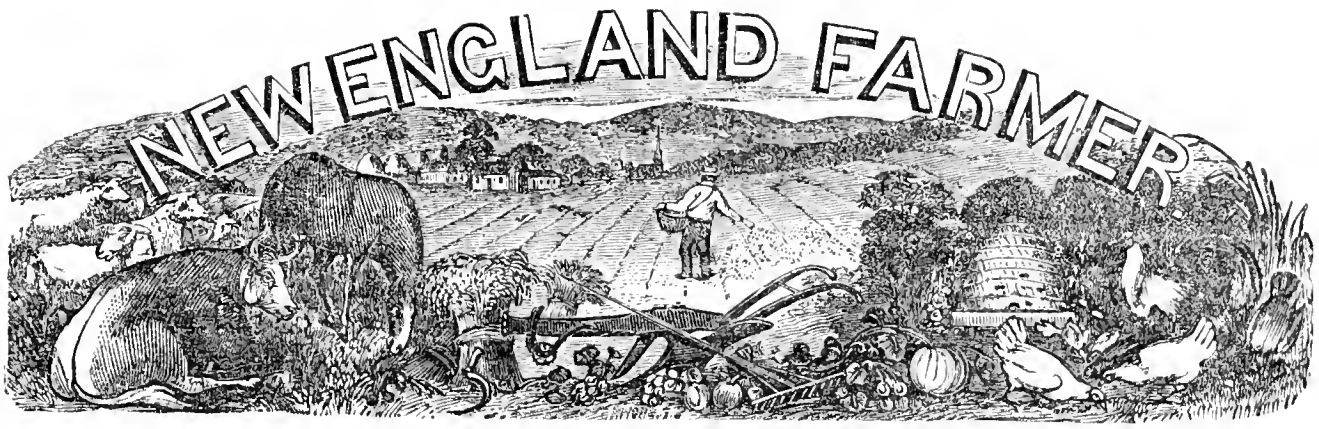
☞ The Semi-Monthly Farmer contains nearly the same matter as the Agricultural department of the weekly.

☞ Postmasters and others, who will forward four new subscribers on the above named terms, for either publication, shall receive a fifth copy for one year.

☞ All papers will be forwarded, until an explicit order for discontinuance is received; and whether taken by the subscriber or not from the place where they are ordered to be sent, he will be held accountable until he orders a discontinuance and pays up all arrearages.

☞ When subscribers wish to change the direction of their papers, or when they return a copy to this office, they will please be *particular* to name the Post Office, and State, to which it has been sent, as well as the one to which they wish it directed; as it often happens that two or more of our subscribers are of the same name, and annoying mistakes have occurred in consequence.

☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. BOSTON, SATURDAY, DEC. 6, 1851. NO. 25.

RAYNOLDS & NOURSE, Proprietors. Office....Quincy Hall.

S. W. COLE, SIMON BROWN, } Editors.

FRED'K HOLBROOK, HENRY F. FRENCH, } Associate Editors.

BLOODY MILK.

The inquiry made a few weeks since by one of our correspondents, "What causes cows to give bloody milk, and what will cure it," has led to some replies, and among them, one from a correspondent at Bristol, Vermont, which will be found in another column. Cows being the most profitable part of our farm stock, their diseases become important questions of interest as well as humanity. We have therefore deemed the subject worthy of some extended remarks. It would be as sensible to take a slow coach through the mud, to visit a sick friend at a distance, when a fast car is running in the same direction, as it is to adhere to old modes of administering medicines under the new light which has dawned upon the whole materia-medica. The world is progressing in everything, and we may as well be out of it altogether, as not progress with it. Cold water and pure air were once refused the patient in fevers; but who but an insane man would think of refusing them now. If it was once supposed that a certain disease was induced by a general derangement of the whole system, it might have been proper to prescribe garget as a remedy, in the absence of any certain knowledge as to what was required; but now, when it is well known that the same disease is local, affecting only one part, while all the rest is in health, it becomes not only useless, but cruel, to administer substances which will not affect the disease, but cause additional pain to the suffering animal.

When our correspondent, however, informs us that he has witnessed the effects of a specific for *more than half a century*, with the highest gratification, we really feel a diffidence about remarking upon his letter at all; being almost persuaded that an observation extended through so many years, *must* be correct in its conclusions, and that a practice adhered to so long, must also be a safe one. Indeed, if we were not sure that popular errors had run through a cycle of years far outnumbering his "half century," and that new light is constantly dawning upon the pathological treatment of diseases, we should bow in deference to his large experience, and raise no warning voice. But we cannot hold ourselves harmless in sanctioning error by silence, any more than to propagate it by open declaration. That the subjects discussed in these columns may not mislead, the editors write only from close personal observation or actual experience; or, when the matter introduced is foreign to their particular province, they refer to those who are competent and skilful on the subject-matter in question. We have long had our doubts of the propriety of using powerful drenches, cathartics, and prostrating depletions, on our domestic animals. Though they are our servants, and subject to our will, we are bound to treat them humanely. Rash experiments by inexperienced persons, either with drug or knife, are cruel and inhuman, and it shall be our effort to discourage and discountenance them with whatever influence we may exert.

Cows not unfrequently give bloody milk. In our own stock there are cases of it every year. It continues for a day or two and then subsides, without administering medicine, or making any external application except bathing the udder in cold water. It is *never* accompanied by any of the symptons called *Garget;* there being no swelling, inflammation, or soreness of the udder apparent. We are, therefore, inclined to think the "bloody milk" disease, and the disease occasioning a swollen and inflamed udder, and frequently accompanied by hard lumps, to be widely unlike each other, and originating in different causes.

In order to be able to gain all the information which could be readily come at on this subject, we called upon Dr. Dadd, a Veterinary Surgeon of much experience in this city, and he stated to us that a mixture of blood with the cow's milk might result from various causes, but that the most frequent are local inflammation of the mam-

mary gland, which causes an increase of the arterial ramifications, and results in an *afflux* of blood; surcharging the small capillaries, producing extravasation and forcing blood out of the walls of blood-vessels. And secondly, a loss of equilibrium in the circulation of the vital fluid; whereby congestion of the blood-vessels in the udder takes place; resulting in extravasation, or unnatural flowing of the fluids from the ducts or vessels.

These cases are sufficient as examples; yet in themselves they are but results, for, preceding them were others—such as kicks or blows on the udder, termed direct causes; others, operating indirectly, such as plethora, &c. Violent *tuggings* at the teats by an inexperienced hand may also be classed among the direct causes of bloody milk; for then the small blood-vessels are lacerated.

The article recommended in the communication of our correspondent, *garget*, known to botanists as *phytolacca decandra*, is a powerful nauseant, irritant and narcotic. A number of years ago it was proposed, in human practice, as a substitute for ipecacuanha, but it was found wholly unfitted for the purposes which the latter article is calculated to fulfil. It produced excessive vomiting and purging, attended with great prostration of strength, and sometimes with convulsions. It is seldom if ever used with veterinary practitioners.

We respectfully object to our correspondent's mode of using the article, cut up into pieces "*four or five inches long*," with the fixings, (pork and thread,) and doubt very much if, after cramming it into the cow's mouth, she could be made to chew and swallow it. And if so, it would take a long time for the gastric fluids, in the stomach, to decompose it, so as to affect the disease.

"In its green state," he says, "it requires about double what would be required when dry." We think that in its green state it is even more active than when dry. "Its virtues are diminished by keeping, and in the course of twelve months it becomes inodorous." *See U. S. Dispensatory, p.* 487.

If, however, people prefer to use the article, why not give it by infusion. For every particle of active matter is imparted to boiling water. We can only add that we sincerely respect every man's honest opinions, and that the long experience of our correspondent in the use of garget ought to entitle it to a fair trial, with all those who know of no better remedy, and think its use efficacious and safe.

☞ November has been a rough month. The ground as far south as the neighborhood of Boston, has been several times covered with snow, and frozen so as not to thaw in the middle of the day.—Snow fell to the depth of three inches at Fitchburg on Thursday, and in Maine there is at present good sleighing.

THANKSGIVING.

Another of these interesting anniversaries has just passed away; it has been a refreshing halting-place in the confusion and hurry of life. We hope every individual sat down to a bountiful table, with a heart big with gratitude to the Great Provider for all;—remembering that it is He who has continued our lives, given us joy and health, filled our garners with food, and preserved the social dispositions which have kept bright the chain of friendship, and united us in the bonds of affection and love;—That it is He who has controlled the seasons, and tempered them with His sun and wind and showers, and made them fruitful for us;—That He has "sent the springs which run among the hills, into the valleys," filling them with beauty and with life, and "watered the hills from his chambers," till the "earth is satisfied with the fruit of his works."

Thanksgiving! We trust there was a universal Hymn of it throughout the land—that the heart of each yearned towards his neighbor, and that the humble and the poor all had "their meat in due season." ☞ If Thou wert not thankful then, be so now.

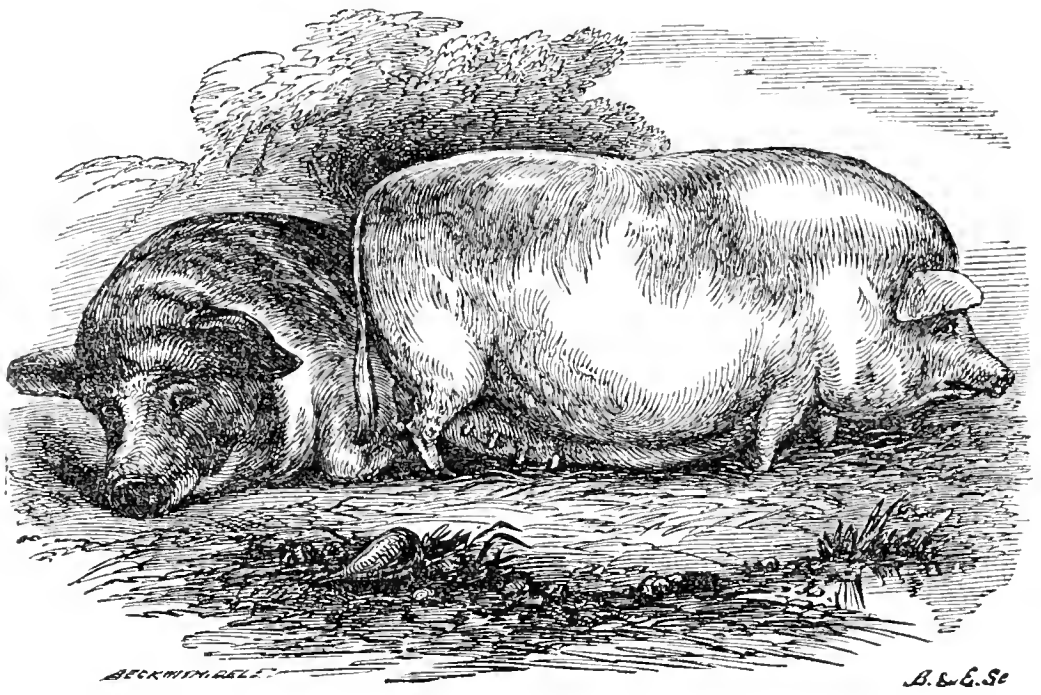
Cold winds pinch the unprotected, and colder neglect crushes the best affections of the heart. The poor ye have always with you. Go, then, and from thy bountiful store, give warmth and food to those who have had No Harvest to gather; then will the voice of Thanksgiving be heard in their dwelling, and their "meditation of thee shall be sweet."

Cherish this institution. Tell your children how in the stormy December our forefathers landed on "the stern and rock-bound coast"—how in the midst of suffering and privation they erected the Church and the School-House, and planted their principles in the New World. And although smitten with disease and more than decimated by death,—though reaping scantily where they had toiled and sowed in pain and in fear, yet how joyfully they gathered themselves together and united in anthems of Thanksgiving and Praise to Him who had brought them in safety across the wild waste of waters, and given them "freedom to worship God."

Cherish this institution, then, in deep-felt gratitude, in hymns of Thanksgiving, and in affectionate remembrances of those who can be made happier by your kind acts; then will it be handed down to future generations, to make glad the family hearth and embalm the memory of the Pilgrim Fathers.

☞ We have received several varieties of fruit, which will be particularly acknowledged in due time.

☞ "Here's a cent," said a wealthy man to a poor cripple. "I was poor once myself."



GROUP OF CHINESE PIGS.

We insert the above cut more as a matter of curiosity, than with any desire to recommend this breed. There are two distinct varieties, the white and the black; both fatten readily, but from their diminutive size, attain no great weight. They are small in limb, round in body, short in the head, wide in the cheek, and high in the chine; covered with very fine bristles growing from an exceedingly thin skin; and not particularly symmetrical, for, when fat, the head is so buried in the neck that little more than the tip of the snout is visible. The pure Chinese hog is too delicate and susceptible of cold ever to become a really profitable animal in this country; it is difficult to rear, and the sows are not good nurses; but one or two judicious crosses have in a manner naturalized them.

This breed will fatten readily, and on a comparatively small quantity of food; and the flesh is exceedingly delicate, but does not make bacon, and is often too fat and oily to be generally esteemed as pork. They are chiefly kept by those who rear sucking pigs for the market, as they make excellent roasters at three weeks or a month old. Some authors point out five, some seven varieties of the Chinese breed, but those are doubtless the results of different crosses with our native kinds. The above cut, with several others purchased expressly for our columns, were taken from the living originals for the International Magazine, published at New York.

New History of Boston.—Messrs. Little & Brown have in press a "Municipal History of Boston," from 1630 to the present time, by Hon. Josiah Quincy. This is a work much needed, and the name of the author is a guaranty that it will be well executed.

PACKING APPLES FOR FOREIGN MARKETS.

As this is about the time when most of the apples are prepared for shipment to foreign markets, it may be well to say a few words on the subject. No care, however, in packing for transportation, will preserve the fruit unless it has been properly gathered in the first place. Premising, then, that the apples have been properly collected and preserved, the business of packing them is not a difficult one, so that they may be transported any distance, by still continuing to them the same care which they have had from the beginning.

