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Wisconsin and Iowa farmer, and northwestern cultivator. Vol. V 1853

Janesville, Wisconsin: Mark Miller, 1853

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WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V.

JANESVILLE, WIS., JANUARY, 1853.

NO. 1.

PUBLISHED ON THE FIRST OF EACH MONTH, BY

MARK MILLER.

TERMS:

50 Cents a Year in Advance;

Five copies for \$2, if directed to one Post Office, and at the same rate for a larger number. All subscriptions to commence with the volume. Back numbers supplied to new subscribers.

To Our Patrons and the Public.

It is now four years since we commenced the publication of the WISCONSIN AND IOWA FARMER, and on entering upon the fifth volume we desire to address a few words to its patrons and to the public,—a goodly number of whom have been with us from the beginning, and to whom we would acknowledge our hearty obligations for their generous support—for their kindness and forbearance in excusing our manifold shortcomings.

It has ever been our wish, to make this Journal an efficient medium of communication between the Farmers of the Northwest,—to adapt it to their wants,—in fine, to make it such a compendium of knowledge as would be calculated to aid them in their Heaven-ordained vocation. We would invite you, and earnestly desire, that you make this Paper still more a medium of convenient intercourse—for a free interchange of opinions,—thus imparting and receiving instruction from each other's experience. The utility and value of an agricultural paper depends in a great measure upon the contributions of the many. It can scarcely be expected, that a knowledge of the best and most approved modes of culture of all crops, can be concentrated in any one mind.

Our aim is to assist in the diffusion of useful knowledge. We shall endeavor to convey to the minds of the readers of this Journal, as full and complete information on all the various branches of agricultural science and domestic economy, as we may possess, or can collate from works of thoroughly practical writers,—keeping in view, as we ever have done, useful facts and practical results, rather than speculative theo-

ries,—facts, which have been, or may be, demonstrated to be of real service to the most humble cultivator of the soil. When we tell you that "twenty-five bushels of flax seed" can be raised per acre—fifty of wheat—or one hundred and fifty of Indian corn,—or that pork can be made for two cents a pound, we will give you the *modus operandi* by which it may be done.

As we have remarked before, we do not believe in literal book-farming—that mere book-knowledge alone will render men good farmers, or reliable instructors; but we contend that it is absolutely essential for the successful prosecution of the business of agriculture,—that the nature of the materials with which they have to do—the capabilities and deficiencies of the soil, and how it may be improved—the proper rotation of crops—the right application of manures, &c., should all be well understood by the "lords of the soil." When this is the case, and whatever is learned is reduced to practice, and they are in the field, not only to superintend, but to work with their own hands; they cannot fail of becoming efficient farmers, proper teachers, and successful in the business which they have chosen. In the words of the lamented NORRIS, "to fit practice to theory is one thing, and to fit theory to practice is an entirely distinct, more useful, and successful business."

We are continually receiving assurances of the acceptability of our Journal, from the friends of agriculture in every quarter, within the range of its circulation; and who have brought us under many obligations for the substantial aid they have rendered us in various ways.—We are truly grateful for the extent of patronage secured through the efforts of faithful agents; and also for the courtesy of our BRETHREN of the Press, in calling public attention to our humble sheet. In return for these tokens of confidence, we feel bound to renew our efforts—to labor with increased diligence, and a willing mind—that we may give to our patrons a paper, more than ever, worthy of their confi-

dence and support. We shall spare no means within our reach, to make the *Farmer* one of the best Agricultural Papers of the day; and may we not count on the continuing assistance of its friends, to further extend its circulation?—Let every one of its present subscribers consider himself an active agent, and solicit his more tardy neighbors to join him in making up a club, or in enlarging one already formed. With a little effort of this kind our list of subscribers might be doubled or trebled. This may be done with trifling inconvenience to themselves, while it would place in our hands material aid.

Suggestion for the New Year.

How many farmers, as well as others, find themselves wofully mistaken in their calculations when they come to close up the old year! They owe more than they expected and have less with which to pay than they expected, and thus they are doubly disappointed. They are consequently disheartened, and instead of welcoming in "the glad New Year," they would put far away its coming. How can this evil, for it is a sore one, be done away with? Simply by keeping an account of matters. First go immediately to the Book Store and buy you a memorandum book, or what is nearly as good, and more economical, fold a few sheets of paper into a small form—put a cover on it—attach to it a pencil—put the whole establishment into your pocket and carry it with you as sedulously as you would a pocket pistol or a life preserver; and be as sure to put down every item of debt and credit, as you would to load your pistol or inflate your life preserver. Remember *this* is your *only* safety. This is the only preserver from the evils to which too many of us become heirs *at law*. Many farmers keep no accounts with the merchant, blacksmith, or shoemaker, and the doctor is always suffered to charge *ad libitum*. 'Tis thus the farmer knows nothing of his indebtedness till the fatal day of settlement. Farmers, keep your own accounts. You can then, at any time, tell what are your obligations, and if you have, as you should, kept an account of your proceeds you will know your ability to discharge those obligations, and that, without the legal advice of the squire.

FLOUR.—The receipts of flour at Dunkirk, N. Y., average 10,000 barrels per day, which is twice the capacity of the railroad to send forward.

For the Wisconsin & Iowa Farmer.

French Merino Sheep.

MARK MILLER:—I intended to have dropped you a line ere this, principally to inform you and the farmers of Wisconsin, generally, that I have purchased the full-blood French yearling Buck sheep, owned and exhibited by the Messrs. Hall & Kemp, Gaines, Orleans Co., N. Y., and which you were pleased to term "As fine a fellow as you ever saw in a sheep-fold."

I also have purchased a 3 year old ewe of the same flock, together with some half-bloods of a superior order. You hoped these sheep would be retained in this State, and *four* of the 5 full-bloods are. H. V. Prentice, Esq., of Genesee, Waukesha Co., having secured 2 of the 3 yearling ewes. I had the four in my possession some 4 weeks, and I can assure you, that after running in my clover lots and getting over the hardships of the journey, they make an interesting appearance; especially along side some Hoosier ewes I then had in my possession and which were called *very good sheep*. I rather think that it would excite my combativeness a little for any one to offer to sell me any more of this last kind. By the way, can any one give us a chapter on the comparative hardness of coarse and fine wool sheep, as tested in Wisconsin? I recollect having seen an article in the Patent Office reports, communicated from Geneva, Wis., stating a case where two kinds (coarse and fine), were together, and fared alike; the odds was decidedly in favor of the fine.

My own experience was to the same result. I had a flock of some 60 ewes—some 40, coarse enough in all conscience—the residue, different degrees of fineness, from half French and Spanish, to half Spanish and Native. There was one rule without an exception, I believe.—The finest were the strongest, and came through the winter in the best condition. And why should they not? If a man were to choose between two coats—one, a fine thick heavy article, the other, a coarse thin slazy or *light* article, it would require no very great or unusual sagacity to determine the nature of the choice. And yet, men calling themselves human, have told me that my fine woolled heavy fleeced sheep, were worthless, *because* they were not hardy enough for our rigorous winters. Nonsense.—These woolly-headed fellows with their *leggings* on, must have had some *ideas* of western life, especially the crossing our prairies in a cold winter day, the wind in the west, or they would

never have come to us thus "accounted." May be these ideas were beat into their heads, with the four feet snows and six months winters of the Green Mountain State—"The star that never sets." But enough. I may have drawn this fine wool out too far already for the durability of the cloth. I close by saying, that if the services of his woolly majesty are wanted by you for that sheep Mr. Hall sent you, they are at your disposal. He will be at my brother's, Mr. E. F. Weld, near Palmyra, in a few days, if that would be more convenient to you. I intended to have taken her home with me from the Fair, but she was taken away during my absence.

F. D. WELD.

Greenfield, Nov. 19, 1852.

For the Wisconsin & Iowa Farmer.

Comparison between Ox and Horse for Agricultural Labor.

In this utilitarian age in which such advances are made in the speed with which we can transport our products to market, over any mode known to our ancestors of the 17th, or 18th, centuries, and in which all our business movements are actuated by the widely spread thirst for gold, should we not examine how it may be saved as well as made? If we can abridge the amount of expense and all other things remain the same, it is equivalent to saving that amount, or to making it. The labors of the farm are principally carried on with horses; oxen it is true are kept on some farms, but as a general rule the horse is used in the labors of the field. That the ox is the most economical for use so far as keeping is concerned none will deny.—That he is more valuable in old age when unfit for labor is also true. That he is capable of performing as much agricultural labor as the horse, any one will be convinced of, who will try the experiment with a good yoke of oxen and give them one half the grain, when at work which would usually be fed to a pair of work horses. How many horses are there whose value is three-fourths diminished at twelve years old; the ox at that age is worth for beef more than at six years old. Let us institute a comparison. A pair of good farm horses are worth say 200 dollars; harness 25; making \$225; interest one year at 7 per cent., \$15 75; grain, 12 qts. each per day at 2 shillings, \$68 50; hay 8 tons at six dollars per ton, \$48 00; cost per annum, \$132 25. Oxen, yoke and chain, 110 dollars; interest one year at 7 per cent.,

\$7 70; grain \$34 25; hay, \$48 00; cost per annum, \$89 95.

We commence with first rate farm horses at four years old and continue until fourteen, or ten years time and with the oxen the same time, and all kept in as liberal a manner as farmers generally keep their horses and much better than they generally keep their oxen. Let us now see how the account stands.

Keeping of one pair of horses at \$132 25 per year, - - - - - \$1322 50

Shoeing at 12 dolls. per annum 120 00

Total \$1442 50

Keeping one yoke oxen 10 years at \$89 95 per year - - - - - \$899 50

Shoeing at 5 dollars per annum 50 00

Total \$949 50

Oxen worth for beef - - - - - \$80 00
leaving the cost of the ox labor for ten years - - - - - \$869 50

Horses worth at the end of ten years say - - - - - \$125 00
leaving the cost of horse labor for same time - - - - - \$1317 50

Balance in favor of oxen - - - - - \$448 00

The cost of shoeing oxen can be entirely dispensed with unless used upon the road, which would make the balance in favor of oxen nearer 500 dollars; enough to buy a farm in a new country. Now, so far as the amount of labor performed by the horses over that performed by the oxen being equal to the extra time consumed in grooming the horses, we will call it equal—and then one ox team stands \$500 in advance of the horses. That the comparison is a fair one we are confident; that the ability of the oxen to perform is fully equal to what we have stated we are also confident. Oxen of fair size and age and taken care of as above stated when working in the same field with horses will be found fully equal to them at all kinds of work, and quite another team from the weak and half starved oxen fed on hay, unhoused and uncared for which we usually find among our farmers, especially when they have a pair or two of horses. They cannot afford to take care of the oxen, as the horses need the grain and hay, and straw will do for the oxen. What would a horse team be worth with such care? not as much as the oxen, and the tanner would speedily have their hides. The docility of the ox is not inferior to the horse. He can be train-

ed with as little care to work alone among hoeing crops with the cultivator or drag. Persons unaccustomed to train young steers would be astonished to find them quite ready to mind the word of command after a few short lessons of an hour each. Taken at four weeks old a pair of calves can be learned to perform all the movements of oxen at the word of command after a dozen lessons. They never forget their early impressions, and the labor expended at such a time is well expended.