Flour barrels are as cheap and convenient as any thing for them. They should be perfectly clean, sweet and tight. The apples should be assorted, rejecting all that are wormy, bruised, or mis-shapen, leaving only such as are hard, good sized, and handsomely shaped, as every one that is deficient in these qualities operates as a discount upon all the rest, when opened in a foreign market.—Place some soft substance on the bottom of the barrel, say cheap cotton or soft paper, and then after wiping the apples, roll them in dry paper and place them in layers with the stem end up, until the surface is covered, and so closely that they cannot jostle upon being moved with the barrel. Cover these with the cotton or paper, and proceed in this manner until the barrel is full. The barrel must be filled so full as to require the head to be pressed gently down; this will prevent all motion among the apples themselves, while the barrel is conveyed from place to place We practice a similar mode to keep our apples for family use, and find it a good one. It is but a little labor to wrap a barrel of good-sized apples in paper, and where old newspapers are abundant, the expense is very trifling.

Apples prepared in this manner will keep well

and bear any necessary amount of motion; and one barrel of them in a foreign market will bring more than two barrels packed in a careless manner.

SUFFOLK PIGS.

We have recently examined a pair of Suffolk Pigs, purchased by one of our publishers, Mr. J. Raynolds, from the stock of Mr. J. L. Lovering, of Hartford, Vt., which we think as well formed and perfect as any we have ever seen. They were engaged nearly a year since, being the first, since that time, which he has been able to obtain. The beautiful portrait which we gave in April last, is a perfect likeness of one of the same stock, and was taken expressly for the columns of the Farmer. From our experience with this breed of swine, we are satisfied that they will produce more pork in proportion to the food they consume, than any other breed which we have known, and they are constant and hearty feeders. If the same remark in relation to pork, holds good, that is made of beef, viz: that beef which is fatted rapidly is the sweetest and most tender, then this pork ought to be better than any other, for the Suffolks grow and lay on fat very rapidly. This may be accounted for in some measure by their quiet and contented disposition—eating and sleeping being their principal business of life. From these specimens, and others of his stock, which he has sent to this market, we do not hesitate to refer purchasers to Mr. Lovering, if they desire the pure Suffolk breed of swine.

The reader will find a more particular account of this breed under the engraving in the April number of the Farmer. That portrait was taken from a pig raised by Mr. Lovering and sold to Mr. Alonzo Andrews, 38 School Street, who still has him in his possession, and pronounces him one of the most perfect of his kind.

For the New England Farmer.

PRICE OF GUANO, &C.

Gentlemen:—Will you inform me what the price is per cwt. of Guano, unadulterated; of sulphate of soda (Glauber's Salts); of Bone Dust; of Nitrate of Potash, and of ground or calcined Plaster of Paris, as I desire to obtain a quantity of each for some experiments, in your vicinity.

Truly yours, H. H. S.

Washington, D. C., Nov. 16, 1851.

Remarks.—We reply to our correspondent's queries through the columns of the Farmer, that it may be an answer to other letters of inquiry, as well as his, on the same subject. Peruvian guano is scarce and high, the price ranging from $40 to $60 per ton, and constantly fluctuating, as there is more or less in the market. The Chilian and Ichaboe may be purchased for much less; but at a low price would probably be more costly than the pure Peruvian. Sulphate of soda, or, better known as Glauber's salts, is selling at 75 cents per 100 pounds, bone dust, at $1,50 a hundred, nitrate of potash, commonly known as nitre, or saltpetre, at $700 for the crude, and $800 for the refined, per 100 pounds. Ground Plaster of Paris may be purchased for about $5 a ton, or something less than that in large quantities.

For the New England Farmer.

A FEW MORE REMARKS ABOUT APPLE TREES.

BY HENRY F. FRENCH.

A novelist, in one of his stories, portrays an old gentleman who set up for a wit, upon one joke only, which he was careful to show off as entirely new, whenever he met a stranger, with the remark aside, "Well, I don't think I ever said that to *him* before." Perhaps they who have heard and read what I have said and written about apples and apple-trees, may find nothing particularly new in what may now be suggested, and may be inclined to liken me to that same old gentleman, but I can at least say, that however much of a hobby I have made of the subject, I have never published any thing upon it in the New England Farmer.

And as my name is in print at the head of the columns, it may as well be understood, first as last, that I consider it my special mission among my agricultural friends, to induce them to plant trees; shade trees of all kinds for ornament, and fruit-trees for profit.

Although there are a few men in most New England towns, who know perhaps, all that can be learned, by reading, on these subjects, yet the greater part of those who plant fruit-trees, as was remarked in a recent number of the Farmer, plant and manage them so badly, that not one of three ever produces a crop of fruit.

This is partly because the best mode of culture is not understood, but oftener, perhaps, the result of a sort of reluctance, apparently natural to most men, to doing as well as they know how to do.—Any man of common sense knows that a hill of corn planted in the turf of a grass field, would never grow, and it would seem manifest that a tenderly reared tree from a nursery, deprived of half its roots in transplanting, could bear adversity no better, yet nearly one-half of all the apple-trees in New England have been heretofore planted in grass land, and the ten thousand little mouths of the grass roots have drunk up the moisture and fertility of the soil, and left the trees to shrivel and die of thirst and starvation.

It is not absolutely necessary to keep the whole surface of a young orchard under cultivation.

For the first five years after an apple-tree from a nursery is set, the roots will find sufficient space, if a strip eight feet wide, four on each side of the tree, be kept thoroughly worked and manured, leaving the remainder in grass.

Perhaps it may be better to cultivate the whole, but it is almost impracticable, upon ordinary farms, to keep any considerable extent of orchards constantly under the plow. I have, this autumn, prepared about three acres of land for planting with apple-trees next spring, in a mode which seems new to those who have observed it, and which it may be useful to owners of new land to know. A heavy growth, chiefly of white pine, was taken

from the land three years ago. It was never burnt over, and white birch and other bushes had sprung up, so that it had a month ago as little the appearance of an orchard, as any tract in the State. Having cut the bushes, I staked the land out for the rows of trees, twenty-eight feet apart. Three men with hand tools, without cattle, in one week dug out nearly all the stumps and visible roots within four and a-half feet of the rows staked out. Then with three yoke of oxen, in three days the strips nine feet wide were plowed by back-furrowing more than a foot deep. Two men were required besides the driver and plowman to do this work, one with a sharp axe to cut off the roots which were found by the plows, and another to follow with a hog-hoe to mend the broken furrows.

The land, being free from stone, is thus thoroughly worked in strips of nine feet wide one way, through the tract, leaving about two-thirds of it in possession of the pine stumps, to be dealt with at some future day.

I am now having holes dug for the trees, *six feet* across, and *eighteen inches* deep. The soil thrown out is to be mixed with about three bushels of compost manure from my barn cellar, and half a peck of ashes to each tree, to lie in heaps until the time for setting the trees in the spring.

I mention the *manure* particularly, because an article has been recently published by high authority, objecting to the use of any manure in planting fruit trees.

Green manure should never be used about any trees; but compost, which will not ferment, may be applied in the manure I have mentioned, with manifest advantage, as my own trees bear abundant testimony.

By planting the plowed strips of my new orchard with potatoes and corn, I think the trees will flourish as well for five years, as if the whole ground were worked. Then the whole should be cleared up and *subsoiled*, and the fruit will abundantly pay after that time for any reasonable expense of cultivation.

To show by facts, and not theories merely, the advantage of raising fruit, I will state what has been the value of the crop of a single orchard to which reference has before been made in the Farmer. Mr. Joseph Robinson, of Chester, N. H., has an orchard of less than two acres, which produced a crop of fruit in 1847, for which he was offered six hundred dollars, on the trees; in 1849, a crop which sold for six hundred and eighty dollars; and this year he was offered $425 for the fruit on the trees, and declined the offer. His orchard has been long in full bearing, and bids fair to last for a generation to come. His fruit has been sold in the neighboring markets from one to three dollars per barrel. From his own account I am satisfied that the average nett income of that orchard for ten years past has been more than three hundred dollars a year—the interest of *five thousand dollars!*

A gentleman in Hampton, in this State, sold the fruit of about four acres of land, this season, for $800, and last year he received $1400 for the fruit of the same orchard.

Now if we were credibly informed that so profitable a business as this could be done in California, flocks of our young men would peril health and life even, to find the golden soil; but it is too matter-of-fact a business to remain and labor *at home*. It requires six years for trees which we get from the nurseries to come into bearing, and many of our *young* men are too old to wait so long.

I recently met a gentleman, who has one of the finest orchards in this vicinity. Said he, "I am more than seventy years old, but I have set over a hundred apple trees this fall." Mr. McClintock, of Portsmouth, who is now ninety-four years of age, this year ate of the fruit of trees planted with his own hand when he was *eighty-six!*

And by-the-way, there is no doubt that a man who plants trees in his old age, lives the longer for doing it. An interest in the works of nature—which calls him to active exercise, and keeps up his sympathy with the pursuits of other men, prevents him from breaking down at once like the retired merchant or professional man, who dies prematurely for want of anything else to do!

As a profitable investment of capital, there is nothing that now promises better for a half century in New England, than fruit raising. The cry of an over-supply has been kept up for fifty years already, and still the price of fruit has regularly increased. Mr. Robinson says that when he planted his orchard with seedling trees more than fifty years ago, his friends told him there could never be a demand for so much fruit.

Nobody doubts that just at this time, an orchard is of more value than land in any other use. The most obtuse intellect yields to a mathematical demonstration by simple addition; but still the doubt is, whether there can be a demand for all that can be raised. This question was ably considered in a recent number of the Farmer, by one of the editors, and need not be here pursued.

Let the subject of fruit be kept steadily before the public, in our Agricultural journals.

Many will read, and profit by what they read, and many more will doubt and hesitate, and in future years, regret, as so many are now daily heard to do, that they had not begun in their younger days to plant trees. H. F. French.

Exeter, N. H., Nov. 15, 1851.

For the New England Farmer.

CRANBERRY CULTURE ON UPLAND.

Gents:—I perceive that doubts remain (see Ploughman and Farmer of this date, Nov. 15) of the practicability of successfully growing the cranberry, on upland, or high-land, as distinguished from meadow, in Yankee phraseology. As this is one of those fruits found on the soil of New England, by our fathers, at a period of earliest memory, it seems to me too late to doubt the positions in which it can be grown. That the cranberry does grow, and in great abundance too, on many meadows without the aid of culture, there can be no doubt. That it can be grown above the meadows, on soil sufficiently elevated for the purpose of growth of corn or garden vegetables, is to my mind equally certain.

This fact has been demonstrated, by the continued cultivation by the Messrs. Needham, of Danvers, of about half an acre of land, near where the toll-house used to stand on the Newburyport turnpike. This spot is in a valley near the height of land between the sea and Ipswich River, and I should judge it to be sixty feet above tide water. In the spring of the year, there would

sometimes be an accumulation of water upon this land; but its natural product is English grass. I am the more particular in describing the position, that those who have not the privilege of viewing, may understand it. On this ground there has grown the present season many bushels of cranberries of the largest size and finest quality I have ever seen; (and I profess to be a judge of the quality, being an extravagant admirer of it, when prepared for the table; thinking it more palatable than any other sauce within my knowledge.) In fact, I have always viewed it as an indispensable accompaniment of a good Thanksgiving dinner. One of those New England customs, peculiarly proper to be consecrated by the use of New England fruits and fowls.

I have spoken of the feasibility of growing this fruit on the upland, as being beyond doubt; but of the expediency of it, as a matter of profitable culture, I am not fully advised. I have endeavored, by repeated inquiries, to ascertain this from Mr. N. himself; but the probability is, he has pursued the culture, *con amore*, with such a determination to test its feasibility, that he is not able to speak with confidence as to the labor consumed by it. Everything necessary to be done to keep the patch in best condition, has been done by him. It has always appeared entirely free of grass and weeds. The only dressing that I have witnessed being applied was pulverized meadow mud, strewed between the rows of plants, and gathered by the hand about the roots. In September, the runners fully covered the ground; and the berries, for a space from six to twelve inches in width along the rows, were as thick as they could lie—in many instances, as they expanded, crowding each other from their places. A specimen of these cranberries, thus growing, was exhibited at the late Show in Salem (Sept. 25th) and viewed with admiration by all those who had any just appreciation of the philosophy of culture. I have seen accounts of cranberries being successfully grown on banks of sand; and that sand is a good application to encourage their growth. How this may be, I cannot say from my own observation. I think I have seen something of the kind, in the publications of the Plymouth Society. "The natural cranberry is such a capricious character, that all efforts to improve the crop are in vain,"—says your correspondent, S. B., of Wilmington, who lives in the region of cranberries—but such is not the testimony of the Messrs. Needham and Fowler, of Danvers; gentlemen of as much discrimination in their observations of culture as any within my knowledge.

I understand Mr. N. to say, that he considers *meadow mud*, in some form, essential to the healthy growth of the cranberry. This shows that Nature made no mistake in her selection of positions for the growth of this plant. Perhaps you may think that I have spun my yarn to an unreasonable extent, on so small a topic as the cranberry. Nevertheless, if I can induce any one to pursue the culture of this plant, until he can explain what elements in the soil are best adapted to promote the growth of this excellent fruit, I shall feel that I have done a good service. P.

Nov. 15, 1851.

Remarks.—Our correspondent's remarks are clear and opportune—the subject interesting and the discussion of it a profitable one. The market, at present, is not supplied with this favorite berry. It is selling to-day for eight and nine dollars a barrel. A friend informed us the other morning that he had just taken $80 for his load of cranberries, and that he had sold within a few weeks $800 worth, at about $3 per bushel.

Last spring we set some five hundred plants on upland. They have done well, many of them bearing very large and handsome berries. We shall continue to cultivate them with care, and think we shall be able to speak favorably of them in upland culture hereafter.

For the New England Farmer.

BLOODY MILK.

BY JOSEPH C. BRADLEY.

Gents:—I noticed in your paper of the 1st inst. an inquiry for a remedy for "bloody milk." It is not an uncommon disease, and is not difficult to remedy. My plan is as follows:—Take three or four pieces of the dried root of "garget," as it is commonly called; pulverize it and mix with a quart or two of bran or Indian meal, and give it to the cow. If she has been used to messing, she will eat it readily. Administer the like mess to her once every fourth or fifth day, till the symptoms disappear, which will be the case in two weeks, or less. If you cannot readily procure the root in a dry state, dig up the green root and cut it into pieces about four or five inches in length, and with a piece of thread confine it to the root. Cram it into the cow's mouth and hold her with her nose elevated till she chews and swallows it. In its green state it requires about double what would be required when dry. It is an infallible cure for almost every disease of the glands of either horned cattle or horses.