The hundreds of miserable horses now devouring the products of the country could well be replaced by as many oxen which would be available without much loss when their labors were ended, and save many hundred thousand dollars which is now no better than sunk in the ocean. Being an ardent lover of the horse, we cannot be other than an advocate for him as far as truth will admit; but we must confess we would prefer to drive a fine yoke of oxen rather than an ordinary or poor pair of horses. Brother farmer, try the experiment and we venture to say you will form a better opinion of the "laboring ox who turns the fallow to opening sun." Milwaukee, Dec., 1852. A FARMER.

For the Wisconsin & Iowa Farmer.

Pork Tubs and Preserving Pork.

MARK MILLER, ESQ.—Dear Sir: I am surprised that a large proportion of pork that is packed is more or less injured, from a variety of causes. I therefore give a few hints through the medium of your paper, (if indeed you think them worth publishing,) respecting that invaluable article which should be found in a perfectly pure state upon every farmer's table.

The best packing tub I have ever used, is made of pine; 24 inch bottom, 3 feet staves, and 20 inches top. A tub for a small family can be in smaller proportions. This taper is sufficient to hold each layer in its proper place, and frequently to the last piece in the layer, which prevents its rising and rusting.

In packing, I have but one rule as to quantity of salt; that is to be sure to put in enough. As soon as the animal heat has subsided, and while in a pliable state, I pack each layer close, and press them snug together, covering the first abundantly with salt, previous to commencing another.

I then make a strong brine, which I skim while heating, until perfectly pure; then boil and pour to my pork boiling hot, sufficient to cover it, and cover my tub immediately, and

let it remain until I wish to use it. This mode is not only the safest, from the fact that every piece in the barrel is penetrated equally and at once; but it gives a peculiar brittle tenderness and fine flavor, unequalled by any other process. Try it.

FEEDING STOCK.—Farmers lose much by injudiciously feeding grain. Hogs will fatten much faster on less grain in warm weather, than in cold. Hence there is two-fold loss; more feed in the same length of time, and more time to accumulate the same amount of fatten. The loss is still greater on cows, which in meagre condition are forced to face a stern and frowning winter; long and drear. They require more food, give less milk, and the milk they do give a poorer quality; the animal much more liable to disease and disasters; but if by chance she escapes them all, she is comparatively of little value the ensuing season than she would have been, kept in good condition. No one perhaps, mistakes more grossly in this respect than the flock-master, who starves his sheep in summer, and suffers them to roam and pick a scanty feed in autumn and in early winter, and leaves them all exposed to prairie winds, and then trusts to a little grain in dead of winter to resuscitate them and prevent untimely death.—What, though perchance amidst the odds against them, they survive—outside the winter storms, give birth to a feeble progeny which there is but one chance in ten to raise, and if raised worth but one-tenth what it should be. The dam if it lives, (which is doubtful) has but half a crop of wool—half of that lost before shearing time, and the remainder so tattered that it can be put in no saleable shape, and the sheep neither fit to kill or keep. Let such as are or design to be flock-masters, compute the loss.

S. N. HAWES.

Fond du Lac, Dec. 8, '52.

For the Wisconsin & Iowa Farmer.

FRIEND MILLER:—I wish to enquire through the columns of the Wisconsin Farmer, where can be bought heavy boned, and well proportioned male swine or Suffolk breed of hogs, which I wish to cross with fine boned Leicestershire sows,—of which I have one hundred for breeding.

A. R. BARRETT.

Magnolia, Dec. 8, 1852.

A bed of coal six feet thick, lying five feet below the surface, has been discovered in Kendall county, Illinois. The quality of the coal is said to be equal to that of the Pennsylvania mines.

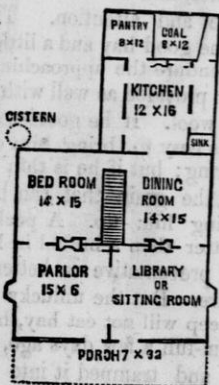


Plan of a Neat and Convenient Farm House.

There is perhaps no subject upon which there is a greater diversity of opinion than on the construction of dwellings. No two individuals, scarcely, can be found who will adopt the same plan in every particular. Every man who builds a house will have some peculiarity of his own—differing from his neighbor, although the difference may be quite unimportant. We shall occasionally present to our readers plans, which, though they may not be followed out strictly, will suggest many useful hints.

This plan combines many excellences. The elevation presents a pleasing aspect, while it is conveniently arranged within. It is not too large for an ordinary sized family, and may be built for a moderate sum. We copy this plan from the Albany Cultivator, with the following description.

"The main building will be 32 by 34 feet; the kitchen 12 by 16, with two porches 4 feet wide—the pantry and coal-house connected with the kitchen. will be 8 by 20 feet. There is a door opening out of the kitchen into the pantry, and from the porch into the coal-house.

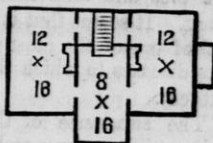


FIRST FLOOR.

Each room is provided with one closet or wardrobe; the library with a permanent bookcase. All the windows in the second story open on hinges; the one to the north-east into a small balcony with iron railing, 4 by 6 feet, which is sheltered by the roof, project-

ing over the wall two feet. The window at the opposite end has a railing attached to the outer edge of the wall, three feet high. The lower story, besides the dining room, library and parlor, contains one large bed-room. The second has two good bed-rooms, 12 by 16 feet, and if necessary, a bed could be placed in the middle room, which is 8 by 16 feet, extending to the front wall. The stories are each ten feet high. The stairs ascend between the chamber and dining room; the cellar stairs are under them.

Every room except the middle one in the second story, is provided with a fireplace. The roof is steep, the apex being 16 feet from the second



SECOND FLOOR.

floor; this leaves room for a high ceiling in the upper bed-rooms, and for a small ventilating window at each end, above the ceiling, which permits a free circulation of air between the plastering and roof."

WHITE CLOVER.—We are satisfied that our farmers do not appreciate the white clover, or white honeysuckle, as some call it, so highly as they ought, nor take so much pains as they should to cultivate it. In fact but very few sow it, when they lay down their lands to grass. They trust to nature to supply them with it.

When once seeded with it, the soil will retain it a long time, for the low short stems will bear heads full of seeds, and these become scattered out into the soil, and thus the seed is kept in the ground and springs up whenever circumstances are favorable for its development. A moderate clayey loam is congenial for it, and if this be dressed with an occasional dressing of plaster,

it will bring out abundantly. It affords an excellent pasturage for bees, the best honey in the world being obtained by these little insects, from white clover.

It also affords the best pasturage for cattle, especially cows from whose milk, cheese is manufactured, as experiments have proved that cows that graze upon this species of clover, yield milk that contains *casein*, or cheesy particles, in greater abundance than they do when fed on the common grasses. We throw these hints out for our readers to think of. Four or five pounds, mingled with a due quantity of other grass seeds will be sufficient for an acre, and it can be obtained at reasonable prices at the agricultural seed stores. [Maine Farmer.

The Rhubarb Plant Dangerous.

The Cultivator for August, says that the fourteenth number of Braithwaite's Retrospect of Practical Medicine and Surgery, contains an article on the influence of rhubarb plant in producing gravel, which is calculated to alarm those who indulge in the pies and tarts made of this palatable plant. It seems that it furnishes the material of one of the most painful and dangerous diseases to which the human system is subject.

The substance of the article is briefly this: "The young stalks of rhubarb contain oxalic acid, and hard water contains lime; and consequently, those who eat articles of food made of the plant, and drink such water, are introducing into their system, the constituent ingredients of the mulberry calculus, which is an oxalate of lime; if they are dyspeptic, and unable to digest the acid, 'are very likely, indeed, to incur the pain and exceeding peril of a real concretion of that kind. The oxalate was found in three out of four, after eating the rhubarb.

This, it must be admitted, is rather alarming. The mulberry calculus is the most painful form of the concretions of the kidneys and bladder. The rhubarb plant has come into extensive use, and is generally considered a very wholesome article of diet. If the danger of using it, is as represented in the Retrospect, it should be universally known. There would seem to be reason to infer that the danger is not confined to those who use limestone water, for the acid will probably combine with

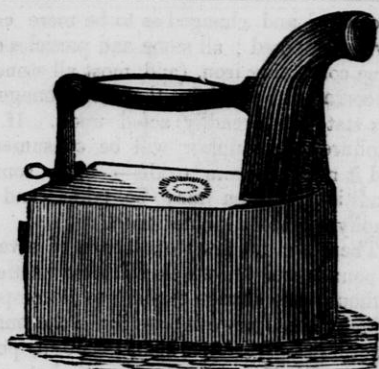
other bases as well as with lime. The presence of oxalic acid in the plant, perceptible to the taste, would lead one to conclude, *a priori*, that the ascribed effect would result from its use, whenever it is not decomposed by the stomach, which seems to be the case in the greater proportion of instances; and the experiments leave little room to doubt its agency in the production of oxate gravel in the urine. [Ex.

A Word to Keepers of Sheep.

A large majority of the farmers of Ohio, think that, give a sheep grass during the spring, summer and autumn months, hay during the early part of winter, and hay and grain towards spring; if they die from poverty in the spring, as many of them do, it is attributed to bad luck. The unlucky man will say that he feeds his sheep all the grain they want in February and March and they still go down in flesh, and many of them die, while those belonging to his neighbor get through these trying months on half the grain and keep in good flesh. Why is it?—It must be luck. Now if the unlucky man will look at his neighbor's sheep occasionally in the month of November and December, he will find them on good feed and looking strong. His lucky neighbor will tell him that when the frosts come in the fall the pastures fail in substance, and this is the time sheep require care and attention. They should have some good hay and a little grain. A sheep to endure the approaching winter should be provided as well with a coat of flesh as of wool. If he goes into the winter strong, it is easy to bring him out strong in the spring; but if he is thin in flesh in the fall, all the grain that can be given will not bring him up. A peck in December is better than a bushel in March—an ounce of preventative is better than a pound of cure. But the unlucky man will say, his sheep will not eat hay, he carried them an arm-full a few days ago, and they ran over it and tramped it into the mud; as for grain, he never thought it necessary to be given until February, when sheep got weak.

Now if the unlucky man will put his hay in racks to prevent its being trampled under foot, and will adopt his neighbor's mode of feeding, he will find in March, that there is more in management than in luck. [Ohio Cult.

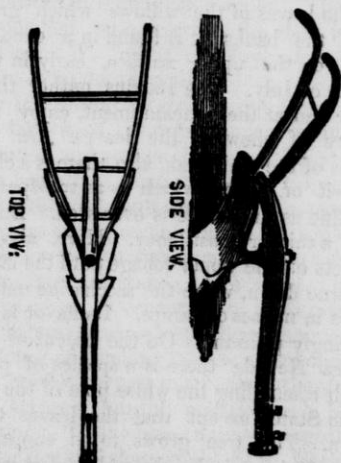
UNCLE BILLY.



Self-Heating Smoothing Iron.

This is a useful article of domestic economy and convenience. The iron is heated with charcoal, or coals from a common wood fire, in from five to ten minutes, and may be kept in constant use by adding a small quantity of coal once an hour. It is said that *one cent's* worth of coal is more than sufficient for a day's use, thus obviating the expense of a large fire, and of ironing in a heated room. It might be supposed that the fumes of the coal arising from it, would be unpleasant to the person using it, but we have heard no such objection to its use.

Irons constructed on the same principle are made in form and size suitable for Tailor's use.



Double Mould-Board Plow.

This is a light one-horse plow, used for opening drills to plant potatoes, corn, &c. In plowing out between narrow rows, it throws the dirt both ways to the plant, and thus does the work of two plows. It is also very useful in digging

potatoes. It is a very convenient implement for various kinds of work.

For the Wisconsin & Iowa Farmer.

Selection of Pumpkin Seeds.

MARK MILLER, ESQ.—Sir: Some years since in conversation with a foreigner, (a learned Scotchman,) upon the subject of raising Pumpkins, he enquired of me, "Do you always raise abundance of Pumpkins from an abundant growth of vines, or only occasionally? My reply was,—that I had ever in my experience found the fruit to be very uncertain, however excellent the vines might be. Said he, "save the right kind of seeds." This was the first time that I ever had an intimation that, from full sized, ripe, rich Pumpkins, there was a difference in the seed; I therefore courteously asked him to explain his meaning. He replied, "save seed only from the female species." Here again I was at fault, and besought that he would give me further directions by which I might err no more. He commenced by saying, "That one accustomed, can generally tell by their general appearance; but the most distinguished feature is at the blossom end, the mark of the blossom being from twice to four times as large on the females as on the males." Since learning the above, I have selected seed according to his directions, and for ten years past have never failed of raising Pumpkins, when I could obtain a luxuriant growth of vines.

S. N. HAWES.

Fond du Lac, Nov 16, '52.

For the Wisconsin & Iowa Farmer.

MR. EDITOR.—"Farmers write for your paper!" Dr. Kennicott calls in your November Farmer. Well, it snows and rains to-day, so I can not husk the rest of my corn that ought to be done. If you like it, I will tell you of a first rate kind of cement for the purpose of making swine troughs, feed-boxes, eave-troughs, and many other things.

Take some common lime and mix it with a quantity of tar—just enough to make a tough dough. Use it quick, because it becomes hard like stone in a few moments, and will never soak or crumble. This cement, well known in our old country, (Germany) I have never seen here. I assure you, it is a very useful and practicable one.

DR. R. A. KOSS.

East Troy, Dec., 1852.

Charcoal Pit Bottoms.

"Why do coal pit bottoms," asks a friend, "remain productive for an age, never failing to give a heavy crop?"

The question is an important one in many respects. It is of the same nature with all enquiries in Natural science. Newton had one just like it as he sat looking at the chandelier. There was a fact. Those vibrations were in accordance with some fixed law of Nature which was ever constant, ever true. Now, says he to himself, what is the law? and he gave himself but little rest, until he had resolved the problem and made known the Laws of Gravitation to the world. Newton did not make laws; God made them. Newton's business was to study and learn those laws, and make them known to his fellows, that the business of life might be regulated in accordance with them.

Now here is another fact. Who will solve the problem connected with it—What gives the long continued fertility to the pit bottom? One answer, and the one usually considered satisfactory is, that there is coal left on the ground. In answer to this it is said that coal contains but a single element, (carbon) for the use of plants, and that it yields up that with a degree of reluctance. This is true. Its power of absorbing other agents from air or water, is well known. The most filthy water, strained a few times through fine charcoal, recently prepared, becomes pure and sweet; but charcoal by exposure, loses much of this power. How much would remain after an exposure of years we know not.

Others have ascribed the continued fertility, to ashes. If coal is judiciously made, there will be but very few ashes; still we suppose few pits are burned without making some. Could they produce the effect?

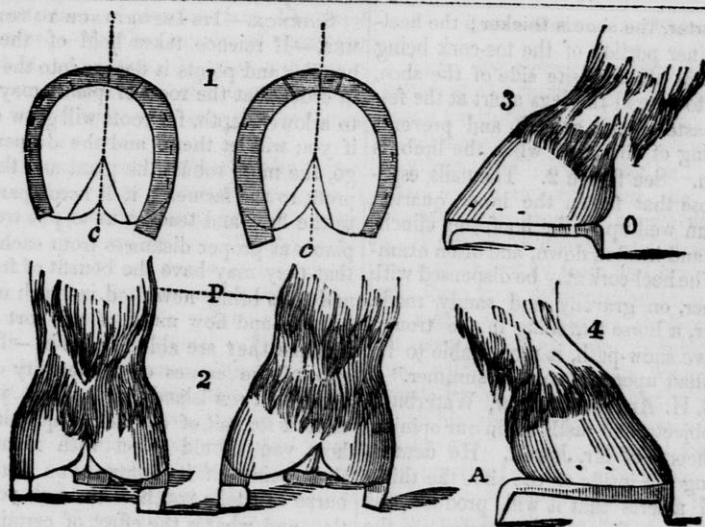
Our enquirer suggests another solution. The *burnt earth*. It is very common in England, to pare and burn the surface of their fields. In this country, but few experiments of the kind have been tried.

In burning coal, the earth on which the pit stands, as well as that by which it is covered, becomes thoroughly heated, before the process is finished. In this case, all lime stone would be changed to lime; pieces of micaceous and magnesian slates,

so cracked and changed as to be more easily decomposed; all stone and particles of stone containing iron, (and most all stones do contain it,) will have that iron changed to a state more readily acted upon. If a sulphuret, its sulphur will be consumed, and it may become oxide—or in some conditions oxygen may be taken, and a readily soluble sulphate result.

There are but few stones, even of several pounds weight, which will bear heating without some change tending to decomposition. Much more is this true in the small grain sized particles, which, although, perhaps, not half so large as pigeon shot, are as useless for the use of plants, as those of ten pound weight. If it be true, that so great and long continued fertility is mainly owing to the burning of the earth, very important uses can readily be made of the principle. [Pittsfield Culturist.]

HONEY TREES IN CALIFORNIA.—California has been established a land flowing with gold, and it will soon come in for the degnition of a land flowing with honey.—One of the papers in Stockton states that in the region round, there is to be found an abundance of saccharine matter of delicious flavor. It is to be found on different description of trees and in different forms.—On the leaves of the willows which grow upon the banks, it is found in a candied form, on the upper surface, early in the month of July. The Indians gather their sugar and at their encampment, enjoy the luxury of chewing the leaves. On the leaves of the white-oak, also, there is a clear deposit of honey which is as transparent and fine as the article is ever seen. But it is of a thicker consistency. Here, also, it collects on the upper foliage until the latter is borne down, when the saccharine matter drops in masses or lumps. Its flavor is exceedingly pleasant. On the ascent of the Sierra Nevada there is a species of pine, much resembling the white pine of the Atlantic States, except that the leaves turn down. This tree grows to an enormous size—270 feet in height and 30 feet in diameter at the base; and sometimes the trunk runs up 180 feet, almost without a limb or crook. The resinous matter which exudes from the bark, has a rich saccharine flavor. The Indians eat it in large quantities. [Booneville Ledger.]



Interfering Horse-Shoe.

It is our desire to set before our farmers, every thing new and useful in the mechanic arts, in which they have an interest ; we therefore select from our worthy cotemporary, the "Boston Cultivator," the following inventions, the illustrations of which we have had neatly engraved to explain its peculiarities in the fullest manner. The correspondent who describes the shoe, is Mr. Solomon W. Jewett, of Weybridge, Vermont, who does it well :

"Interfering, or striking one foot against the fetlock of the opposite leg, is quite a common and serious difficulty with many a fine horse that carries a shoe. I design in this article to show how a horse may be shod, so as to prevent concussion while the limb is in motion, accompanied with a sketch of an interfering shoe, to be adopted in extreme cases. Perhaps there is no piece of mechanical work, except the planning and building of dwelling houses, where opinions and modes vary so much, and where skill and art are so horribly mangled, as in horse-shoeing. I have many a time thought, that a blacksmith's shop would "turn black and blue," if a horse, rough shod, only had the power of speech !

Figure 1 represents two interfering shoes, with the inside quarters much wider, longer, and less curved, than the outside portion of the shoe ; with the toe-cork set more upon the inside quarter, as may be seen by the

line, *c d*, drawn across the center of the hoof, from the toe to the heel. When properly set, the inside quarter of the shoe lies more directly under the foot, as may be seen by the line, *c d*, drawn through the center. Upon the inside, or quarter of the shoe, the holes to receive the nails should be punched as near the edge as possible, that the shoe may set well under the outer wall or crust of the hoof, when properly adjusted. Consequently, the inmost quarter of the shoe sustains more of the weight or bearing of the animal. This part of the shoe having more surface, it is not liable to settle on the road as the outer quarter.—The toe-cork inclining more to the inner side of the toe of the shoe, and left the highest on the inner side, all helps to roll the hoof and fetlock outward.

Figure 3 represents the outside quarter of the shoe, when fastened to the hoof, as the thinnest ; a lighter heel-cork, and well set under the heel at *O*. By comparing this with the inside quarter of the shoe, as represented upon the same hoof in figure 4, you will observe the shoe to be thicker and larger, with a strong heel-cork, which extends back from the heel at *A*, more than at *O*. The outside quarter or crust of the hoof, should be pared away more than the inner quarter, which latter should be pared as slightly as possible. The inner wall or crust of the hoof being longer under the

same quarter, the shoe is thicker; the heel-cork or inner portion of the toe-cork being longer than the opposite side of the shoe, all tends to spread the legs apart at the fetlock or pastern joint as at P, and prevents the striking of the hoof when the limb is in motion. See figure 2. The nails, especially those that fasten the inner quarter, should run well up to the hoof, the clinches short, and headed down, and often examined. The heel-cork may be dispensed with in summer, on gravelly and sandy roads. In winter, a horse travelling in the trough or concave snow-path, is more liable to interfere, than upon the road in summer."