The same remedy, if seasonably applied to horses which have been afflicted with what is commonly called the horse-ail, having the glands about the throat tumefied in consequence of a want of suppuration, would save hundreds of horses yearly from that fatal disease called the glanders. I have watched the favorable effects of that valuable root upon the diseased glands of cows, oxen and horses, with the highest gratification, for more than half a century. Mr. Upham, your correspondent, is invited to try it and give the results of the remedy in your valuable paper. J. C. B.

Bristol, Addison Co., Vt., Nov. 3, 1851.

Remarks.—For some extended remarks upon the above communication, the reader is referred to another column.

Protecting Half-Hardy Shrubs.—The following method is recommended by the *Horticulturist*:—Raise a small hillock of tan or charcoal, or sand, round the trunk of the shrub, and turn a barrel over it. In order to admit a little light and air, raise the north side of the barrel a couple of inches, and put a stone under it. It is not the cold, but the sunshine after the cold, which destroys half-hardy plants.

For the New England Farmer.

AGRICULTURE---NO. 2.

HISTORY OF VEGETATION.

BY R. H. HOWARD.

We find the primal starting point in the history of vegetation to be the committing of the seed to the soil, wherein it is ultimately to develop itself in all its parts, and wherefrom it is principally to derive its nourishment till maturity.

In this, as in all other developments of nature, we find that the future growth and health of a plant is very much, yea, almost wholly dependent upon the manner in which the seed is primarily brought to develop itself. Hence great care must of needs be taken that it be properly committed to its appropriate element. In this operation we must first take heed that the seed be not buried too deep—that is, not so far under but that the air can have access, as this is absolutely necessary to germination. The earth, therefore, must lie loose and light over it in order that the air may penetrate. Hence the importance of digging, harrowing, plowing, &c. A certain degree of heat and moisture, such as usually takes place in spring, is likewise necessary.

But before we proceed farther, in order that we may more fully understand the nature of germination, let us glance at the different parts of which the seed is composed.

The external covering or envelope is found to contain, besides the germ of the future plant, the substance which is to constitute its nourishment—called the parenchyma. (*a.*)

The seed is generally divided into two compartments, called lobes or cotyledons (*b.*); the dark colored kind of string which divides these lobes is called the radicles (*c.*), as it forms the root of the plant. The figure and size of the seed depend very much upon the cotyledons; these are said to vary in different seeds, and it is plainly seen that while some have only one, as wheat, oats, barley and all the grasses, others have three, and some six. But most seeds, as for instance all varieties of the bean, have but two cotyledons.

When the seed is buried in the earth above about 40°, it imbibes water, which softens and swells these lobes; it then absorbes oxygen, which combines with some of its carbon, and is returned in the form of carbonic acid. This loss of carbon increases the comparative proportion of hydrogen and oxygen in the seed, and excites the saccharine fermentation, by which the paranchymatous matter is converted into a kind of sweet emulsion. In this form it is conveyed into the radicle by vessels for that purpose, and in the meantime the fermentation having caused the seed to burst, the cotyledons are rent asunder, the radicle strikes into the ground and becomes the root of the plant, and hence the fermented liquid is conveyed to the *plumula*, (*d.*) This is a substance enclosed within the lobes of the cotyledons and contiguous to the radicle—from whence the stem arises—whose vessels have been previously distended by the heat of fermentation. The plumula being thus swelled, as it were, by the emulsive fluid, raises itself and springs up to the surface, bearing with it the cotyledons, which, as soon as they come in contact with the air, spread themselves and are transformed into leaves, which at first appear very thick and clumsy. This is owing to their retaining the remains of the parenchyma, with which they still continue to nourish the young plant; as it has not yet sufficient roots and strength to provide for its sustenance from the soil. But when it has arrived at a little greater age, and the radicle shall have sunk somewhat deeper into the earth, sending out its fibrous shoots in every direction, each of which is found to be furnished with an apparatus for sucking up nourishment from the soil, the function of the original leaves being no longer required, they gradually decay, and the plumula becomes a regular stem, which, through a regular process of development, is now prepared to increase to the full stature of a mature plant.

Here we can but note a very striking analogy between the seed and the egg: both require an elevation of temperature to be brought to life, both at first supply with aliment the organized being which they produce, and as soon as this has attained sufficient strength to procure its own nourishment, the egg shells break, whilst in the plant the seed leaves fall off.

Likewise another analogous principle of the vegetable and animal kingdoms we shall observe as we progress—viz, that as in both cases, the chief and original *nourishment* is derived from the *soil*, so from the *atmosphere* is derived their principle of vitality. But how is this? plants do not breathe?—We shall see.

As soon as the young plant feeds from the soil and provides for its sustenance "on its own hook," it requires the assistance of leaves, by which organs the plant throws off its superabundance of fluid. This secretion is much more abundant in the vegetable than in the animal creation, and the great extent of surface is admirably calculated for carrying it on in sufficient quantities. This fluid thus transferred is found to consist of little else than water. The sap by this process is converted into a liquid of great consistence, which is fit to be assimilated to its several parts. Hence the great injury arising from destroying the leaves of a plant, as it not only diminishes this transpiration, but also the absorption by the roots: for it is ascertained that the quantity of sap absorbed from the soil is always in proportion to the quantity of fluid thrown off by the transpiration. We see, then, the necessity of a young plant unfolding its leaves as soon as it commences deriving its nourishment from the soil.

Perhaps it would be proper to remark here that the function of transpiration seems to be confined to the upper surface of the leaf. Whilst, on the contrary, the lower surface, which is somewhat more rough and uneven, and furnished with a kind of hair, or down, is destined to absorb moisture and other such ingredients as the plants derive from the atmosphere.

As soon as the plant makes its appearance above-ground, light, as well as air, also becomes necessary for its preservation. We often observe what a predilection vegetables seem to have for light, which is especially essential to the development of colors and to the thriving of the plant.

But to proceed more directly to the connexion or relation rather of the atmosphere to vegetation, we might with some propriety observe that plants are truly endowed with the property of breathing, as they certainly do derive many principles or properties from that source, and also yield others to it, but during this process of respiration—if thus it

may be termed—we find that directly the opposite properties are made use of than during the respiration of animals, and thus sustaining the desired equilibrium. Indeed, it is chiefly, and I might say wholly owing to the action of the atmosphere and vegetable kingdom upon each other that the air continues always fit to impart to us its vital principle.

But to explain. It is found that animals, during the process of breathing, retain the oxygen of the atmosphere for their own use, and in return load the air with carbonic acid, which, if accumulated, would in process of time render the atmosphere totally unfit for respiration. Here, the vegetable kingdom interferes, and, as oxygen to the plant is not so essential as many other ingredients, such as hydrogen, carbon, &c., it attracts and decomposes the carbonic acid, retains the carbon for its own purposes and retains the oxygen for ours.

Ah, what a striking instance of the harmony of Nature! And what an admirable design of Him who maketh every part of the creation thus to contribute to the support and renovation of each other.

We are now about to bring our observations on this point to a close. We have observed the nice minute arrangement exhibited through all the various stages of development, and have admired the great perfectitude with which the process is effected. The whole "modus operandi" of vegetation, in miniature is before us, and as we review it again and again, *truly* how forcibly are we struck by the "fitness of all things"—of the striking *intent* of the Divine Architect in all His works, as well as that infinite and truly superhuman power every where evinced. Indeed, who, with the least of those qualities which beautify the inner man, can regard these All-wise demonstrations of a kind over-ruling hand without being led "to look through Nature up to Nature's God."

R. H. H.

Burlington, Vt., Oct. 27th, 1851.

Remarks.—(*a.*) *Parenchyma.* The pith or pulp of plants.

(*b.*) *Lobe*, or *Cotyledon.* The part of a plant or fruit, to which the seeds are attached, and which perishes when the seeds sprout.

(*c.*) *Radicle.* That part of the seed of a plant which, upon the seeds vegetating, becomes the root.

(*d.*) *Plumule.* The ascending part of the plant which becomes the stem.

TO MAKE YOUNG PEAR TREES BEAR.

I was afflicted by the sight in my garden for four or five years, of the most luxuriant and thrifty young pear trees, which would not bear, but all their strength ran to wood. Vexed at this, I resolved to try the effect of bending down the branches so as to check the flow of sap and cause them to form fruit buds instead of wood buds. Accordingly, the first week of December, 1847, I filled my pockets with stout twine; I drove down some small pegs into the ground underneath my trees, (which had branched low, so as to make dwarfish heads;) I then tied a string to the end of every long shoot, and gradually bringing down the end of the limb till it curved down so as to make a considerable bend or bow, I fastened it in that position either by tying the other end of the string to the peg, or to another branch or a part of the trunk.

According to my expectation, the tree next year changed its habit of growth, and set an abundance of fruit buds. Since that, I have had plentiful crops of fruit without trouble—take good care not to let many branches go on the upright system. —*Horticulturist.*

THE FARMER.

Drive on, thou sturdy farmer,
Drive cheerfully o'er the field,
The pleasures of a farmer's life,
No other life can yield.

Thou risest with the morning sun,
To till the fruitful earth,
And when thy daily task is done,
Thou seek'st thy peaceful hearth.

Thou lovest not the gaudy town,
With its tumultuous roar;
Plenty and peace thy fireside crown,
And thou dost ask no more.

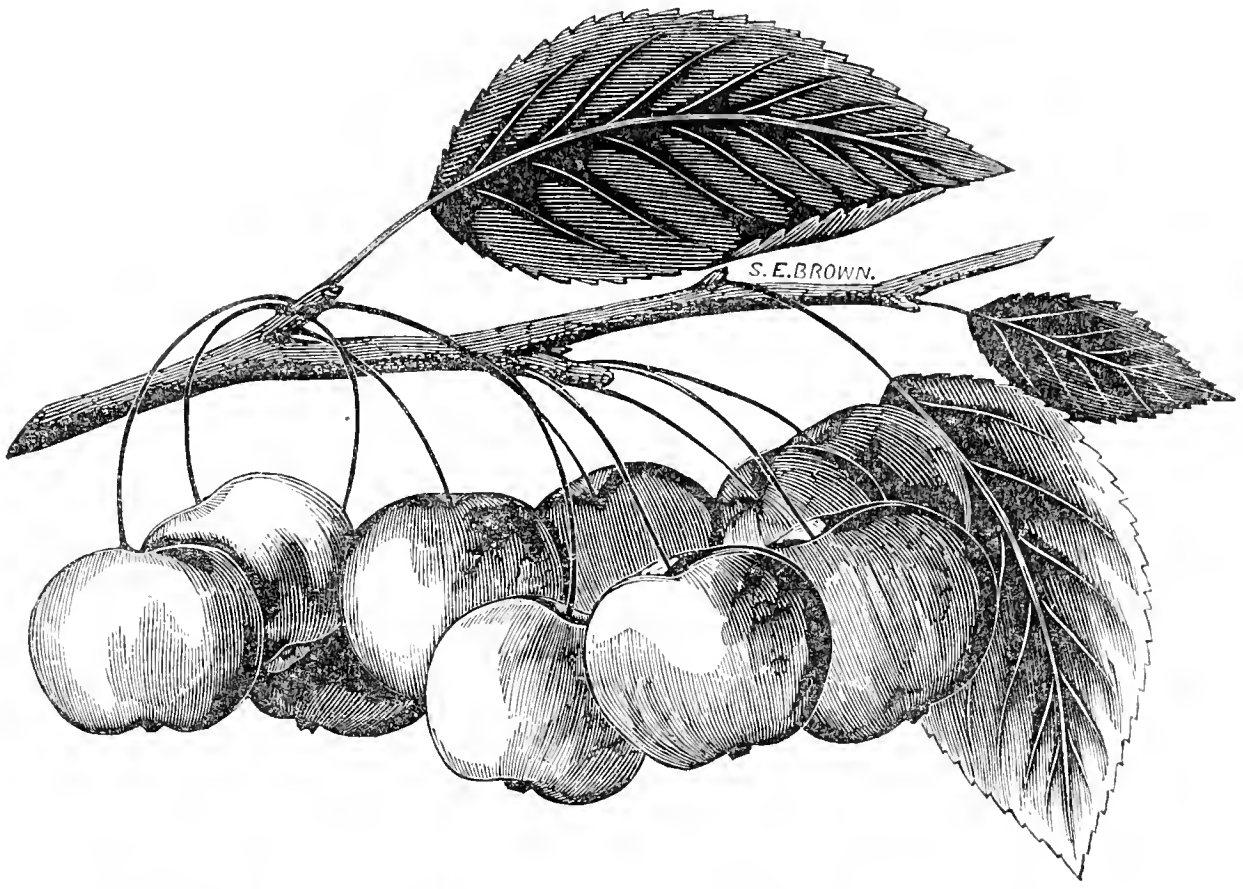
Monarchs in robes with crimson dyed,
Are low, compared with thee;
They are pampered sons of pride,
Thou art God's nobility.

Go on, thou sturdy farmer,
Tread proudly on thy sod,
Thy proud and goodly heritage,
Thou chosen son of God.

TAPIOCA.

A milk-white substance is deposited by the juice of the mandioca root, which being collected, and hardened by exposure to the sun, constitutes the article so well known as tapioca, from which such wholesome and delicious puddings are made. So very poisonous in the root in its natural state, that it has been found to occasion death in a few minutes when administered experimentally to animals, and it is said that the natives used it with great effect many years ago in destroying their Spanish persecutors. It has been ascertained by dissection that this poison operates by means of the nervous system, producing immediate convulsions and exquisite torments, as soon as it is introduced into the stomach. In some instances it has been used in the executions of criminals, in which cases death invariably ensued within five to ten minutes after imbibing it. The fatal principle appears to exist in certain gases which are dissipated by heat. This is conclusively proved, from the harmlessness and highly nutritious properties of the farina, when the process of its manufacture has been completed.

It has been stated on good authority, that a single acre of land planted with the mandioca root, will afford nourishment to more persons than six acres of wheat planted in the same manner, and my own observation fully justifies this assertion. Concerning the value of the plant, Southey remarks with truth, that "If Ceres deserved a place in the mythology of Greece, far more might the deification of that person have been expected who instructed his fellows in the use of mandioca."—*Paraon the Amazon.*



SIBERIAN CRAB APPLE.

This tree forms a dwarf, and is very beautiful in its habits, as the foliage is large, luxuriant and pendent, and usually forming a contrast in color with other apple trees around it. In spring it makes a splendid appearance from its large as well as beautiful blossoms, and in fall it is ornamented with large clusters of red fruit which continue through the season.

The Red Siberian Crab apple is not only ornamental but useful, as it produces valuable fruit which is good for preserves, sauces, tarts, &c.

FARM WORK FOR DECEMBER.

Insects.—There may be days in this month when the weather will be mild and the ground open so as to admit the plow. If such should be the case, it will offer a good opportunity to disturb, and perhaps destroy, some of the enemies who have escaped your vigilance through the summer.

Wire Worm.—This is an old depredator—everybody knows the hard, snapping rascal, better, perhaps, than they know how to get rid of him. He is about an inch long, a yellowish color, and travels upon six legs; he is probably the same worm so often noticed sticking in the potatoes when they are dug. He is found in large numbers, on grounds which have remained a long time without being plowed. They may have turned up their noses at your nostrums of every kind, but if you turn *them* up to a good sharp frost, their day of desolation is ended.

Cut Worm.—This is another destructive insect, sometimes destroying considerable portions of large fields of corn. They come up in the night and eat off the tender shoot, usually just above the surface of the ground, and then return below to digest their booty in peace. They also cut off other young and tender plants. We have "been the death" of great numbers of them, but unfortunately, not till after they had given us unmistakable evidence of their whereabouts, by destroying our corn. Freeze them, then,—it is too delicate an operation to "put salt on their tails," so we recommend the use of the plow to expose them to the frosts of winter.

Weeds.—While you are after the insects, by plowing, you will destroy great numbers of weeds and foul grasses. It is said that by harrowing over a piece of ground in the winter that was plowed in the autumn, witch grass can be killed. If so, we know of no easier way to do it. Mr. Delafield says, in the New York Transactions, that insects will die when exposed to a temperature at from 16° to 14° above the freezing point, and that autumnal plowing should be resorted to, that insects may be turned up from their resting places, exposed to a low temperature, and thus be destroyed. Very early spring plowing would have the same effect; that is, during the time when the frosts are sharp. We have never been under the ground to see how these fellows operate there, but suppose that as the temperature above becomes lower, they sink deeper into the earth, and rise again as the sun penetrates and warms it. If you

can find opportunity, plow, and watch its effects, and tell the world the results.

Colts.—We have never seen a poor, half-starved, shrinking human wretch, but it has brought to mind the old adage—"He looks like a motherless colt." The idea has prevailed, certainly ever since we knew a colt from a cart, "that any thing will do for a colt—he can get a living by picking up the scatterings about the yard, and fields, "and under the stone walls." And a more pernicious idea never prevailed about a farm-yard. The profit of stock depends greatly upon the rapidity of its growth. By proper attention the colt may be worth as much at three years of age as he would be at four, with indifferent care; you save in this case all the keeping and risk for one year, and the use or interest of the money for the same time. Beside the losses which have occurred from this belief, the practice is a cruel one, to expose a young animal half-fed to the peltings of the pitiless storm. He stands tail to the wind, his hair long and frowzy, and his buttocks and sides covered with filth, a perfect picture of despair, and a fitting representative of the age of rattling clapboards, stuffed windows, and a tippling master.

Young and *old* animals need the most care. The middle aged and strong may do with less.

Keep no more stock than you have plenty of good fodder for, and time to prepare it in the best manner, and to keep them cleanly, and consequently healthy. This will yield a larger profit than any greater number kept with the same amount of care and food.

WHAT IS PRACTICAL FARMING?

Farming has become so respectable an occupation of late, and the title of Farmer so honorable, that grave questions are likely to arise, which may require the intervention of an office of Heraldry, to determine who has the right to bear that title, and what order of precedence shall be established among the various claimants of the exclusive privilege of bearing the ensigns armorial of Husbandry. The *Practical Farmer* undoubtedly stands head and shoulders above everybody else, but the question returns, *Who is the practical farmer?* We have among us all kinds of farmers. First, we have the *amateur* farmer merely, who does not know the *near* from the *off* side of a team, who has *read* of subsoil plows but never saw one, and who knows all about chemistry and geology that can be learned without soiling his boots by stepping out of doors. Ask him if he could conduct the affairs of a farm, and he would give the same answer as the youth who was asked if he could play the flute—"I suppose I could, but I never tried." Manifestly, *this* is not the practical farmer. Then we have the man who prides himself upon being a farmer and nothing else. He lives on the same farm where his great grandfather was born, and inherited his knowledge of husbandry with the old wooden plows, which he still uses. He takes no agricultural paper, and reads no books on the subject, because he knows all about it, already. He is not to be humbugged by any science, or new-fangled notions about composts, mineral manures, or deep plowing. Manure, with him, is what he finds left in the spring, out doors, under his hovel-windows—about a load for each ton of hay consumed—and he plows about four inches deep, and puts manure in the hill where the corn can find it. His boys have discovered that farming *wont* pay, and have gone to California, while he finds the buildings and the tools have grown old, and the interest on the old mortgage is gradually gaining on him. However, he is sure he is one of the class, which are termed the *bone* and *sinew* of the country, and the only true *practical* farmer. That he is a practical, as well as a most *impracticable* farmer, there is no doubt.

Then we have a third class of men who may have worked all their lives upon the land,—of men who, having acquired a taste for farming in youth, after successful toil in another business for years, have returned to their first love, and devoted their later years to agricultural pursuits—of professional men and merchants, who having room in their brains for more than one idea, are conducting their farming operations at the same time with their other affairs—in short, a class composed of all those who believe in *progress* in husbandry, as in everything else, and have the personal direction of their farms. The farmers of this class do not believe that the earth gave up all her secrets at once to the tiller of the soil. They do not think, like the Chinese, that they are precisely in the centre of the world, and all others are *outside barbarians.* They see that the soil of the country has been exhausted by injudicious cropping, and feel the necessity of improvement.

They listen attentively to the chemist, or man of science, who tells them what are the components of the soil, and of the crop, and in what way they can best restore to the barren field the elements of fertility. They are willing to hear about subsoiling and draining, and to *think* upon the reasons given why those operations should be beneficial. They can conceive, and believe, upon paper evidence, that there may be manures besides what are found in the barn-yard. In short, they are willing to "try all things" that they may "hold fast that which is good," or in other words to expend time and money in making experiments for the benefit of their neighbors. These men are emphatically *Practical Farmers*—practical as opposed to the mere *theorist—practical* in the highest sense as men whose labors are of *practical use* to themselves, and their fellow-men.

There is still another class, who, as cultivators of the soil, are *practical* men. We refer to the

gardener and horticulturist,—from whose experiments have been derived many of the most important improvements in the arts of cultivation. Witness the labors of those, both in Europe and in this country, in the production by hybridization, of new and valuable farm products, for the apple, the pear and the peach. The beet, the turnip, the cauliflower, and even the strawberry and raspberry are as much agricultural products when grown *within*, as when grown *without* the pale of the garden fence. These are the men who have uniformly urged the necessity not of shallow plowing, but deep and thorough tillage; not guess work in the adaptation of soils, crops and manures, but a scientific knowledge of each; and should the farmer use the same precision in the adaptation of the constituents he uses for his various crops, as the gardener does for his various tribes of plants, it would need no seer to predict the beneficial effects resulting from it.

A practical cultivator is not *necessarily* a man who daily holds the plow, or drives a team, or shovels manure, or digs ditches. He may or may not put his own hands to such labors; and if he finds it more convenient to devote his time to the general direction of his affairs, while a foreign laborer, who can do nothing else, is hired for such work, he does not forfeit his title of *Practical Farmer*, nor does the laborer merit that appellation.

If to be a practical farmer is merely to labor with the hands, then the farmer who has extended his practical operations on his farm so far that his whole time is required to direct them merely, is no *practical* farmer, although practical results may have multiplied indefinitely around him—an absurdity which can never be tolerated.

CORRECTION.

In our last issue we published a capital article on the "Value of Phosphoric Acid in Agriculture." We found it in our exchanges, credited to the *Western Agriculturist*, and gave it that credit. The article was written by the celebrated chemist, Dr. C. T. Jackson, of this city, for our neighbor, the *Journal of Agriculture;* and although the Journal can bear a filching from its columns as well as any paper in our knowledge, we hasten to make the correction. We are attentive readers of the Journal, but had forgotten the article in question, which was published in its first number in July last.

It is our intention, not only to *give credit*, but to copy as extensively as our limits will permit from our agricultural friends. It costs something to fill the pages of an agricultural sheet with useful thoughts as well as for the paper upon which its articles are printed; and we find much pleasure in disseminating the views of those whose hearts are in the cause, and who are contributing something valuable to the common cause.

It is delightful to see our offspring returning to us from all parts of the land, dressed up in their new suits, and with their smiling faces making their best bow at the same home from which they went forth. But when they return shorn of their good name, with quailing eye and downcast countenance, there is strong reason to suspect that they have been abroad and fallen into evil company!

☞ Mr. John Bancroft, of West Salisbury, suggests that if pork eaters wish for a thin delicate rind to their pork, they must always keep the animals well supplied with a good soft bed. And he is right. Let a man lie on his back on the soft side of a hard plank for 18 months, and we will guarantee that his pork will have a thick skin too.

For the New England Farmer.

RURAL ARCHITECTURE.

BY JOHN L. BLAKE, D. D.

There are few things in a country landscape which more forcibly arrest the attention, or more agreeably impress the mind of a traveller than a comely style of farm-houses, cottages, and other edifices needed on a farm. And scarcely less important in rural scenery is the exhibition about these buildings of substantial and tastefully constructed fences and gates. Such is not the fact simply with the traveller who has a scientific knowledge of the principles of architecture. It is in a measure so with others; for there is in all well-balanced minds an apprehension of what is comely or beautiful, although in thousands of cases the individuals may be unable to determine the reasons for the emotion they experience. Well-formed objects cause a pleasure in the mind of the beholder, and ill-formed and uncouth ones cause a painful sensation, although the individual may be ignorant of the philosophy which occasions the difference. No one can deny this. No one, it might seem, is without experience in illustration of this principle of our nature. All at times must have felt the truth of it. A few instances will be sufficient to render it incontrovertible.

To wit, where are the persons to be found so stupid and so destitute of taste and so insensible to the perfection of Divine wisdom in the material creation as not to gaze with delight on a beautiful human face, a piercing black eye, or well-proportioned limbs; or to turn away in disgust from such as are of a contrary description? Who are so obtuse in their perceptions, as not to be delighted with the regular proportions and the graceful movements of the race-horse, or with the rich plumage of the peacock or the bird of paradise; and, on the other hand, as not to be shocked with the filth of the vulture and the want of symmetry in numerous other animals? The same impulsive attribute of the human mind operates in relation to architectural structures. It operates also in regard to dress, in regard to furniture, in regard to pleasure carriages, in regard to all kinds of machinery, and in regard to all kinds of implements for the various manual operations of life. Why not then in regard to architecture? It does so operate in regard to it. Who would fail, however ignorant he might be of the principles of archi-

tecture, to bear testimony of the fact, when on the one hand beholding an edifice for a human habitation with one corner lower than the others, with windows and doors of all shapes but right angular ones, with its main timbers more resembling the natural growth of trees than right lines, and with numerous other similar outrages upon mechanical skill; and, on the other hand, beholding one with proportions of perfect order, denoting adaptation to convenience and durability as well as to the canons of a well cultivated taste, and this moreover encompassed with equally well constructed out-buildings, so arranged as to furnish materials for an elegant landscape? There is not one person in a thousand who would not mark the difference. There is not one person in a hundred who would not be impressed with the difference as we have stated.

In this country there has generally been a deplorable deficiency of taste, in regard to convenience and comfort in farm edifices. In multitudes of cases the barn is known from the house rather because the occupants of the one have four legs and those of the other have two, than from any prominent difference of architecture. By removing the windows and chimneys from the latter to the former, the occupants of the two might exchange quarters without much loss to the one party, or gain to the other. For this there is no necessity. It is the result mainly of a want of good taste, and a little architectural knowledge within the reach of all. The difference of cost between such a style of structure, and one that commends itself to the man of taste, is not of any magnitude; the materials in both cases are about the same. All the difference is in the amount of labor required, and this cannot be considerable, if the builder understands his business. Surely it is as easy to erect houses and other buildings in good taste, as to erect those presenting every species of incongruity and deformity; and these different structures shadow forth the good sense of the proprietors, or the want of good sense, as the case may be. We think a good agricultural education should include correct notions on rural architecture. These notions are to be acquired principally from reading and studying books relating to the subject. Fortunately such books are not rare. Several have recently been published that will do much in remedying the evils of which we complain.

As little importance as farmers have generally attached to rural architecture, it is believed safe in affirming, that farms would frequently sell for ten per cent. more, when due attention has been paid to this subject; that every dollar of extra outlay upon it will bring to the proprietor ten dollars in return—a thousand per cent. And this is in addition to the pleasure every day experienced by him in the occupancy of well devised architectural premises. There is now an improving taste in our country relating to this matter. Several of the books alluded to have been instrumental in promoting it. We name a few of them. The first that fell under our notice was Downing's Rural Architecture, published by John Wiley, of New York. The next was Country Houses, by the same author, published by D. Appleton & Co., New York. These books are beautifully got up, and are among the most appropriate for Holiday Gifts, or for ornaments on the centre-table, as well as the advancement of their more legitimate aims. More recently there has been published by Charles Scribner, of New York, Wheeler's Rural Homes, a work much less extended and expensive, but equally well calculated to be useful, and equally beautiful as a book for ornament. There are other works richly deserving commendation, but these are among the best of their class, and we think the very best. Several of our agricultural journals are also contributing to an improved taste for Rural Architecture. All such efforts are of great value, and will lead to the best results. Let the improvements of which we speak become general in our country, and there will be a charm in rural life hitherto but little realized; the occupation of husbandry will experience an elevation hitherto but little imagined; and, a residence on the farm will be mainly relieved from that repulsive attribute now by many in the city ascribed to it.