Mr. B. H. Andrews, farmer, Waterbury, Conn., objects, and justly so, in our opinion, to the theory of Mr. Jewett. He demurs to making the inside of the shoe the thickest, and asserts that it will produce the very opposite effect to that stated in the above. His practice is against that of the blacksmith's, to have the outside full and the inside well pared down, and he is never troubled with an interfering horse.—This latter theory is the correct one, in our opinion. [Scientific American.]

WARMTH PROMOTES FAT.—Lord Ducien has performed some experiments highly illustrative of the foregoing general principles, and which also indicate what might be expected from their application to the practice of grazing. 1st. experiment.—Five sheep were fed in the open air between the 21st of Nov., and the 1st of Dec.; they consumed 90 lbs. of food per day, the temperature of the atmosphere being about 44 deg. At the end of this time they weighed 2 lbs. less than when first exposed. 2d. experiment. Five sheep were placed under a shed and allowed to run about, at a temperature of 49 deg.; they consumed at first, 82 lbs. of food per day—then 70 lbs.—and at the end of the time had increased in weight, 23 lbs. 3d. experiment. Five sheep were placed in the same shed, as in the last experiment, but not allowed to take any exercise, they ate at first, 64 lbs. of food per day—then 58 lbs., and increased in weight 30 lbs. 4th experiment. Five sheep were kept quiet and covered, and in the dark; they ate 35 lbs. per day, and were increased 8 lbs. These experiments prove very satisfactorily the influence of warmth and motion on the fattening cattle, and are still going on.

SCIENCE.—ITS IMPORTANCE TO THE FARMER.—If science takes hold of the plow handles and points it deeper into the earth, in order that the roots of plants may reach to a lower depth, for roots will grow deeper if you will let them, and the deeper they go, the more robust the plant and the more profit to the farmer; if it accompanies us to the field and teaches us to put trees and plants at proper distances from each other, that they may have the benefit of fresh air, and thus bring new food in reach of their leaves—and how much of this sort of sustenance, they are able to take in—if it tells you of the causes of the fertility of mud banks and sea islands, and where you are to look for soil of the richest quality, and how you should select with reference to that point—if it follows you into your barns and tells you how to treat your cattle—and what is the effect of certain treatment—to what diseases cattle are subject, and how they are to be prevented and cured—and if it goes with you into the fields, and instructs you in the nature of the insects that attack your crops, and as to the means of destroying them—I put it to you to say, whether if science can do all this, it is to be considered either as useless or unprofitable to the farmer? [Prof. Johnston.]

Source of the Nutritious Property of Vegetables.

The nourishing property of corn, wheat, and other grains, is owing to the gluten contained in them. And this gluten consists, in great part, of nitrogen. It is of course an important object with the farmer, to increase the proportion of gluten, and that is done by supplying additional nitrogen in the aliment of the plant. Carbonic acid and water, are the chief sources of growth. Nitrogen is the principal element constituting the nutritive quality.—The atmosphere contains a large quantity of nitrogen. It is not supposed to be taken up by vegetables, however, from the atmosphere in its simple form, but, by combination with the hydrogen, in the form of ammonia. By the digestion of the ammonia, the nitrogen is afterwards separated in the plant, and used to constitute the peculiar product, gluten, to which its nutrition is owing.

Ammonia is produced by the decay of animal substances. In this way it is, that

the application of manures is so beneficial to plants;—by the supply of ammonia furnished, which being digested in the plant results in a separation of nitrogen, which enters in the tissue of plants and produces their nutritive quality.

Ammonia is readily absorbed by water, and the rain or dew becomes impregnated with it, and it is thus administered to vegetables, in small quantities. This may be sufficient for their existence and ordinary growth. But a greater supply of ammonia is necessary to some plants on account of their peculiar economy. This is the case with all plants containing much gluten. And this substance may be greatly increased, by a liberal supply of manures from which ammonia is more abundantly provided. These plants can therefore only be cultivated advantageously by a frequent application of manure, or otherwise an equivalent provision of ammonia in another form. Corn, ordinarily, when raised in vegetable mould, contains nine and a half per cent, of gluten; but raised on land manured with blood or urine, has been found to contain thirty-five hundredths of gluten.

Gypsum has the quality of absorbing ammonia from the atmosphere, and yield it again to water which may soak through it. This is the mode in which gypsum has a beneficial action on vegetation, while the gypsum itself held in solution in water, is considered injurious. [N. E. Farmer.

POULTRY REMEDY.—We find in the New England Cultivator, the following remedy for a disease which we think will be found quite prevalent among our poultry:

About six weeks ago one of my hens became ill, and lost the use of one of its legs. I was told overlaying was the cause of the malady, and was recommended to give her a few pepper-corns, and a little bread soaked in ale, which was forced down her throat. In a few hours the bird was walking the yard; however, in a couple of days she had a relapse, when the same dose was administered, and she was separated from her companions for forty-eight hours, when she quite recovered, and has had no return of the complaint, and produces her full number of eggs per week. This may be a useful hint to amateurs, as I was informed by a poultry fancier of some experience that my hen would die.

Green-Houses in Winter.

Very few persons appear to know the value of the sponge, in a green-house. I mean for the purpose of washing the leaves of all those plants with leaves broad enough to admit of it. I took the hint some five years ago, from a neighbor, the most successful plant grower I have ever had the good fortune to know. His plants were always so especially fresh and healthy, that I was for a long time puzzled to understand his secret, and he always declared he had no secret. But early one morning I caught him with a pail of clean water, slightly warm, by his side, sponging off the leaves of all his choice plants. I said to myself, "I have it." I did more; I went home and practiced it. My plants soon showed by their new aspect, that I was not wrong in believing it the real secret of my neighbor's success. They began to look brighter, healthier, and grow and bloom better than my utmost care had ever been able to make them do before. And now strangers always ask the same question when they see my plants, that I used to ask my neighbor. My answer is, "use the sponge."—The pores of the leaf get filled with fine dust—and the plant chokes. Syringing does not wholly remove it; the sponge does. [Horticulturist.

MODEL DAIRY HOUSE.—Mr. Titus Markham, of Collinsville, N. Y., has just completed a new dairy house for butter, on a new and improved model. It is constructed with double walls, leaving about 18 inches between the inner and outer, with the windows opposite each other. The object of the double wall, is to keep the room in warm weather, of a medium cool temperature, and at the same time to avoid the dampness of an underground room. The building is placed on abutments, about 18 inches from the ground, and by a number of openings in the floor, with gratings, a perfect ventilation is obtained, and so regulated, that the room can at all seasons be kept of an even and at any desired temperature. The expense of this building is not much above an ordinary one of the same size, and we certainly think it possesses very decided advantages above any other we are acquainted with in the country.

[Roch. American.



HORTICULTURE.

Sayings and Doings of The North-Western Fruit Grower's Association.

BY JOHN A. KENNICOTT, M. D.

The second meeting of THE ASSOCIATION, and third annual gathering of Western Fruit Growers, in Illinois, was held September 29th & 30th, in Dixon—and I propose giving a brief abstract of their sayings and doings in advance of the official publication of Proceedings.

There were about sixty members in attendance, from five different States. The quantity of fruits large, and the quality superior, for so dry a season—APPLES constituting the great mass; but PEARS, GRAPES, QUINCES, PEACHES, &c., making up a varied and most interesting show.

The morning of the first day, up to 11 o'clock, was devoted to examinations and arrangement of fruits. At eleven A. M. the meeting was called to order by the President, Dr. John A. Kennicott—and on motion, the Constitution so amended, as to require an annual member fee of one dollar.

COMMITTEES on Synonyms, Seedlings, Select lists of fruit for discussion and recommendation, Business, &c, were then, on motion, appointed by the Chair, and business went on smoothly and rapidly. Nearly every member having something to say, and saying it in few words, and with no waste of time.

The writer has attended many such meetings, and often presided, but he must say, that he never witnessed one where there were so many SPEAKERS, and such short, pointed, and definite speeches. There was as little waste of words as of time.

There were three sessions the first day—the evening one being public—and then our "INDUSTRIAL COLLEGE" movement was freely dis-

cussed, and *unanimously* recommended. A STATE AGRICULTURAL SOCIETY was also talked over, and the chair authorized to appoint delegates to attend a State Convention at the Capital, in January.

Brief, but feeling observations, on the late afflictive dispensation of Providence, in removing our beloved friend and leader—A. J. DOWNING, were made by F. R. Elliot, and the President—and before our adjournment, proper resolutions—drawn by a young Son of Wisconsin—were adopted—a copy of which has already been forwarded to the family of the noble and justly honored DEAD.

I will now give you the substance of some of the remarks of members on the APPLES offered by the committee for discussion.

Red June—Mr. McWhorter called for the opinion of C. R. Overman on its identity with "Blush June."

Mr. Overman—Believes them identical.

Mr. McWhorter—Had corresponded with Mr. Ragan, of Indiana, who says they are not the same, but different fruits, though much alike, except in color.

Mr. Williams—Has sent to Mr. Ragan for scions of both trees, as a test.

The President—Believes this variety to be one of surpassing excellence, for its season, in this region.

Dr. Haskell—Thinks it one of the *very best* in quality of fruit and early productiveness—has had it bear at four years old in nursery.

Passed, as beautiful, hardy, productive, and best of its season.

Sweet June—Mr. McWhorter—This sort has not borne as well as usual the past season.

Mr. Brayton—It has borne well in Wisconsin.

Dr. Haskell—Has borne well with me, also. Mr. Edwards—The Secretary—It has borne well with me, every year since its commencement—though transient, 'tis a good fruit and prolific, and an early bearer—These are prime requisites in a new country.

Passed, as very good, early and productive. Early Pennock—Mr. Phoenix—Considers it of good quality in general, and bearing profusely when young—but has seen it speckled and spongy—a good market variety.

Arthur Bryant—Would call it second rate in quality, but valuable in new countries, on account of early productiveness.

Mr. Elliott, (of Ohio)—It is a good bearer in

Ohio, but not equal to Summer Queen in quality—not so much cultivated as formerly, on this account.

R. Avery, (Iowa)—Referred to the criticisms in the Prairie Farmer, on the action of the last meeting on this fruit, which, the writer says was recommended as Early Pennoek, and rejected under the name of "Shakers' Yellow"—and if synonymous, Mr. A. thinks it far below Benoni.

The President—Called for the opinion of Mr. Elliott as to the identity of our Early Pennoek with the one cultivated in Ohio, under that name.

Mr. Elliott—It is not nearly so high colored, in Ohio, as these specimens—doubts his ability to determine the identity, from appearance alone, of the specimens before him—believes them identical, however.

McWhorter—Believes Shakers' Yellow a synonym of Early Pennoek.