FLEMING GROVE.

Essex County, N. J., Nov. 18, 1851.

For the New England Farmer.

THE CORN CROP.

BY JOHN BROOKS.

MR. EDITOR:—In a conversation with you, last winter, I remarked that I was collecting statistics to show the comparative average crop, cost and profits on growing corn and wheat, and the profits on raising hogs in New England and the Western States. I have the average crop and cost of cultivating one acre of corn and one acre of wheat, in sixteen of the principal grain-growing States in the union; but for fear of being tedious, I will compare only three New England States, viz: Massachusetts, New Hampshire and Vermont, with three of the Western States, viz: Ohio, Indiana and Illinois. I have collected what I give below, from the Patent Office Reports, and from other reliable sources, and I believe it will be found as near the truth as the present state of information upon the subject will admit.

The crops and prices and cost of cultivation are an average of ten years, from 1840 to 1850.

Corn, average crop in Mass., 40 bushels the acre.	
" " price the bushel, 80c, is	32,00
Value of stover the acre,	7,00
Value of the whole crop per acre,	39,00
Cost of cultivation, including interest on land,	20,00
Profits per acre,	$19,00
Wheat, average crop in Mass., 18 bushels the acre.	
" " price $1,34 the bushel, is	24,12
Value of straw the acre,	5,00
Value of the whole crop the acre,	29,12
Cost of cultivation, including interest on land,	18,00
Profits per acre,	$11,12
Corn, average crop in N. H., 40 bushels the acre.	
" " price the bushel 80c, is	32,00
Value of stover the acre,	6,00
Value of the whole crop the acre,	38,00
Cost of cultivation, including interest on land,	20,00
Profits per acre,	$18,00
Wheat, average crop in N. H., 20 bushels the acre.	
" " price $1,34, is	26,80

Value of straw the acre,	5,00
Value of whole crop the acre,	31,80
Cost of cultivation, including interest on land,	22,00
Profits per acre,	$9,80
Corn, average crop in Vermont, 40 bushels the acre.	
" " price the bushel 73c, is	29,20
Value of stover the acre,	4,00
Value of whole crop the acre,	33,20
Cost of cultivation, including interest,	16,00
Profits per acre,	$17,20
Wheat, average crop in Vermont, 20 bushels the acre.	
" " price $1,31, is	26,80
Value of straw,	4,00
Value of the whole crop the acre,	30,80
Cost of cultivation, including interest on land,	20,00
Profits per acre,	$10,80
Corn, average crop in Ohio, 50 bushels the acre.	
" " price 28 cents, is	14,00
Value of stover,	3,00
Value of whole crop the acre,	17,00
Cost of cultivation, including interest on land,	7,00
Profits per acre,	$10,00
Wheat, average crop in Ohio, 20 bushels the acre.	
" " price 78 cents, is	15,60
Value of straw,	3,00
Value of whole crop the acre,	18,60
Cost of cultivation, including interest,	8,00
Profits per acre,	$10,60
Corn average crop in Indiana, 60 bushels the acre.	
" " price 26 cents, is	15,60
Value of stover,	1,00
Value of whole crop the acre,	16,60
Cost of cultivation, including interest on land,	7,20
Profits per acre,	$9,40
Wheat, average crop in Indiana, 20 bushels the acre.	
" " price 75 cents, is	15,00
Value of straw,	1,00
Value of whole crop the acre,	16,00
Cost of cultivation, including interest on land,	8,00
Profits per acre,	$8,00
Corn, average crop in Illinois, 60 bushels the acre.	
" " price 26 cents, is	15,60
Value of stover,	1,00
Value of whole crop the acre,	16,60
Cost of cultivation, including interest on land,	7,20
Profits per acre,	$9,40
Wheat, average crop in Illinois, 20 bushels the acre.	
" " price the bushel 75 cents, is	15,00
Value of straw,	1,00
Value of whole crop the acre,	16,00
Cost of cultivation, including interest on land,	8,00
Profits per acre,	$8,00
Profit on one acre of corn in Massachusetts,	19,00
" " " N. Hampshire,	18,00
" " " Vermont,	17,20
Average of the three States,	$18,06
Profit on one acre of corn in Ohio.	10,00
" " " Indiana,	9,40
" " " Illinois,	9,10
Average of the three States,	$9,60
Balance of profits on one acre of corn in favor of New England States,	8,46
Profit on one acre of wheat in Massachusetts,	11,12
" " " N. Hampshire,	9,80
" " " Vermont,	10,80
Average of the three States,	$10,57
Profit, on one acre of wheat in Ohio,	10,60
" " " Indiana,	8,00
" " " Illinois,	8,00
Average of the three States,	$8,87
Balance of profits on one acre of wheat in favor of New England States,	1,70

The corn grown in Massachusetts, Vermont and New Hampshire, is of the yellow flint variety, and will weigh 60 pounds the bushel; allowing 4 pounds of corn to make one pound of pork, one bushel will make 15 pounds. The average price of pork in Boston market for ten years ending with the year 1850, was 6 12-100 dollars the hundred. One bushel of corn fed to hogs would come to 91 80-100 cents; 40 bushels, the average crop in Massachusetts, Vermont, and New Hampshire, would come to 36,72

Average value of stover in these three States, 5,66

Whole value of one acre when fed to hogs,	$42,38
Deduct average cost of cultivation in the three States,	18,66
Profits on one acre of corn when fed to hogs in the three New England States,	$23,72

Corn grown in the States of Ohio, Indiana and Illinois, is of the soft kind, and will not weigh more than 56 pounds the bushel; one bushel will make 14 pounds of pork. The average price paid for pork in Cincinnati, Ohio, by one of the largest dealers in Boston, for ten years, ending with the year 1850, was 2 95-100 dollars the hundred. One bushel of corn fed to pork would come to 41 30-100 cents; 56⅔ bushels, the average crop per acre in the three States, would come to 23,40

Average value of stover in these three States, 1,66

Whole value of one acre when fed to hogs,	$25,06
Deduct average cost of cultivation in the three States,	7,12
Profits on one acre of corn when fed to pork in the three Western States,	$17,93
Balance of profits on one acre of corn when fed to pork in favor of the New England States of	$5,79

Princeton, Nov. 15, 1851. J. B.

Remarks.—The corn crop is, in our opinion, the most profitable field crop produced in New England. It has been somewhat neglected of late, because it was supposed that other crops would pay better. Such lucid comparisons as are brought together above, by our correspondent, will go far to correct the error under which many are laboring.

We hope he will find opportunity to write again on this important subject.

For the New England Farmer.

REMEDY FOR BLOODY MILK.

Gentlemen:—I noticed in the Nov. number of your paper an inquiry from J. E. Upham in regard to the cause and cure of cows giving bloody milk; and you close your remarks by requesting some one acquainted with the physiology of the cow to enlighten you on the subject. I do not profess to be much acquainted with the physiology of the cow, but have had two cases of cows giving bloody milk, both of which (I think) were caused by external injury, and were cured by the following means; bleeding about four inches forward of the udder in the large vein on that side of the belly where the milk is most affected, (as it is frequently confined to one quarter of the udder) and giving one ounce of saltpetre thoroughly pulverised.—Wash the bag carefully with salt and water, and extract the milk as clean as possible twice a day at this season of the year, or three times in the hot part of the season.

Very respectfully yours,

Horace Carpenter.

Worcester, Vt., Nov. 15, 1851.

Remarks.—Since the recent discussion of this subject in our columns we have made numerous inquiries, and find that the disease constantly prevails to a considerable extent, and consequently there must be in the aggregate a very serious loss. In conversation with a distinguished physician yesterday from New York, who passed his youth in actual operations on the farm, he informed us that the "garget root" is a specific in the disease in question, but that if used at all it must be with great discretion. He also stated that some remedies having a powerful influence on men, were innoxious upon animals, as for instance:—arsenic taken into the stomach of a dog proves harmless, while it would readily destroy human life. This may be the case in some measure with garget. Saltpetre is sometimes used in small portions with good effect, as a medicine for horses; we know nothing of its effects upon cattle.

If these discussions lead to greater care and kindness in the treatment of diseased animals we shall consider the space devoted to them well occupied.

USES OF CORN---HUSK BEDS, &C.

Messrs. Editors:—The value of that king of cereals—Indian Corn—has scarcely begun to be appreciated. Not only is its grain the most wholesome and nutritive food for man and beast, and its stalks excellent forage for stock, but its husks make first-rate beds for the tired husbandman and his family. Let the inner husks be saved by the farmer, and his wife and daughters can manufacture them into most healthy and agreeable couches. The hard ends of the husks should be clipped off with a pair of shears, and they may be put in the ticks whole, or what is better, split in shreds with a hatchell. Such a bed is soft and pleasant, without the enervating effects of feathers, and far less expensive than mattrasses. They are also very durable. (*a.*)

By the way, the cheapest and most economical way of keeping horses through the winter season, where the work is not heavy, is to cut corn stalks and mix them with a little mill-feed. They can be kept in this way with but little hay or grain, which at the present prices of these articles is an item worthy of consideration.

Speaking of cheap feed for horses reminds me of the way a friend of mine kept his horse last winter. He is a clergyman, and using his horse only about once a week, thought it best to be as saving of expense in keeping him as possible. Having no pig, he gave him the slops of the kitchen, which he soon seemed to relish, and kept him on these and a "jag" of straw which a friend gave him, all winter, and kept him in good order with little or no expense for fodder. If this should meet the eye of my reverend friend, I trust he will pardon me for making it public, for in this day of economy I think he deserves a special premium.—*Rural New-Yorker.*

Remarks.—(*a.*) We are assured by those who have used husks for under beds for years, that they are much better without splitting, as they do not mat together so soon.—Ed. N. E. F.

How to Measure an Acre.—The American Farmer gives the following direction for measuring an acre of land. The information will not only be valuable to farmers, but to the reader generally.

Land—30¼ square rods make a square rood; 4 square roods make 1 acre; 640 acres make one square mile; 4819 square yards or 157 rods make one acre. In measuring an acre by yards, the usual practice is to trace off 79 yards in length and 79 yards in width; this in a rough way may be considered near enough for practical purposes, but as 79 yards either way make 4999 square yards, it exceeds one acre by 69 square yards. To determine an accurate acre, it should be measured 78 yards in length by 66 1-7 yards in breadth. The same result may be arrived at by measuring 229 feet in length and 196 feet in width, or by measuring 78⅔ yards in length by 66 yards in breadth.

Popular Religion.—He that breaks off the yoke of obedience, and unties the bands of discipline, and preaches a cheap religion, and presents heaven in the midst of flowers, and strews carpets softer than the Asian luxury in the way, and sets the songs of Sion to the tunes of the Persian and lighter airs, and offers great liberty of living, and reconciles eternity with present enjoyment,—he shall have his schools filled with disciples: but he that preaches the Cross and the severities of Christianity, and the strictnesses of a holy life, shall have the lot of his blessed Lord; he shall be thought ill of, and deserted.—*Taylor.*

☞ "There is nothing, said Sir Samuel Romilly, "by which I have through life more profited than by the just observations, the good opinion, and the sincere and gentle encouragement of an amiable and sensible woman."

Mechanics' Department, Arts, &c.

NEW BRICK MACHINE.

On Thursday of last week we visited the Steam Brick Works of Tufts & Boyden, in Somerville, to witness the operation of a machine for making bricks from dry clay, invented and patented by Woodworth & Mower, of Boston. This machine is of iron, simple, compact and massive, weighing seventeen tons, and was made by Lyman Kingsley, Esq., at his extensive works at Canton, Mass., and is a good sample of the substantial and perfect work for which Mr. Kingsley's establishment is justly celebrated. It works with great steadiness and precision, and turns out *three thousand bricks per hour*. The machine and the clay pulverizer are operated by a steam engine of twenty horse power. The clay is first dried, then ground, by passing between heavy rollers, then sereened or sifted, and passed into the machine in a uniform state, where it is subjected to the immense power of the machine, and a beautiful, perfect face brick is produced, almost as smooth and dense as polished marble. The bricks are taken from the machine and immediately set in the kilns ready for burning, thereby obviating the necessity of spreading on the yard to dry before burning, as well as injury or loss from wet weather. By this process, a *superior face* brick can be produced at *less expense* than the coarsest common brick by the old method.

This machine is the result of three years' close application and hard study on the part of the patentees, Messrs. Woodworth & Mower, and may justly be considered one of the most valuable and important inventions which have been made. No one can witness its operations, and compare it with the old fashioned way of brick-making, without being filled with surprise and admiration.—*Boston Journal.*

Curious Machinery.—Among the numerous and ingenious machines in the various workshops and establishments at the Charlestown Navy Yard, in this State, is what may be called a deck-plug making machine. It is extremely simple, and upon the plan of a circular saw. It is moved by steam power, and is so speedy and effective in its operation, that from five thousand to ten thousand deck-plugs may be manufactured by the aid of it in a single day—the greater or less number depending, in an important degree, upon the quantity and state of the wood, wet or dry, used for the purpose. These plugs are of all sizes, and are mainly used to fill up the spaces left in the decks and other parts of the government ships, when the bolts and spikes are driven home. The saving to the United States, produced by this single apparatus in making their plugs, over the old mode, is as great in its way, perhaps, as that accomplished by any other machine in this Navy Yard, while, at the same time, it very materially lessens the toil and hard labor of the workmen in the public service.—*Courier.*

Useful Invention.—Mr. George C. Todd, of this city, has invented a machine, for which he has secured a patent, by the aid of which shoe patterns of all sizes may be quickly and accurately drawn from a single pattern—each copy, of whatever size, being proportioned exactly like the one from which it is drawn. We have seen Mr. Todd's apparatus, and have witnessed its operation. It is simple and convenient, and will be found, we think, valuable to shoe manufacturers.—*Lynn News.*

Boy's Department.

THE WAY TO BE BRAVE.