Mr. Belangee—Has had good crops of this fruit, for twelve years. The first to bear in his orchard—ripens through August, and sells readily, at high prices.

Mr. Williams—Are these specimens as good as usual?

Arthur Bryant—No—they are over ripe—and, if governed by quality alone, I should condemn the fruit.

The President, remarked that we must look to bearing properties—to profit, as well as quality of fruit.

Mr. Phoenix, was understood to say, that he would plant it, if for the first ten years crop, only.

Mr. Brayton, moved to adopt it for moderate cultivation for market.

Passed, as good, productive, profitable for market, and worthy of limited cultivation.

Mr. Phoenix, moved that in all our decisions on fruit—not only *flavor*, but all other qualities of fruit, and tree,—such as hardiness, productiveness, &c.—should be taken into consideration.

Carried. But, before the question was put, Messrs. Elliott, Harkness, Avery, Galusha, and Shaw, made pertinent remarks on the necessity of a more definite classification of fruits, in regard to flavor and all other good properties—and also every thing of marked importance, relating to the properties of the tree.

Hocking, (local name)—About the same range of discussion as last year, was had on this in-

teresting Central Illinois' favorite—with the addition of observations from Mr. Elliott, in person—and two or three others.

Mr. Phoenix, thought this might be the Townsend apple—It resembles Rambour Franc, but is much larger.

Mr. Elliott, said on a call for his opinion, that his Townsend apple was different, and only second rate; and at the Syracuse Convention, both he and Charles Downing had thought it might prove to be Rambour Franc—altered by soil and climate.

Charles Kennicott, being called on, for an opinion as to the wood of Hocking and Rambour Franc, (or Dutchess of Oldenburg, which may be the same,)—said—There is a marked difference in the wood of these varieties.—Hocking, received by us from Mr. Harkness, has much darker wood, with buds less prominent, and nearer together. Our Dutchess of Oldenburg, has wood nearer like Hocking, in color, but the buds are farther apart, though not so prominent as our Rambour Franc—A near resemblance in the fruit of the three. We have never fruited Hocking, however.

The President—Thinks Rambour Franc earlier than Hocking—judging by the difference in latitude, only—as it ripens in Cook Co., about the time the Hocking does in Peoria—and will not keep more than a week or two.

Passed, as good.

Keswick Codlin—Passed, as good.

Early Harvest—Passed, as poor bearer on young trees—in quality, best.

Sweet Bough—Spoken of the same as last year—Good fruit, but poor and uncertain bearer.

American Summer Pearmain—Passed, as best in quality, good bearer, but tree of remarkably slow growth.

Rambo—Passed, as best, most profitable of its season.

Snow Apple (Fameuse)—Mr. Finley, (Iowa,) said it was superior to Rambo, with him.

Dr. Pennington—Thinks it varies in productiveness, in different localities.

Mr. Phoenix—Finds it more productive than Rambo, in Wisconsin.

Mr. Elliott—Considers it good, for northern localities, quite desirable, but has done badly with him.

Cyrus Bryant—With him more productive and estimable than Rambo—tree very hardy.

Passed, as very good, and recommended for general cultivation at the north.

Maiden Blush—The Secretary—Finds it very productive and profitable, and thinks there is no danger in planting it extensively.

Mr. Avery—Does not esteem it highly.

Mr. Brayton—Would recommend it for limited cultivation for culinary purposes.

C. R. Overman—There are other varieties of autumn apples on trial, which may prove more worthy.

Mr. Galusha—It is well known and highly esteemed by purchasers, and is therefore worthy of recommendation.

President—Very inferior in quality, though beautiful.

Mr. Harkness—In planting fruits, we must consult the tastes of purchasers, as well as our own. This is a very profitable apple to cultivate.

Passed, as very good for culinary purposes, for general cultivation.

Gravenstien and Porter, were both left without action, after considerable conversation—no one having tested them sufficiently to warrant a decision.

Autumn Strawberry—Cyrus Bryant—Has fruited it several years—abundant bearer alternate seasons—ripe 1st of September—very slightly astringent.

Mr. Phoenix—Has fruited it some years—would plant it in a collection of only six varieties, in his locality.

Mr. McWhorter—Its flavor is exceedingly delicate, and texture tender.

Passed, as recommended for further trial.

Sweet Nonsuch, (local name)—Cyrus Bryant—A good grower and fine bearer—excellent for baking—a valuable fruit.

Mr. McWhorter—Would call it excellent for baking—too sweet for the dessert.

Arthur Bryant—Received it through Mr. Belangee, from Columbiana Co., Ohio, as "Orange Sweet"—Has borne well for twelve successive years. In use from October to January, and has kept it 'till March—Knows nothing superior for baking, or dessert either.

Mr. Elliott—Thought this might be Bronson's Sweet—No action.

Monarch—Dr. Pennington—Has fruited it several years—tree a good grower but not a prolific bearer—a profitable sort—is tender, root grafted.

Mr. Belangee—It came to me from Ohio, as "Monarch Sweet"—flavor, an agreeable subacid—ripens last of August. A most splendid fruit, and sells at high prices in market.

Mr. Avery—It is very superior in quality and appearance, to Maiden's Blush.

Mr. S. M. Coe—Has proved it an early bearer. No action. (One of the most beautiful apples shown.)

Fall Pippin—The President—Had seen it bear decidedly large crops—Soil with a good admixture of clay, for Prairie.

Mr. Finley—Said the same—soil alluvial.

Cyrus Bryant—Trees planted in 1837, have never borne a dozen apples in a season.

Mr. McWhorter—Has seen a few trees bearing well.

Mr. Williams—Where budded or stock-grafted, it bears well—has several root-grafts, 12 years old, that have borne but little. He believes the different modes of propagation, exercise great influence on productiveness, in the west.

Mr. Loomis—The Fall Pippin bears profusely, in Northern Indiana, when root-grafted. Soil, oak openings.

Mr. Avery—Has 5 trees planted out in 1840—have never borne much 'till this year. Values one tree of Rambo, equal to seven of Fall Pippin. (No action.)

Red Gilliflower—Passed, "for further trial."

Yellow Bellflower—The Secretary asked if it had not proved more productive, when budded? It had with him.

Arthur Bryant—It seldom bears young—but bears well when ready—trees budded.

Mr. Williams—Has seen budded and root-grafted trees, of same age, growing together.—Budded trees loaded with fruit, root-grafts with none to speak of.

Dr. Haskell—Has trees 13 years old—bearing well this year, for first time.

Dr. Pennington—Said one budded tree in his estimation, is worth two root-grafts—and yet this is one of our hardiest trees, root-grafted.

Mr. Phoenix—Thinks the Yellow Bellflower, one of our best apples.

Mr. Avery, concurred, but thought many others were better.

Question was taken on budding or root-grafting, as applied to this apple in particular, and decided in favor of "budding," by a small majority, only.

Dominie—Passed, as very good for general cultivation.

Rawie's Janet—Passed, as one of the best for profit, in favorable localities—but not best in quality—or rather, as "very good."

Wine Sap and Willow Twig—Both passed for general cultivation, without much discussion.

Fallwater—Passed, as good for limited cultivation.

White Winter Pearmain—Nearly all the testimony was favorable to this fruit; and it was passed, as best, for general cultivation.

Belmont—Mr. Avery—Fruit superior, on young trees, to W. W. Pearmain; on old trees, drops and rots.

McWhorter—Should be eaten as soon as mature.

Elliott—On elevated dry soils excellent—on alluvial or wet not desirable; would recommend to gather before fully mature; many fruits should be so gathered.

Phoenix—Very fine at Elgin; soil sandy.

Passed for limited cultivation.

Vandevere—Avery—Bears well, but liable to blight and drop fruit.

C. Bryant—Has done well with me, better on sandy soils,

Pennington—Variable, and liable to bitter rot, occasionally.

McWhorter—Has seen it bear well on clay soils, Hickory Barrens.

Loomis—Has seen it do well in Northern Indiana, on clay loam—prefers sand, needs good culture.

Passed (for limited cultivation?)

Tolman Sweet—McWhorter—Earliest bearer, good for baking; does not sustain its eastern reputation here. Recommended for general cultivation, for baking and for stock.

Detroit Red—Pennington—Has had good crops.

Phoenix—Has been confounded with "Black Pippin," and "Black Apple," of Hodge.

Passed as not sufficiently known here.

Rhode Island Greening—Williams—Finds root-grafted trees nearly barren; stock grafted or budded, are as productive as need be.

Pennington, Phoenix, Brayton, Whitney, Haskell, and others, gave nearly the same opinions.

C. Bryant suggested the use of lime; A. Bryant said there are spurious varieties; true sort bears well; Overman thought it cost too much, though good fruit. Passed as preceding.

Roxbury Russet—The same speakers and nearly the same line of opinions, all agreeing that this and the Greening should never be root-grafted, (except Mr. Loomis.) root-grafts burst at the collar. Mr. Avery and C. R. Over-

man strongly recommend sowing oats in the Nursery, about the 1st Sept. McWhorter had found no advantage from the practice. Passed for further trial.

Ladies Sweeting—Passed as not well known. Baldwin—Passed like preceding.

Swaar—All agree that it should not be root-grafted. Recommended for general cultivation.

Red Astrachan, Hawthornden, Penn, Red Streak, and Pryors Red, all passed without action.

Discussion on propagation, &c., will be resumed hereafter. Old officers re-elected, and Association adjourned to meet in Chicago, 1st Tues. in Oct., 1853; to be a four days session.

How to Shield the Isabella Grape Vine in Winter.

Mr. EDITOR :—Just a word from a live grape grower, "down east," who raises bushels of nicely ripened Isabellas every year. I have six hundred bunches on two vines, this very moment, good size, finely colored, but *not ripe* by a "long sight," yet. They will remain on the vines until Oct. 20th or 25th, and if they freeze together I shall not be alarmed. I gathered a bushel the last year, and the bunches were frozen up fast with the falling snow and sleet.—These grapes were positively *uninjured*.—They could not have been detected as hurt in flavor, or otherwise, among those gathered a fortnight previous. They can be raised, and at much profit, too, and they are not half so uncertain as a crop of pears or plums. Will unbelievers call and see?—My method of protecting the vine in winter, is this :—I pinch all the growing shoots off the vines, as early as Sept. 5th, and thus get well ripened, hardy wood.—Then, in November, say 20th, (not too early,) the canes are pruned exactly as they are to grow the next year, and every shoot that looks light colored and badly ripened, is cut back to good, sound wood. After pruning, all the canes are gathered together, and loosely tied, or "stopped," with woolen list. Then a good lot of leaves, or old strawy litter, is spread along on the ground where the canes are to lie, with a few sticks of wood to keep them out of the ice, comparatively dry; the canes are then bent and covered slightly, two inches, with the same leaves or litter; then heave over

the whole, some old matting, straw, or a thin covering of green boughs, and you are all right for winter. Don't meddle with any of this rigging till April 10th, certain, and remove it after that time, at the commencement of a rain storm, or in cloudy weather. Let the vine still recline on the ground, and do not put it up on the trellis until the buds push, say May 10th; you will find out, that year, whether or no this advice has been of any service to you.