Speak kindly to that poor old man,
Pick up his fallen cane,
And place it gently in his hand,
That he may walk again.
His bundle, too, replace with care
Beneath his trembling arm;
Brave all the taunts that you may hear,
To give his life a charm.

A braver deed than scorners boast
Will be your triumph then;
A braver deed than annals tell
Of some distinguished men.
Yes; leave that thoughtless, sneering crowd,
Dare to be good and kind;
Then let them laugh, as laugh they may,
Pass on; but never mind.

Pass on; but think once more of him,
The wreck that you have seen,
How once a happy boy like you
He sported on the green;
A cloudless sky above his head,
The future bright and fair,
And friends all watching o'er his couch,
To breathe affection's prayer.

But ah, the change! He wanders now,
Forsaken, lone and sad—
Thrice blessed is the task of those
Who strive to make him glad.
Speak kindly to that poor old man,
Pick up his fallen cane,
For that will ease his burdened heart,
And make him smile again.

ANECDOTE OF A YOUNG INDIAN.

An English gentleman and his friends travelling through a piece of woods in one of the western States, took with him an Indian lad as a guide. In the course of the day, they separated, and one of them finding some curious berries, sent them to his companion by the lad, with a note specifying the number. The one who received the present, found some of the berries missing, and having reprimanded the boy for eating or losing them, sent him back for more. The gentleman forwarded a second parcel, with the number again marked on the note. The boy played the same trick with these, delivering only part of what he received. This procured a second scolding. Whereupon the Indian fell down upon his knees, and kissed the paper, saying, "I found out, the first time, this paper was a witch or conjuror; but now he has proved his power to be supernatural indeed; because he tells *that which he did not see;* for when I flung away these last berries, for the sake of experiment, I took care to *slip the note under a stone*, that it might not know what was passing."

The Boys in Maine.—We cannot help thinking what a set of boys, the boys in Maine will be. If the present good laws continue, they will never see, smell or taste the fiery liquors which have

proved so ruinous to thousands and millions. And the little sailors, what fine fellows! we reckon hey will give up fighting, swearing and be in high demand all the world over. We hope Maine will not be the only State that will send out 50,000 young and thorough teetotalers. Three cheers, boys, for Maine.—*Youth's Temperance Advocate.*

Ladies' Department.

HOW TO BURN COAL.

The art of burning coal is not properly understood as it ought to be. Too much coal is usually placed in the stove, by which the draught is destroyed and the gases are imperfectly consumed. The Miners' Journal of Pottsville says there are two errors in the way we burn coal, by which more than one-half is wasted. 1st. We have to shut the door of our stove or furnace, to make a temporary over combustion at one time, and at another time we have to leave open the door and let in cold air to cool off. 2. The gas that ascends our chimneys carries off with it a deal of coal that is unburned, merely coal in vapor, which gives out little heat for want of air to consume it. We lose the most of the unconsumed vapor of coal when the door is shut. When it is open the vapor is consumed, but the heat is reduced by a flood of cold air and carried up the chimney. What is required then is an air-tight door over the ash pit, through which you can let in just what air is necessary for quick or slow combustion as desired. The door that admits the coal should be tight, and should never be opened except to put coal in. A small flue should admit a stream of air, heated by contact with the stove, to mix with the gas on top of the fire. In buying a stove, if you find that the stove or furnace door must be left open when you want to moderate your fire, reject it; for it is essentially wrong in its construction, and it will consume three tons of coal where one would answer if the draft door were air-tight.

One of the "Rights."—We copy the followlowing gentle reminder from the Cambridge Chronicle—without the least idea, however, that it will apply to any of *our* "Farmers' Wives," whose butter, we doubt not, is beyond any such suspicion:—

"Uncle Jonas says that among all the sayings and doings of the women about their 'Rights,' he's a little surprised to find such a total silence on the subject of *their right to make good* Butter. He thinks that the assertion of this right at the present time would at once place them in an impregnable position; beyond the reach or hope of any and all assailants. In his opinion it is a highly disagreeable circumstance at table to be 'unexpectedly called upon' to bite a large lump of salt, to receive a spirt of buttermilk or imbibe the taste of rancid fat; and is besides exceedingly dangerous as inducing a habit on the part of gentlemen, of making up mouths at 'women's work.'"

Apple Pudding, No. 1.—Half a pound of mashed apple, half a pound of butter, half a pound of sugar, five eggs, half a nutmeg; two table spoonsful of brandy, or rose-water if preferred. Peel the apples and core them; cut them in small pieces, and stew them in very little water till they are soft. Pass them through a sieve to free them from lumps. Beat the butter and sugar smooth, whisk the eggs and add to it; then stir in the apples, (which should be half a pound when mashed,) brandy or rose-water and nutmeg. Cover your pie plates with a rich crust and bake in a moderate oven. These are very rich.

Apple Pudding, No 2.—One pound of grated apple, half a pound of butter, half a pound of sugar, six eggs, half a pint of cream, the juice and grated rind of one lemon Grate your apples; beat the butter and sugar very light, whisk the eggs and add to it, add the apples, cream and lemon. Stir all together, line your pie plates with rich paste, pour in the mixture and bake it. A few currants may be added.

Plain Apple Pudding, No. 3.—One pound of the mashed apples, a quarter of a pound of butter, sugar to the taste, six eggs, one tea spoonful of cinnamon, half a nutmeg, brandy or rose-water to the taste. Peel the apples, cut them in slices, and stew them in a very little water till they are tender. Mash them fine, and while they are hot add the butter. Set them away to cool. Beat the eggs, and when the apples are cold add the eggs and sugar, liquor, and spice. Cover your pie plates with plain paste, fill them and bake in a moderate oven. A quarter of a pound of dried currants may be added if preferred.—*National Cook Book.*

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

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The Farmer, under the charge of Messrs. S. W. Cole and Simon Brown, Editors, Frederick Holbrook and Henry F. French, Associate Editors, is devoted exclusively to Agriculture, Horticulture, and their kindred Arts and Sciences, making a neat octavo volume of 416 pages, embellished with numerous engravings. It may be elegantly bound in muslin, embossed and gilt, at 25 cts. a volume, if left at this office.

☞ Also published at the same office *every* Saturday, on a large handsome folio sheet, the New England Farmer, an independent Journal, devoted to Agriculture, Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and the usual variety of Literary and Miscellaneous matter, adapted to family reading. Letters from Home and Foreign Correspondents will appear from week to week, together with a variety of contributed and selected articles of a Literary, Scientific, Historical, Biographical, Humorous and Juvenile character, short Moral Tales, &c.; containing more reading matter than any other Agricultural Family Newspaper published in New England. Every thing of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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☞ The Semi-Monthly Farmer contains nearly the same matter as the Agricultural department of the weekly.

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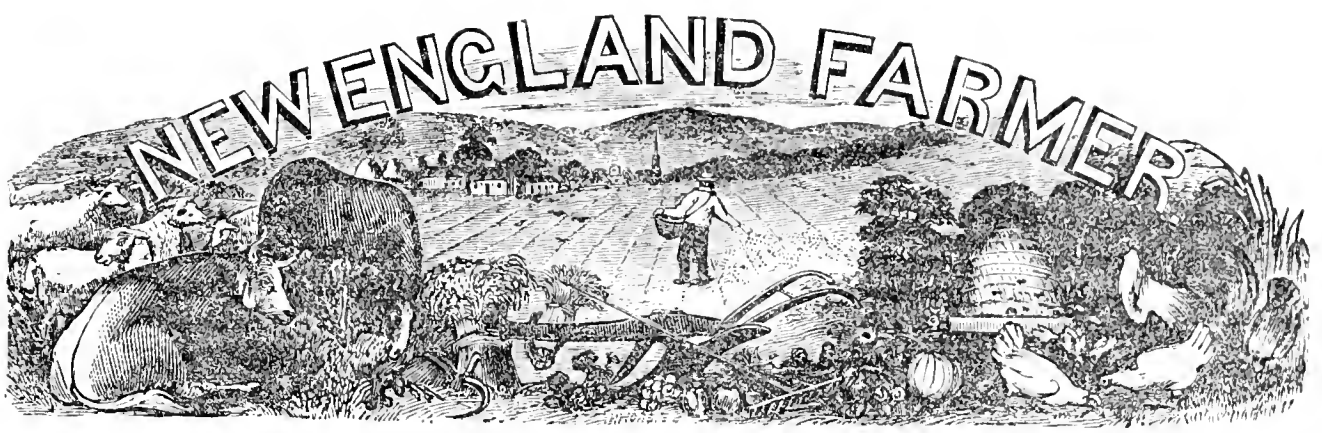
☞ All letters and communications should be addressed post-paid to Raynolds & Nourse, Quincy Hall, Boston



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. BOSTON, SATURDAY, DEC. 20, 1851. NO. 26.

RAYNOLDS & NOURSE, Proprietors. Office....Quincy Hall. SIMON BROWN, Editor. FRED'K HOLBROOK, HENRY F. FRENCH, Associate Editors.

CLOSE OF VOLUME THIRD.

When we find that the year is growing old, and its last sands are ebbing away—when we know that it is forever numbered with the years that are "beyond the flood," and that no hopes or regrets can recall it—when in its solemn and silent march, it may have stolen away something of our buoyancy of spirit or touched our heads with silvery hues, it is not strange that such a review should tinge one's thoughts with sadness. It is not such a feeling however, that moves us now; but rather one of joy and gratitude, that in the vocation in which we are called to labor such vast results have been accomplished—that the attention of individuals possessing talents of the highest character, and the aggregated mind expressed in various public assemblies, and now taking hold of the Legislatures of the States, and the Nation, is turned to the first and most important industrial pursuit of man.

In no one year is it probable that such progress has been made before in the various modes of cultivating the earth; in new applications of mechanical powers; and in more systematic investigations of the nature of soils and of the substances used for supporting life.

As a Science, as well as an Art, the business of Agriculture has received a new and powerful impulse. It is now elevated in the public mind to a *genteel* occupation. Every man aspires to it as the *ultima thule* of his hopes, the fruition of his earthly labor and toil. It will result in immense *moral benefits*, unite the people with hooks stronger than steel and give the nation a power never conceived before.

Sad events, there have been; they have touched the heart with a sorrow that time only can partly assuage; they were in the course of Providence. That Providence has summoned our friend and associate from our side, and called other loved ones away from our earthly vision. We bow to these admonitions in humble confidence, and work on with an earnest and trusting heart.

Laboring in the wide field before us, we have constantly found cause of thankfulness, in the cheerful hearts and vigorous hands that have sustained us on the way. We have felt strong in their midst, and only give utterance to the sincere emotions of our heart, when we thank them for their forbearance and kindness, as well as for their invaluable favors. Without them it were impossible to reach that position in the public favor which we now are confident we possess. There is palpable evidence in our successive editions that we have in a considerable degree met the wants of the agricultural community. In clubs and in neighborhood associations men have instigated each other to good works. They have examined, experimented, discussed and decided, and their practical decisions have been sown broad cast through our columns. There are others whom we could wish to number with these, and they are respectfully invited to aid us in elevating to its proper position their favorite rural art.

In closing the volume we have given a copious index to the subjects, and an index to the names of correspondents, which will be found of great convenience. This volume contains much that cannot fail to be eminently useful to those commencing the management of a farm, as well as numberless useful hints and suggestions to the skilful practitioner.

NEW ARRANGEMENTS.

To keep pace with the increasing demands of the Agricultural community, and enable us to devote more space to contributors, to Horticulture, and extracts from the columns of our friends, we shall on the first of January *increase the size of the New England Farmer to 48 pages*, and issue it on the first of every month, embellished with numerous engravings; making a handsome volume of 576 pages at the end of the year This will be the

largest and cheapest Agricultural paper in the Union, and this increase in size will be made without any addition to the price. It is the determination of the publishers to make its pages more valuable as the public support extended to it is increased.

We shall give a Prospectus with particulars in the January number to which we ask the attention of the reader.

SAMUEL W. COLE, ESQ.

Our friend and associate, he who has long spoken of your interests through these columns, will speak to you no more. His hand will no longer inscribe the pleasant words which have so often come to your homes and hearts. His voice is forever dumb—its sympathizing tones or warning note, shall reach your ear no more; his hand shall record no burning thought, or touching grief; they shall rest in the realms of silence until the last Almighty Fiat shall re-animate their dust.

Mr. Cole expired at his residence, at Chelsea, on Wednesday evening, the 3d inst. He had been wasting away under the effects of a painful disease for some months, and his departure from among us was, therefore, not entirely unexpected.

The deceased was a man of unsophisticated habits and unbending integrity; he courted retirement by occupying all the time which he could command from his editorial duties, in his favorite pursuit of horticulture. Those who knew him intimately loved him most. They found in him a firm, reliable friend; one, whose sympathies once enlisted, were not easily turned aside. With those with whom there was only a slight acquaintance, there was sometimes an impatience of manner, which might lead one to say,

"The truth you speak doth lack some gentleness,"

but beneath this there was a warm and gushing heart. In the benevolent efforts of the age, he was decided and earnest, and his influence and means were ever ready to promote them. Whenever cases of wrong and oppression came to his knowledge, his whole nature was aroused, and the oppressed never failed to find in him a ready and substantial friend. He was a kind husband and father; cheerful and happy in their midst, ever imparting to them the kindly state of mind which he carried into his home. As a neighbor, he was obliging and attentive, and discharged all his duties as a citizen with fidelity and truth.

Mr. Cole was born in the town of Cornish, Maine, in 1796. At about the age of 20 he left his native State and passed two or three years in New Jersey and Pennsylvania in teaching. Soon after his return he published the Columbian Spelling Book, a collection of poems, called the Muse, and in 1835, the Yankee Farmer; the latter he removed to Portland, and continued there about three years, in connection with a seed store and agricultural warehouse. In 1839 he came to this city, and continued connected with the agricultural press to the time of his death. His "American Fruit Book," and book on "Diseases of Domestic Animals," have passed through several editions, each, and are still popular and valuable works. Mr. Cole's mind was turned quite young to the subject of fruits, and to all rural pursuits. In the preface to his book on fruits, he says:—

"In our boyhood, we anxiously watched the early bearing trees, and became familiar with hundreds of varieties of fruit, and could select each from a promiscuous heap, and define its name, character and location."