Wincasset, Sept., '52.

A. J., Jr.

[Maine Farmer.]

Culture of Blackberries.

Mr. Lewis H. Spear, of Braintree, Vt, in a communication to the Plow, Loom & Anvil, says of this fruit:

"The blackberry is of several species, and a native of this country, growing spontaneously, and often producing abundant crops of superior fruit. The best varieties in perfection, are more wholesome and of a flavor richer than either the strawberry or the raspberry.

There are two varieties which I think superior to all others, the first of which is the 'Bush,' growing straight and upright, the top of which becomes recumbent and almost free from prickles, and under favorable circumstances attaining a height of from six to ten feet. It has a large white blossom in June, the fruit of a shining black, long, ovate or about one inch in length, and one in circumference, very tender, and of a juicy, sweet, rich flavor.—This variety is seldom found.

The second is the 'High Bush.' This is a very rapid growing blackberry, stem very tall, sometimes ten or twelve feet in height; fruit shining black, very large, oval, conical, often over an inch in diameter, very sweet, juicy, and melting, with an aromatic flavor; the fruit ripening from the first of August until the middle of September.

This fruit in perfection is not excelled by the productions of any climate. It is delicious for the dessert, excellent for pies, puddings, sauce, preserves, wine, &c., and it well supplies the place of the peach and grape.

This most wholesome of all fruits, often relieves bilious and dyspeptic habits, and dysentery has often been cured by a free use of the ripe fruit. I have every reason to believe a free use of it by all classes, in-

stead of unripe fruit and fresh-meat, would do more to lessen mortality at that season, than all the 'Dysentery Cordials,' 'Anticholera' drugs, that all the speculative ingenuity of men ever invented.

SOIL AND CULTIVATION.—The blackberry grows freely in a warm, tolerable dry, or rather deep rich soil; it abounds among stones, old logs, natural ledges, and on lands which have been recently burned over, which contain a good supply of alkali.

Land should be kept rich, mellow, and free from grass and weeds. Besides common manure, use leaves, ashes, and vegetable matter.

It is propagated by seeds and offsets from the root.

I would recommend to those who wish to cultivate this fruit, first, to select a suitable spot of ground; second, plow deep and well; third, have your hills from six to eight feet apart, for the convenience of plowing and cultivation. The land once 'set,' they will not need transplanting for a long time.

After this, manuring, plowing, and keeping the bushes properly thinned, is nearly all that is necessary to secure large and abundant crops of the choicest fruit.

One bush often produces a quart of the finest berries; a friend has a bunch covering less than one rod of land, and he assured me he picked twenty-seven quarts in one day. I saw a spot this season which produced over one bushel to the rod, or more than five thousand quarts per acre.

The Cincinnati Gazette says, the St. Louis boats are bringing full loads of lead, hemp and hides. The Aurora packet is always freighted with whiskey and hogs, and the Pittsburgh boats are bringing down immense quantities of iron, nails, glass and hardware. The Madison and Louisville packets go down with cooperage; the St. Louis boats with furniture, and the New Orleans and Memphis craft, with pork, beef, and other Ohio staples.

THE LARGEST HOG IN THE WORLD.—There is now on exhibition in this city, a hog raised by Nathaniel Lamb, of Milltown, which stands 7 feet 6 inches high, and girths 6 feet 8 inches, and weighs 1200 lbs. It is one year and six months old. If this hog was fat, he would weigh 1400.

[Calais (Me.) Adv,

PATENT CHURN AND BUTTER WORKER.

FIG. 1

Among the thousand and one inventions which have been patented for churning, scarcely one has proved to be really valuable. In fact, very few of them are as good as the old fashion dash churn used by our early ancestors. But here is a machine which we think promises to be of real utility.

Figure 1 represents the churn and butter worker with the tub in an upright position for churning the cream. Its construction will be readily understood from the engraving, without the aid of any further description..

Figure 2 represents the churn and butter worker with the tub in a horizontal position for working the butter.

L L are the beaters revolving in opposite directions, one within the other; P is a small aperture for the escape of the butter-milk and watery substances. The cross bar which holds the machinery in its place, is secured to each side of the tub by thumb-screws, and may be removed and the beaters and gearing taken out,—leaving no obstruction in taking out the butter and cleaning the tub.

The Scientific American, after giving a minute description of this churn, says, "It is obvious that the fans or beaters, from their configuration and from their revolving in opposite directions, must agitate the cream and bring every portion of it in contact with the atmospheric air, more effectually than can be done by any other process. Consequently the operation of churning is rendered much shorter and easier.

The churning is so thoroughly done that every particle of butter is extracted and not a drop of the cream is lost.

After the butter has come, place any convenient receptacle under the frame, and having removed the upper part of the cover, gently

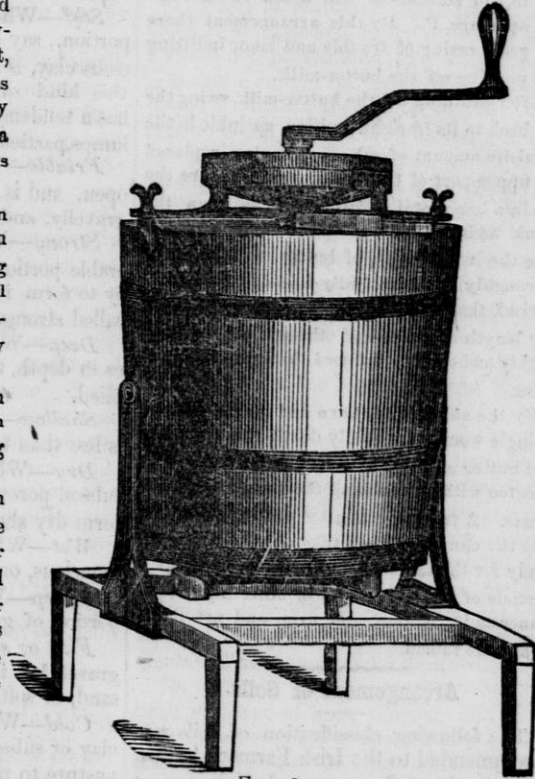
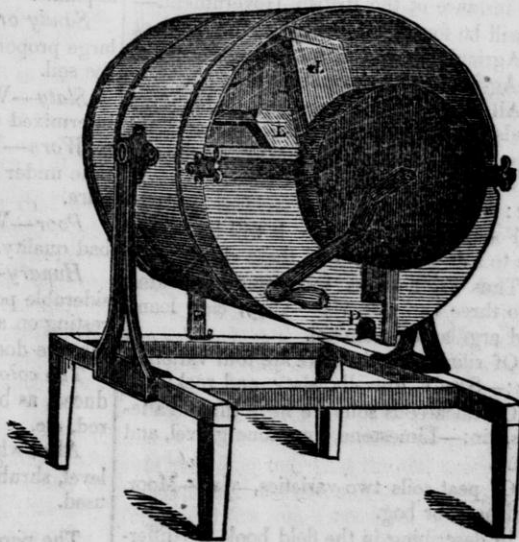


FIG. 2



swing the tub into the position represented in figure 2—in which position all the butter-milk and liquid substances will drain off through the aperture, P. By this arrangement there is a great saving of trouble and labor in lifting and pouring off the butter-milk.

After draining off the butter-milk, swing the tub back to its upright position, sprinkle in the requisite amount of salt, and having replaced the upper part of the cover, again secure the tub in a horizontal position. Then turn the crank as in churning, and in three minutes' time the whole mass of butter will be more thoroughly and beautifully kneaded, rolled and worked, than can possibly be done by hand in any length of time—and the salt will be thoroughly and equally diffused through the entire mass.

By the aid of this churn and butter worker, a single woman can easily do all the churning and butter making of a very large dairy, and that too without touching the butter with her hands. A few minutes after putting the cream into the churn, you can take out the butter all ready for the table or the market—without a particle of the butter-milk or other liquid substance in it, compact and firm, and not liable to become rancid."

Arrangement of Soils.

The following classification of soils was recommended to the Irish Farmers, by Mr. Griffiths, Land Surveyor and Valuator, at the instance of the British Government.—It will be found interesting to the student of Agriculture, and to the general reader as an Agricultural Nomenclature.

All soils may be arranged under four heads, each representing the characteristic ingredients, as 1. Argillaceous, or clayey; 2. Silicious, or sandy; 3. Calcareous, or limy; 4. Peaty.

For practical purposes it will be desirable to sub-divide each of these classes:—

Thus argillaceous soils may be divided into three varieties, viz.—Clay, clay loam, and argillaceous alluvial.

Of silicious soils there are four varieties, viz.—Sandy, gravelly, slaty, and rocky.

Of calcareous soils we have three varieties, viz.—Limestone, limestone gravel, and marl.

Of peat soils two varieties, viz.—Moor, and peat, or bog.

In describing in the field book the differ-

ent qualities of soils, the following explanatory words may be used as occasion may require:—

Stiff—Where a soil contains a large proportion, say one-half, or even more of tenacious clay, is called stiff. In dry weather this kind of soil cracks, and opens, and has a tendency to form into large and hard lumps, particularly if plowed in wet weather.

Friable—Where the soil is loose and open, and is generally the case in sandy, gravelly, and moory lands.

Strong—Where a soil contains a considerable portion of clay, and has some tendency to form into clods or lumps, it may be called strong.

Deep—Where the soil exceeds ten inches in depth, the term deep may then be applied.

Shallow—Where the depth of the soil is less than ten inches.

Dry—Where the soil is friable, and the subsoil porous, (if there be no springs,) the term dry should be used.

Wet—Where the soil or subsoil is very tenacious, or where springs are numerous.

Sharp—Where there is a moderate proportion of gravel, or small stones.

Fine or soft—Where the soil contains no gravel, but is chiefly composed of very fine sand, or soft, light earth without gravel.

Cold—Where the soil rests on a tenacious clay or subsoil, and has a tendency when in pasture to produce rushes and other aquatic plants.

Sandy or Gravelly—Where there is a large proportion of sand or gravel, through the soil.

Slaty—Where the substratum is much intermixed with the soil.

Worn—Where the soil has been a long time under cultivation, without rest or manure.

Poor—Where the land is naturally of bad quality.

Hungry—Where the soil contains a considerable portion of gravel, or coarse sand, resting on a gravelly subsoil; on such land manure does not produce the usual effect.

The colors of soils may also be introduced, as brown, yellow, blue, grey, black, red, &c.