After a long and painful sickness, the subject of our remarks died in the full possession of his reason, and of well defined hopes of a happy immortality. Glorious anticipations of Heaven cheered the prospect of his passage through the dark river, and no clouds of despondency or murmers of discontent disturbed the calm serenity of his departing moments. So gently did life ebb away, that

"We thought him dying when he slept,
And sleeping when he died."

Our friend was a steady and earnest laborer in the field where his lot was cast. The natural, was ever to him the beautiful. He shrunk from the busy walks of life, and found satisfaction and subject for deep contemplation in the open field, the garden, or the umbrage of the dim forest. This ruling passion was found strong in death. "Lay me," said he, when the feeble flame was but glimmering in its socket, "lay me in some quiet nook, under some shrub or tree, and I shall repose in peace." With pious care, the living have regarded this pleasant wish. Under the interlacing branches of trees which were almost spiritual with him, gentle hands have laid the worn body most gently down. Voices which once came in angel-tones to his ear, will still attune their plaintive notes above his head, and mingle with his free spirit, in the shades he loved so well.

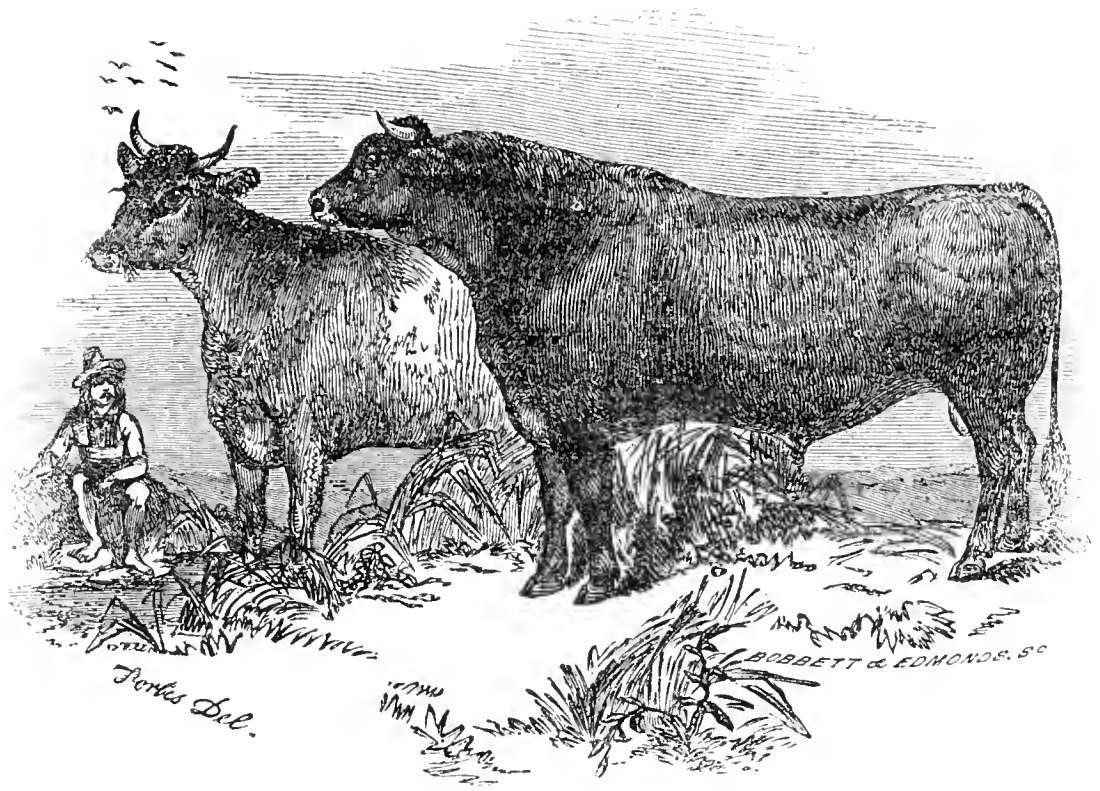
Our brother was not cut down at a blow. A blight came and touched root and branch with withering power. In spring, there were buds and blossoms of hope—in mid-summer, fell scattering leaves, with boding fears, then winter closed the scene. The Great Reaper came and gathered the Harvest home!

With all his worldly affairs arranged, quietly he bowed his head,

"like one
Who wraps the drapery of his couch about him,
And lies down to pleasant dreams."

Destructive Engine.—The French are now testing a new weapon, called *boulets asphixiants*, which develops a gas fatal to all within its immediate reach. This French invention is designed for naval warfare.

☞ "Scientific farming" is the ascertaining of what substances the plants you wish to raise are made, which of these substances are wanting in your land, and what manures will supply them.



HUNGARIAN BULL AND COW.

We present our readers above, with portraits of a Hungarian bull and cow; not with an intention of recommending them as a breed, for we know very little of their merits. They are imported animals, are owned by Roswell L. Colt, and drew a premium at the late New York Show. They appear strong and active. The cow presents a light, clean head and neck, somewhat resembling the Devon; while the bull's front is bold and smart, and indicates great energy and endurance.

Everything from Hungary is at present interesting. Her favorite son, her bold and intrepid defender, has just landed on our shores, so that the public mind is particularly turned to that far off land, and makes this a peculiarly fitting moment for the portraits we have presented.

VENTILATION---HEALTH.

The season has come when every family is making its winter arrangements to secure warmth and comfort, while the sun slants its feeble rays upon us, and the icy north pours down its stores of wind and snow. Pure air and an equable temperature greatly promote firm and steady health. To preserve elasticity both of mind and body, active exercise and a pure atmosphere are indispensably necessary.

The modes of warming apartments are now so various, and the use of coal as fuel so common, that there is danger to the health, as well as of incurring unnecessary expense, in adopting many of these modes.

No system of ventilation, except that of loose doors and windows, exists in this country. Some valuable books have been published on the subject, but they are known only to a comparative few—and if known, would be lightly regarded. The unaccountable prejudice which prevails against learning anything of this sort from books, is the cause of great losses in property and health every year.

Stoves, of one kind or another, have taken the place of the old-fashioned fire hearths, generally. Many of these are constructed without any sort of reference to scientific principles, and are only calculated to burn your fuel and your atmosphere without stint. The fire-place, with a brisk fire upon its hearth, formed a powerful ventilator in itself, causing so strong a draft towards it that it was found necessary to introduce the old high back settee to break the current of air constantly pressing in from the back parts of the room. This clumsy article of furniture came close to the floor in order to protect the feet, and rose above the head of the occupant, while beneath the seat was stowed away a goodly portion of a cord of wood to keep up the evening fire. Under such circumstances the air of the room was constantly changing, and there was little danger to the health from breathing it in an impure state.

The important point to be observed is this;—that your stoves be so constructed as to enable you to ignite the fuel quickly, and when ignited, to keep it in that condition as long as possible by a slow, but certain draft, so that the smoke and gases which are set free may either be consumed or pass off through the funnel. In rooms well made, and

tight, there should be some opening near the floor for the admission of pure air, and an outlet at the top for the free passage of that which has been used. Where the room adjoins other apartments which are cold, what air finds its way under, and through the doors, will usually be sufficient provided a window be slightly dropped at the top, or a pane of glass be removed and supplied with one of wood, which may be opened or closed at will.

The air is in minute particles. It is supposed that they do not give off heat one to another, but that when one particle is heated, however slightly, it instantly rises, and another colder and heavier rushes into its place; much as you observe water heated in a kettle. The particles on the bottom of the kettle becoming heated first, rise to the surface, and are continually followed by others becoming lighter, and seeking their natural level.

There is also much danger to the health from foul air, because we soon become accustomed to it. On entering a room filled with the gases from a coal stove, we find the odor very offensive, but in a short time cease to notice it although the evil is still present, and perhaps very hurtful. "As the gardener cannot smell the *rose*, nor the southern woodchopper the *magnolia*, so we, after a few minutes' delay, are insensible to the disgusting odor of our unventilated room! When the air has once been breathed, very little of its vital principle is left. "An ordinary candle consumes as much air while burning as a man in health while breathing."

In the absence of any specific set of rules to which we can refer the reader, we would urge a free and thorough ventilation of all rooms, at least once a day in clear weather, and in rooms constantly occupied, a permanent outlet in some portion of the upper part of the room. A little care will do something towards obviating the difficulty, and that may add some years of life and health.

It is very important that a vessel of pure water should be placed upon the stove. "The air we breathe contains, in ordinary weather, about five grains of water diffused through each cubic foot of its bulk," and when this becomes heated and dry, we are deprived, in every breath, of a portion of moisture which is actually necessary for the enjoyment of good health.

Pemigewasset Agricultural Society.—The people of several of the towns in the eastern district of Grafton County, New Hampshire, met at Plymouth in that State, on the 22d day of last month, and formed an agricultural society with the above pleasant name. Hon. Nathaniel S. Berry, of Hebron, was elected President, John R. French, Esq., of Plymouth, Secretary, and Russell Cox, Esq , of Holderness, Treasurer It is their intention to have a Show the ensuing autumn.

☞ Every vicious act weakens a right judgment, and defiles the life.

NEW SEED FOR POTATOES.

Mr. J. H. Russell, of Marblehead, writes us that he believes the cause of the disease in potatoes is degeneration in the seed, occasioned by quick and powerful manures. He thinks pure seed may be obtained from the southwest part of Newfoundland, and that if such seed were planted on land that had not been manured, the trouble would soon cease. He says that according to his experience and observation, all other vegetables decay sooner now than they did twenty-five years ago.

We have never heard this suggested before. All our vegetables keep in good condition in a well ventilated cellar.

The experiment has often been tried of planting the potato balls for seed, without any benefit to the crop. These balls may have been procured from the potato long cultivated here, and thus have a taint of the old stock. What the effect would be of bringing seed from such a distance we know not, but have strong doubts of deriving any benefit from the experiment.

DEATH OF SAMUEL W. COLE.

The reader is referred to another column for some remarks upon our late associate and friend. The severity of his sickness had prevented him from contributing anything to the columns of the Farmer, save a few lines upon the subject of Fruits, for several months past. During this time, and some weeks previous to the announcement of our name, we had supplied his place with what earnestness and ability we could command. This we shall continue to do for the present. This statement is not made without many misgivings, and fears of inability to meet the wants of our numerous and intelligent readers. We can only say this:—our whole heart is in the cause. The occupation of the Farmer has ever been our pride, and has never failed to excite in us feelings of manliness and independence;—the occupation, not merely of superintending others, but to labor as did St. Paul, with our own hands, in every department of the farm. Such is our present practice.

In entering this wide field alone, it will be our earnest endeavor, not to *mislead* by crude opinions, or to amuse by fancy sketches, but to present to the reader such experiences as we have gained in practice, and such observations as a mind always enamored with the subject, can bring to bear upon it, together with such improvements as this progressive age is constantly introducing. To deserve success, and to make our columns the medium of the true principles of cultivating the soil, will be our steady aim. In this pursuit we pray that some charity will be extended to our imperfections, and that the large experience and friendly aid of our readers will ever be our right hand supporters.

Simon Brown.

For the New England Farmer.

STEAMING BONES.

GENTLEMEN:—You will please continue the New England Farmer. * * * *

Will you also be kind enough to give me some information regarding the kind of apparatus necessary to be attached to a steam boiler, such as tanners use for steaming hides; or, in other words, the kind of receiver (*a.*) to contain the bones, and receive the steam. Also, the amount of steam pressure (*b.*) necessary to cause the bones to pulverize easily. By answering the above questions you will confer a favor.

Respectfully, O. A. HILL.

Yarmouth, Maine, Nov. 13, 1851.

REMARKS.—Various methods have been resorted to in order to reduce bones to a pulp or powder so as to use them as a manure; and they have been found so valuable as to justify the erection of costly machines to reduce them, where they were collected in large quantities. But what is important to be known is this:—where only a few bushels or barrels of bones are collected during the year, what is the cheapest and best way of reducing them, so that they become available as a manure? There are various ways of accomplishing this, but nearly all of them too expensive to be brought into use by the farmer, as a single farm operation.

(*a.*) In reply to the first question of our correspondent, we would say that, the only receiver that we have an account of is constructed of the common boiler plate iron one-eighth of an inch thick, made in the circular form, six feet long and three feet four inches in diameter. This is large enough to contain eight or nine hundred weight of bones. This boiler has a false bottom upon which the bones are laid, and the water for steaming is below. It is set in mason-work, and arranged otherwise with regard to fire, smoke, &c., as ordinary boilers are.

(*b.*) In order to pulverize the bones thoroughly, they require the steam of 24 hours, kept as uniformly as possible at a pressure of 25 lbs. to a square inch. With this steaming they are easily crushed to a coarse powder as they are taken from the boiler. It is manifest this process will not answer for our farmers generally.

Another method, that of reducing them by *fermentation*, we gave in the Farmer of the 7th of June and the 16th of August last, to which the reader is referred.

The mode which seems to be the cheapest and most convenient is to dissolve them in sulphuric acid, the common oil of vitriol of the shops. It was a discovery by Liebig, and has been pretty thoroughly tested by others. The experiment below was given by the English Agricultural Society Journal. The writer says—I last year manured 5 acres with only 13 bushels of bone-dust dissolved in 270 lbs. of sulphuric acid and 150 gallons of water. After standing 24 hours, the liquid was mixed with three cart-loads of coal-ashes, and left to remain for a week, during which time it was turned over two or three times. The cost was about $3 per acre, and the crop much improved.

We have noticed in soap-making that the bones which have been boiled *in strong caustic ley* have become so soft as to be easily reduced to a powder; this suggests the inquiry whether they may not very easily be reduced in this manner by any person who desires to use them as a manure.

Mr. Miles, of the Royal Agricultural Society of England, has discovered a process for preparing bones for manure without the use of acids; and, instead of sand, ashes, or earth, he uses saw-dust as the material for covering up the heaps, double the amount of heat being evolved, and the disintegration being effected much more rapidly and effectually. He piled up the bones into a heap, which he first moistened well with water, and then covered it over to a depth of 2 or 3 inches with saw-dust, by means of which not only were the bones speedily converted into manure, but the saw-dust also. By this process, however, the decomposition of much ammonia takes place, and escapes in a volatile state, as it is developed, and is lost.

Some of the above, with many other valuable facts, will be found in the American Muck Book, of which we recently spoke, and to which we refer those who desire more particular information on the subject of bone manure. The subject is also ably described by Prof. Norton, in an article copied into the Farmer, of the eleventh of October last.

For the New England Farmer.

OILING AXLES.

I don't know when I have seen an article in an agricultural paper about oiling wheels, as it is called, or, more properly, the axles. Perhaps a few words upon this subject, which seems somewhat homely, may be worthy of attention. You know what the practice is, to take anything and everything to grease an axle. With iron axles people are a little more particular; but wooden ones are served with tar, and pot skimming, and dirty grease of every kind. Now I don't believe in the economy of wooden axletrees at all, and I shall say nothing against any preparation which their owners choose to apply to them.

But some put grease—salt bacon fat—on to iron axles. This is better than nothing, to be sure. The people in some parts of the world eat the like for butter, when they can get no other or better. Cheap oil is the article commonly used. This contains so much sticky matter, that if a small portion of it could be introduced among the improvements, or, should I say, inventions of the day, we should hear less of the want of adhesion of stamps and envelopes!

I have used cheap oil and found the axles needed some put on twice a week; and then the wheels wouldn't chuck freely, as they should do. Besides, a coating would form over a portion of the arm as tough as leather. I have known a wheel upon a

new axle that had been oiled in this way very hard to get off. I abandoned every kind of oil but the *very best* some years ago. A neighbor, who has charge of the factory, helped me to needed light on this subject. He said nothing else would do for machinery but pure sperm oil.

Well, why is'nt a wagon, a machine. Why don't it need as good oil as a loom or a double speeder? Is horse power or ox power so much cheaper than water power?

I have used the best oil I could buy, since answering the above questions. I find it is cheaper, too. A wagon oiled with sperm oil will run merrily four times as long, at least, as when oiled with the cheaper article.

I have heard of a man who said he thought very little was gained by greasing a cart. I see occasionally some who are practically his followers. I believe this the extremest folly. Will you carry a third less load for the want of a few minutes' care? Or will you drag the last grain of strength out of your cattle when you might so easily lessen their labor?

Yours truly, Wm. D. Brown.

Concord, Nov. 15, 1851.

Remarks.—The practice of using all kinds of cast off stuff for greasing wheels, rather has a tendency to retard than to accelerate motion. The word here "fitly spoken" will call attention to a subject that is by no means unimportant.

For the New England Farmer.

CRANBERRIES---CORRECTION.

Messrs. Editors:—In No. 48 of the N. E. Farmer, a correspondent of the signature P. quoted the sentence in my communication of Nov. 15: "The natural cranberry is such a capricious character that all efforts to improve the crop are vain." When I am in error I will thank any gentleman to correct me, but not to misquote my language. It would have been better for my friend to have quoted the whole sentence as printed, which reads thus:—"The natural cranberry is such a capricious character that *our* efforts to improve the *crops* are all in vain; mowing and burning old vines which are past the bearing state, is labor, with me, thrown away." Now if Mr. P. had quoted my whole sentence, he would find that I made no allusion to the cultivation of cranberries under any kind of improvement. I said the natural cranberry, (meaning the spontaneous growth which is on wet land and miry meadows) when past the bearing state, could not be improved by mowing or burning. I would thank Mr. P. to use a little more care hereafter, and quote me correctly.

Dec. 3, 1851. Silas Brown.

Early Potatoes.—A correspondent, who has been looking over Coffin's valuable history of Newburyport, furnishes some ancient items, as thus: "1719. This year potatoes were introduced by some emigrants from Ireland." In 1737, the Rev Thomas Smith, of Portland, says in his diary, "There is not a peck of potatoes in the whole eastern country." In 1739, Robert Adams chronicles the sale of a bushel and a half of "per taters." There introduction into general use was slow, and so late as 1750,—should any person have raised so large a quantity as five bushels, great would have been the inquiry among the neighbors in what manner he could dispose of such an abundance. They were, at first, raised in beds like onions.

SUNNY DAYS IN WINTER.

by D. F. MacArthy.

Summer is a glorious season,
Warm, and bright, and pleasant;
But the past is not a reason
To despise the present.
So while health can climb the mountain,
And the log lights up the hall,
There are sunny days in Winter,
After all!

Spring, no doubt, hath faded from us,
Maiden-like, in charms;
Summer, too, with all her promise,
Perished in our arms.
But the memory of the vanished,
Whom our hearts recall,
Maketh sunny days in Winter,
After all!

True, there's scarce a flower that bloometh,
All the best are dead;
But the wall-flower still perfumeth
Yonder garden-bed.
And the lily-flowered arbutus
Hugs its coral ball—
There are sunny days in Winter,
After all!

Summer trees are pretty—very,
And I love them well;
But, this holly's glistening berry
None of those excel.
While the fir can warm the landscape,
And the ivy clothes the wall,
There are sunny days in Winter,
After all!

Sunny hours in every season
Wait the innocent—
Those who taste with love and reason
What their God hath sent.
Those who neither soar too highly,
Nor too lowly fall,
Feel the sunny days of Winter,
After all!

Then, although our darling treasures
Vanish from the heart;
Then, although our once-loved pleasures
One by one depart;
Though the tomb loom in the distance,
And the mourning pall,
There is sunshine, and *no* Winter,
After all!

Dublin University Magazine.

Solidified Milk.—A few cakes of the newly-invented *solidified milk* have found their way to this country. The article resembles, in color, consistency, weight and *feel*, cakes of pale yellow soap. One pound, grated into boiling water, will make several gallons of very good milk. It is warranted to keep any number of years. Price, in England, one dollar per pound. It is not yet, we believe, for sale here. A friend, however, whom curiosity led to import a small quantity, has tried it, and assures us that it *is* all that it claims to be—"a real blessing to mothers" and mariners.—*Home Journal.*

Mechanics' Department, Arts, &c.

STEAM EXCAVATOR FOR DIGGING GUANO.

Mr. John Souther, Proprietor of the Globe Works, South Boston, has just completed the construction of one of Otis's Steam Excavators. This machine, we learn, is to be shipped in a few days to the coast of Peru, South America, for the purpose of excavating that substance known as Guano. It was built for Don Domingo Elias, a rich merchant and planter in Lima, who was one of the candidates for the Presidency in the last elections in that country.

For some months past much inconvenience and expense have been incurred by the slow method of digging the guano; and the necessity of giving quicker despatch to the great number of vessels which are constantly seeking cargoes of this article induced the proprietors to send Santigo Flores, an excellent engineer, to procure some machine to expedite the digging. After a careful search, he contracted for one of Otis's Patent Steam Excavators, which has been built with great despatch and accuracy by Mr. John Souther, at his Globe Works.

The Excavator, which is to be the pioneer in the introduction of Yankee machinery into a country where as yet English trade and inventions have had no competitors, was invented some years since by a very talented mechanic of Canton Mass., named Otis, who died at the early age of 22 years. He was a man of great promise, and the excavator which he invented has given him a high rank among the great mechanics of the present century. It is one of the most intricate machines ever invented, and yet there is such fine symmetry in all its parts, so splendid a mechanism stamped on every movement, that Otis' Excavator is considered one of the finest specimens of machinery ever invented. It is capable of taking up three shovelfuls of loose gravel in five minutes, the shovel holding from a yard to a yard and one half cubic. It is estimated that with it two men can easily perform the same work, in the same time, as would require one hundred and fifty common laborers.—*Traveller.*

New Patents.—Among the patents issued at Washington for the week ending 25th inst., were the following:

Erastus B. Bigelow, of Clinton, Mass., for improvement in wires for making pile in woven fabrics; Elias Howe, Jr., of Cambridge, Mass., for improvement in fastenings for garments. George W. Carlton, of Brunswick, Me., for improvement in cooking stoves. Thomas H. Mortimer and James M. Gardner, of Charleston, S. C., for improved method of operating rudders. Dated November 25, 1851; patented in France, June 11, 1851. Francis A. Stevens, of Burlington, Vt., for improvement in railroad cars, brakes. Reisue, Solomon Merrick, of Springfield, Mass., for improvements in the screw wrench.

Steam Drilling Machine.—Mr. Joseph J. Couch, of this State, some time ago perfected an admirable machine for drilling rocks, by the aid of steam power. The machine has been in very successful operation upon some of the railroads in the middle States. He has now made a very decided improvement in it, dispensing with the gearing, and applying the steam directly to the operation of the drill. Indeed it is nothing more than a steam engine, with a drill inserted in the piston-rod, and operated by a simple and ingenious cam-like apparatus, which gives it, with great promptitude and certainty, all the movements requisite for efficient execution.

It is altogether one of the most simple, ingenious and effective machines to which this inventive age has given rise. It can be operated at a very small expense, and will do at least the work of twenty men.—*Traveller.*

Interesting Experiment.—A Stoughton correspondent of the *North Bridgewater Gazette* says: "There has been an experiment tried on the Boston and Providence Railroad track, for the purpose of ascertaining if letters can be sent to a distance by means of atmospheric pressure. To test the practicability of the theory, there was laid for about one mile a pipe, through which the paper or papers were to pass. I am told that those who have experimented, are of opinion that communication can be given in this manner from Boston to New York in four minutes, and that they are quite sure of success."

Ladies' Department.

GOOD TASTE IN DRESS.

You see the lady of good taste turning a cold eye to the assurance of shopmen and the recommendations of milliners. She cares not how original a pattern may be, if it be ugly, or how recent a shape, if it be awkward. Whatever law fashion dictates, she follows laws of her own, and is never behind it. She wears very beautiful things which people generally suppose to be brought from Paris, or at least made by a French milliner, but which so often are brought from the nearest town and made up by her own maid. Not that her costume is either rich or new—on the contrary, she wears many a cheap dress, but it is always pretty, and many an old one, but it is always good. She deals in no gaudy confusion of color; nor does she affect a studied sobriety; but she is sure to refresh you with a judicious harmony. Not a scrap of tinsel or trumpery appears upon her. She puts no faith in velvet bands, or gilt buttons, or twisted cordings. She is quite aware, however, that the garnish is as important as the dress; all her inner borders and beadings are delicate and fresh, and should anything peep out which is not intended to be seen, it is quite as much so as that which is. After all, there is no great art either in her fashions or in the material. The secret simply consists in her knowing the three unities of dress—her own station, her own age, and her own points—and no woman can dress well who does not. We need not say, that whosoever is attracted by such a costume will not be disappointed in the wearer. She may not be handsome or accomplished—but we will answer for her being well informed, thoroughly sensible, and possessed of a refined taste, which is of much more importance.—*Domestic Advertiser.*

An Excellent Tea Biscuit.—Rub one ounce of butter into one and a quarter pounds of sifted

flour, add one tea-spoonful of salt and two of cream of tartar, and mix all well together; then beat together two eggs with two table-spoonfuls of fine white sugar; put the eggs and sugar into a pint of milk, and pour the milk into the other ingredients; mix well, add one tea-spoonful of super-carbonate of soda, knead, mould, and bake immediately.—*Mrs. Bliss's Practical Cook Book.*

A HINT TO MOTHERS.

"A poor, hard-working and feeble mother recently insulted her daughter—a girl of seventeen idle summers—by asking the Miss to help her in the kitchen. Outrageous!"—*Exchange paper.*

The above is "ower true," as doubtless many of our readers can testify from personal observation. How often do we see the mother working harder than a Southern slave—keeping a boarding-house perchance—while her idle daughters lounge in tawdry finery in the parlor reading the latest new novel, or listening with delight to the senseless chatter of some shallow bewiskered and moustached dandy! But who is to blame for this heartlessness? In the majority of cases, not the daughter, for

"Just as the twig is bent, the tree's inclined."

If mothers would bring up their daughters to habits of cheerful industry—accustoming them to assist in the household duties—there would be fewer heartless daughters, and, we might also add, fewer matches where wretchedness is the bridal portion.—*Evening Journal.*

Boy's Department.

CATECHISM OF FAMILIAR THINGS.

What is Coal?

A hard, black, sulphurous and inflammable substance, dug out of the earth, serving in many countries as fuel. It is common in most of the countries of Europe and America. In some parts of the United States, it is found in beds having an area of several thousand square miles.

From what is Coal supposed to have originated?

Its origin is supposed to be derived from gigantic trees which flourished in the swamps and forests of the primeval earth. These having been torn away from their native bed, by storms and inundations, were transported into some adjacent lake, river, or sea. Here they floated on the waters until, saturated with them, they sank to the bottom, and being buried in the lower soil of adjacent lands, became transformed into a new state among the members of the mineral kingdom. A long interment followed, during which a course of chemical changes, and new combinations of their vegetable elements, converted them to the mineral condition of coal.

What is a Coal Mine?

A subterraneous excavation, from which coal is obtained.

Do the terms Coal and Charcoal signify the same substance?

No; Charcoal is an artificial fuel, made in imitation of coal, by burning wood covered with earth so as partially to exclude the air. It is used for various purposes, as the making of gunpowder, polishing brass and copper, &c., and when a clear and bright fire is required, as it burns with little or no smoke; it is dangerous, however, for one to remain many hours in a close room with a charcoal fire, as the fumes it throws out are hurtful, and would destroy life. Charcoal, in fact, is the only coaly residuum of any vegetables burnt in close vessels; but the common charcoal is that prepared from wood, and is generally black, very brittle, light, and destitute of taste or smell. It is a powerful antiseptic, unalterable and indestructible.

YOUTHFUL NEGLECT.

Walter Scott, in a narrative of his personal history, gives the following caution to youth:—

"If it should ever fall to the lot of youth to peruse these pages, let such readers remember that it is with the deepest regret that I recollect in my manhood the opportunities of learning which I neglected in my youth; that through every part of my literary career I have felt pinched and hampered by my own ignorance; and I would this moment give half the reputation I have had the good fortune to acquire, if, by doing so, I could rest the remaining part upon a sound foundation of learning and science."

Louis XIV., when in his intercourse with the accomplished society of France, he felt his own deficiencies, often upbraided the foolish indulgence which had left his youth without instruction, exclaiming, "Was there not birch enough in the forest of Fontainebleau?"

☞ Arts that respect the mind were ever reputed nobler than those which serve the body.

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