Also, where applicable, the words steep, level, shrubby, rocky, exposed, &c., may be used.

The population of Paris is 1,000,000.

Is Lime a Fertilizer.

BY R. B. HUBBARD.

To define this question, we must first fix the definition of *fertilizer*.

To *fertilize* is to supply the food of plants. To manure is to fertilize; and fertility is produced by furnishing the soil with vegetable, animal and earthy pabulum, or food, such as dung, *lime* and fish. Therefore *lime* is a fertilizer.

But the editor of the *Ploughman*, denies that lime is a fertilizer, in any sense of the term. He goes further, and states that *lime has no more fertilizing properties than sand*.

Now, Mr. Editor, while I join issue with the *Ploughman*, in his major premise, I most cheerfully concede the minor. I admit that lime is no more a fertilizer than sand. But I maintain that both lime and sand are fertilizers,—that they are indispensable to the growth and maturity of a very large portion of the products of the soil.

By analysis, the following facts have been established:—

In burning 1000 lbs. of wheat, 11.77 lbs. of ashes are left.

In burning 1000 lbs. of wheat straw, 35.18 lbs. are left.

Of these ashes, from the wheat, .96 lbs. is lime, 4.00 lbs. is silica.

Of these ashes, from the straw, 2.40 lbs. is lime.

Do. do. 28.70 lbs. is silica.

In 1000 lbs. of barley, 23½ lbs. of ashes are left.

Do. straw, 52.42 do.

In the former, 1.06 lbs is lime, and 11.82, silica.

In the latter, 5.54 lbs. is lime, and 38.56, silica.

In 1000 lbs. of oats, 26 lbs. of ashes are left.

Do. oat straw, 57½ do.

In the former, 0.86 lbs. is lime, and 19.76 silica.

In the latter, 1.52 lbs. is lime, and 45.88 silica.

In 1000 lbs. of red clover, there is of lime 27.80 lbs., of silica 3.61 lbs.

In 1000 lbs. of white clover, there is of lime 23.48 lbs., of silica 14.73.

From this analysis it appears that both lime and sand enter somewhat largely into the composition of grains and grasses.—And it can easily be shown that they are indispensable ingredients; that the stalk of corn could no more stand erect, without silica, than the bones of the animal frame could sustain the weight imposed upon them without lime.

Admit, what cannot and will not be denied, that these inorganic substances are indispensable to the growth and health of the plant; and does it not follow, that they constitute a portion of the food, the pabu-

lum of the plant? Now we have the best of authority for saying that to *fertilize* is to furnish food for plants.

The hair of animals contains iron. This metal is indispensable to the growth of hair. I would not recommend to a hungry man to make a supper of iron filings; yet it cannot be denied, that, so far as iron is necessary to the proper development of this animal product, it is a nutriment,—it is to the animal, what lime is to the vegetable.

The same is true of the bones. Without phosphorus and lime there could be no bones. The disease called the rickets is supposed to proceed from a deficiency in the food of the proper ingredients of bone, or from some defect in the organs of assimilation.

Now are not the bones a part of the animal frame, as well as the muscles? And is not an essential ingredient, of the former, nutriment, as well as an ingredient of the latter? The milk which the infant draws from its mother's breast, contains lime and phosphorus; which enter into the composition of the bones,—iron for the hair, and carbon, nitrogen, and hydrogen for the muscles. It would be manifestly unphilosophical to say that a part of these ingredients are nutritious, and a part not.

In nature's alembic a compound has been prepared of such simples, and such only, as are essential to the healthy growth and development of the whole animal frame. This compound we denominate nutriment, and each and every one of the simples, nutritious.

So in the vegetable kingdom. As lime and sand enter into the composition of plants, and are essential to their healthy growth, we feel warranted in affirming that they constitute a part of the nutriment of plants,—that they are fertilizers.

If by analysis it be found that there is a sufficiency of lime in the soil, when you would sow wheat, rye, oats, clover, or any other crop in the ashes of which lime is found, you must supply the deficiency by sowing carbonate or sulphate or phosphate of lime. When clay superabounds, sand is the best manure.

The same is true of the ingredients of plants. The secret of skillful farming, consists in finding out what the soil needs, and in supplying the same economically, or in *fertilizing* the soil, if need be, with sand.

[N. E. Farmer.]

Is Oat Straw Injurious to Milch Cows?

That oat straw is unsuitable food for milch cows, may be well known by many farmers and dairymen; but the probability that there are some unacquainted with the fact, induces me to write what I have observed in reference to it. At different times, our cows failed in their milk, without any apparent cause; the cream being churned a greater length of time than usual, was converted into butter of an inferior quality. This has occasionally happened when the cows were nearly dry, and defect was attributed to this cause. In the early part of the dry season, having a large quantity of oat straw, it was liberally used for littering the stables and yard about the barn. The cows ate it in preference to other food, and the result was similar to what has just been described. The cows in this instance, were all fresh. They were immediately placed where they could have no access to the oat straw, when they gradually returned to their former condition. If some of the numerous writers for the Journal will explain why oat straw produces this effect, they will oblige. AGRICOLA.

Scratches or Grease.

One of the exceedingly troublesome diseases to which horses are liable, is the "Grease," or better known among us as "Scratches." It is an inflamed state of the space between the fetlock and the coronet of the hoof. In a healthy state, no velvet can be more soft to the hand than this, and with this softness it has an oily touch, which one would scarcely look for in a part so much exposed to dust and dirt. The disease sometimes attacks all the feet, but the heels of the hind feet more frequently. After inflammation has existed for a short time, the skin becomes dry and cracks, and soon the part is raw and very tender.

The cause of the disease is undoubtedly the want of proper attention. The horse is driven through the cold mud, and perhaps is left standing in it for two or three hours during the day, and then returned to the stable with a portion of it adhering to his heels. This absorbs the peculiar oil that is upon its surface and perhaps checks its secretion, until dryness and cracking of

the skin takes place. The best way, then, is to *prevent the disease by proper care.*—

Whenever the animal is returned to the stable during the muddy travelling, the legs should be thoroughly cleaned, and briskly rubbed for a minute or two, and the pastern washed and wiped dry. But if the disease is there, washing, and the application of soft oil or grease, will soon effect a cure. Horses that are passing through the barn-yard frequently, will be likely to contract the disease. If the scratches extend up the legs, or are very bad on the heels, wash with castile soap and warm water.

Foul in the foot of neat cattle is occasioned by exposure to the strong substances through which they pass in the barn yard, or standing in them and in the cold mud while loading manure. A careful farmer will wash their feet on returning them to the leanto for the night. Scratches are sometimes caused by allowing the horse to stand where the urine, manure, and other dirt, is allowed to gather under his feet.

[N. E. Farmer.]

SHOEING HORSES.—Henry Griswold, of Conn., who for twenty years has followed the business of shoeing and farriery, makes the following remarks on this subject, in the Boston Cultivator :

"The feet of horses differ so much, that it requires great judgment, and a thorough knowledge of their anatomical structure, to shoe each horse in a manner best calculated to promote the intentions of nature.—Smiths generally pare the heel too much, or rather, do not pare the toe enough; the reason is that it is so much harder to cut. When the horse stands upon the foot, the heel is so much lower than it should be, that the cords of the legs are strained; so, after a night's rest, the legs are stiff and sore, and the horse moves very awkwardly. This sometimes is attributed to founder, when in reality it is caused by bad shoeing. Frequently the toe is burnt off. This is also injurious, for so far as the heat penetrates, the life of the hoof, and the only matter which gives toughness, are destroyed, and the hoof becomes brittle, and liable to crack. Care should be taken to see that the points of the nails are free from defects, for sometimes, after the nail has entered the hoof, it splits, and a part penetrates the quick, causing lameness."

EDITOR'S TABLE.

LETTERS OF INQUIRY :—A large correspondence has of late accumulated on our hands unanswered—soliciting information in regard to fruit trees, seeds, implements, stock, &c. December being the busiest month with us in the year, we must crave a little indulgence of our correspondents. Meanwhile, we would say to our inquiring friends, that any information we may be able to communicate, will be cheerfully given,—either by private correspondence or through the columns of the Farmer.

We are in receipt of several drawings of animals and implements—designed for the pages of the Farmer. Prominent in the collection, is a group of **SOUTH DOWNS**,—the handsomest sheep in the world—from N. B. Clapp Esq., of Kenosha; also a new Agricultural Implement—combining the Plow, the Drill, the Harrow and the Roller, from Henry Beebe Esq., of Albany, N. Y. This machine is designed to perform the operation of plowing, sowing, harrowing and rolling the ground at once.

HORTICULTURAL DEPARTMENT.—We are obliged, this month, to forego the usual variety of matter under this head, to make room for the proceedings of the N. W. Fruit Growers' Association. Climate, soils, varieties, propagation, &c., were freely discussed, and many new facts elicited of the highest importance to all fruit growers.

WESTERN HORTICULTURAL REVIEW.—The November number of this excellent magazine of horticulture, is on our table—teeming with valuable information for those interested in this, and kindred subjects. To all who seek this kind of knowledge we commend this work as one of practical utility, and worthy of the support of the people of the West. Dr. Warder, its talented and accomplished editor, is worthy of hearty commendation for the ability and industry he displays in conducting this Journal. Its original matter evinces a thorough knowledge of the subjects discussed. Dr. Warder's excellent taste for selection, combined with his peculiar habits of investigation, eminently qualify him for a useful journalist. We cannot doubt that so valuable a publication will be properly appreciated and well sustained. Published by Dr. John A. Warder, Cincinnati, \$3 per year.

ROCK COUNTY AGRICULTURAL SOCIETY.

Abstract of the proceedings of the annual meeting of the Rock County Agricultural Society and Mechanics' Institute held at American Hall, Janesville, December 6th, 1852.

On motion, Messrs. Gibbs, Dole, Cheeney, Miller and R. M. Wheeler, were appointed a committee to prepare business for the afternoon meeting.

AFTERNOON—Met as per adjournment. President in the chair—business committee reported, which was accepted and com. discharged.

The following board of officers were chosen for the year ensuing:

President—Josiah F. Willard, of Rock.

Vice Presidents—C. R. Gibbs, Harmony; E. A. Foote, Center; Daniel Bennett, Turtle; S. P. Lathrop, Beloit; Jesse Miles, Janesville; E. A. Howland, do.

Rec. Secretary—Orrin Guernsey, Janesville.

Cor. Secretary—Mark Miller, Janesville.

Directors—T. P. Davis, Harmony; S. G. Colley, Beloit; Richard Dole, Turtle; O. Denmore, Bradford; Peter McVane, Newark; A. Sherman, La Prairie; Isaac Miles, Fulton; J. Prentice, Magnolia; Reuben Case, Clinton; John A. Fletcher, Johnstown; J. M. Riker, Janesville; J. E. Culver, Milton; L. Kingman, Spring Valley; Almon Kenny, Avon; O. F. Comfort, Union; John R. Boyce, Porter; John Childs, Lima; Rufus Washburn, Rock; Jonathan Corey, Center; S. F. Chipman, Plymouth.

On motion, Messrs. Willard, Guernsey, Miller, St. John and Bennett, were chosen a committee to revise and prepare a premium list for the next fair.

Burgess, St. John, Wheeler and Burdick, were chosen a committee to ascertain where proper grounds can be obtained for the next fair, and also what amount of aid can be obtained by individual subscription towards defraying the expenses of the same.

Adjourned to Tuesday, the 4th day of January, at 10 o'clock A. M.

We are indebted to Dr. Kennicott for a copy of the transactions of the Northwestern Fruit Growers' Association, at their second annual meeting held at Dixon, Ill., Sept. 29th and 30th, 1852, with an appendix containing the proceedings of the Association in 1851. We shall refer to it more fully hereafter.

AGRICULTURAL BOOK STORE.—We would invite the attention of our readers to the advertisement of Agricultural works, found in the advertising department of the Farmer. The list comprises principally all the agricultural works of the day, and a larger assortment than can be found in any other book establishment in the west. We are pleased to learn, that Mr. Hopkins of the Irving Book Store is giving special attention to this department of literature, and intends to keep a constant supply of all Agricultural Works of any value to the agriculturist. Give him a call.

WHEAT AND CHESS.—A Correspondent of the Horticulturist, writing from Lexington, Ky., says, there has been a controversy as to the fact of wheat turning to cheat or chess, which as far as I am informed is yet undecided.

It has come under the observation of several farmers, that wheat that has been pastured late is more apt to have a larger proportion of cheat amongst it than that which has not been pastured. This circumstance has suggested the idea that, where the *main* stalk of wheat has been destroyed, that the *side shoots* produce a grain differing from the parent grain. In proof of this I would instance the cabbage: where the head has been removed, the sprouts from the stalks produce a seed, which will not again produce cabbage—but still retaining much of the nature of cabbage.

FOWL PRICES.—A pair of Chittagong fowls changed hands at \$50, at the last exhibition of poultry in Boston; \$200 were refused at the same show, for a pair of grey Dorkings.

A ROYAL SUBSCRIBER.—His Royal Highness, the Grand Vizier of the Ottoman Empire, has ordered a complete sett of the *Southern Cultivator*, with a view of collecting all the information he can obtain with regard to the cultivation of cotton in the United States.

HOW TO FEED ANIMALS.—System and order are highly requisite in the care of domestic animals, and it has been laid down as an important rule by the most intelligent herdsmen, to feed and water cattle at fixed times, and at the same hour and minute every day. It is found that when fed thus, they learn to expect their fodder at a stated time, and remain quiet and uncomplaining until it comes around. "Complaints from his stock," says Stephens in his *Book of the farm*, "should be distressing to a farmer's ear; for he may be sure they will not complain until they feel hunger; and if allowed to hunger, they are not only losing condition, but rendering themselves by discontent, less capable of acquiring it."

This is true of all domestic animals, and should be heeded by the farmer. Let him so arrange his labors at the barn, that every operation may be performed at a stated time, and he will find matters to go on much more comfortably and pleasantly than when all is left at hap-hazard, without system or regularity. **EX.**

LARGE BEET.—The Kenosha Democrat says that a beet has been raised in that village, which weighed ten pounds.

RECIPES.

MAKING CEMENT.—Take plaster of Paris and soak it in a saturated solution of alum, then bake the two in an oven, the same as gypsum is baked to make it a plaster of Paris, after which they are ground to powder. It is then used as wanted, being mixed up with water like plaster, and applied. It sets into a very hard composition, capable of taking a very high polish. It may be mixed with various coloring materials to produce a cement of any color capable of imitating marble. This is a very rare receipt, and is worth twenty dollars to many of our subscribers, any of whom can prepare it themselves. [Scientific American.]

CURE FOR FOUNDER.—The seeds of sunflower is the best remedy known for the cure of founder in horses. Immediately on discovering that your horse is foundered, mix about a pint of the whole seed in his feed, and it will give a perfect cure.

BOIL YOUR MOLASSES.—When molasses is used in cooking, it is a very great improvement to boil and skim it before you use it. It takes out the raw taste, and makes it almost as good as sugar. Where molasses is used much for cooking, it is well to prepare one or two gallons in this way at a time.

WOUNDS ON CATTLE.—The most aggravated wounds of domestic animals are easily cured with a portion of the yolk of eggs mixed in spirits of turpentine. The part affected must be bathed several times with the mixture, and a cure will be effected in forty-eight hours.

SWEET APPLE PUDDING.—Take one pint of scalding milk, half a pint of Indian meal, a tea-spoonful of salt, and six sweet apples cut into small pieces, and bake not less than three hours; the apple will afford an excellent rich jelly. This is truly one of the most luxurious yet simple Yankee puddings made.

WEDDING CAKE.—Flour and butter, each 3 pounds; sugar and raisins, each 3 pounds; eggs 2 dozen; currants, 6 pounds; citron, 1 pound; brandy, 1 pound; cinnamon, nutmegs, mace, each 1 ounce; cloves, $\frac{1}{2}$ ounce. Bake thoroughly.

SAUSAGES.—Take 30 pounds of chopped meat, 8 ounces of fine salt, $2\frac{1}{2}$ ounces of pepper, 2 tea-cups of sage, and $1\frac{1}{2}$ cups of sweet marjoram, passed through a fine sieve. For the latter, thyme and summer savory can be substituted if preferred.

AM. PHRENOLOGICAL JOURNAL.—This excellent serial is too well known as a bold, straight forward advocate of Phrenology and Reform, to need any commendation from us. Literature and Science and General Intelligence have also a place in its columns. Now is the time to send in subscriptions as a new Volume commences with the January number. Price \$1 per year. Fowlers & Wells, Pub., N. Y.

GODEY'S LADY'S BOOK.—This beautifully illustrated magazine, with its variety of reading to suit the taste and elevate the character of its patrons, commences its 46th Vol. with the Jan. issue. Pub. by L. A. Godey, Philadelphia. \$3 a year.

THE HORTICULTURIST has been removed to Rochester, N. Y., and is now edited by P. Barry, who has been long known as one of our best horticulturists. Under his care we cannot doubt that its present enviable reputation will be well sustained. Pub. by J. Vick, Jr., Rochester, N. Y. \$2 a year. An edition with colored plates will be issued at \$4 per year.

THE SCHOOLMATE.—The principal object of this monthly is, to furnish an entertaining, and instructive Reader for Schools and Home instruction. The design has thus far been well executed. Parents and Teachers will find it worthy of support. No. 1 Vol 2 is at hand.—Now is the time to subscribe. A. R. Phippin Editor, Geo. Savage, Pub., N. Y. \$1 a year.

TRIAL OF IMPLEMENTS AT GENEVA.—We are indebted to B. P. Johnson, Esq., Secretary of the N. Y. State Ag. Society, for a pamphlet containing the reports and awards, of the different committees at this trial held in July last. The trial was with Mowing Machines, Reapers Grain Drills, Horse Powers, Threshers, Steam Engines for farm purposes, Seed Planters, Cultivators, and Broadcast Sowers.

YOUTH'S CASSET.—A neat and instructive magazine which will entertain and improve the children and youth. The second Volume commences with this year, enlarged and improved. Now is the time to subscribe. Published monthly by Beadle & Vanduzee, at 50 cents a year. Harley Thorne, Editor.

WATER CURE JOURNAL.—This stands pre-eminent among American periodicals as a work of practical utility to all, without regard to station or calling. It presents a greater amount of valuable information, on subjects of vital importance to the welfare of the human family, than any other journal we know of. It is si-

lently working a mighty revolution and surely spreading a glorious reform. Let every family read and heed its teachings. Fowlers & Wells, Publishers, N. Y. \$1 per year.

OHIO FARMER.—We refer our readers to the advertisement of this excellent weekly in another column.

SCIENTIFIC AMERICAN.—An advertisement of this valuable paper will be found in another column.

FOUNTAIN CITY HERALD.—Such is the title of a new weekly, hailing from the city of Fond Du Lac. Royal Buck, formerly of the Madison Express, Editor and Proprietor. The Herald is a large and handsome sheet. Mr. Buck possesses the ability to make a first rate news journal, and the numbers before us give evidence of his determination to do it. \$1.50 per annum.

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WAUKESHA COMMEERCIAL NURSERY.

THE Subscribers offer for sale, this season, a fine assortment of Fruit Trees, comprising the best now cultivated. They are very thrifty and will be sold at wholesale or retail, for cash or approved credit, at reasonable prices.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruit, to merit the confidence of his friends and the public in general.

All orders accompanied with cash or satisfactory references will be promptly attended to, and trees will be packed and forwarded without delay. We will give cheerful and prompt attention to all post-paid communications requiring information, &c.

D. VAN KIRK, & CO.

Waukesha, January 1, 1853.

NURSERY BUSINESS.

FRUIT & ORNAMENTAL TREES

FOR sale at Janesville, Racine and Koskonong Nurseries, Wis. The proprietors are now enabled to offer to the public, a stock of trees heretofore unequalled in the West. Remarkable for their hardiness, vigorous growth, and adapted to our western climate; embracing fruit trees of every description. Apples, Dwarf Pears, Plums, Cherries, Flowering Shrubs, Bulbous Roots, &c.—comprising all the most popular sorts now in cultivation—and having devoted their personal attention to their propagation and rearing, feel warranted in recommending them to the confidence of the public. Nurserymen, Dealers and Planters are respectfully invited to call and examine for themselves. All *pre-paid* orders containing a remittance or proper reference will receive prompt attention, addressed to,

E. B. & J. F. DRAKE, Janesville.

F. DRAKE, Racine.

Janesville, January, 1853.

WISCONSIN GARDEN AND NURSERY,

*On Gardnmr's Prairie, town of Spring
Prairie, Walworth Co.*

THE Subscriber takes this method to inform his patrons and the public, that he may still be found at the old and well known establishment, at which he offers for sale the coming spring, over Forty Thousand Apple Trees of a fine size and from five to seven years from the graft. Sound, healthy and stocky trees at 18 cents each. Also Pears, Plums, Peaches, Cherries, Quinces, Grapes, Currants, Gooseberries, Strawberries, Raspberries, &c., at prices to correspond to the times. Of the ornamental, a large assortment of Shade Trees, Shrubs, Flowering Plants, Hardy Roses, Bulbous Roots, Dahlias, a choice assortment. Green House Plants, any quantity. Ever Greens; Spruces, Firs, Pines, Cedars and in fact almost every thing usually to be found in such an establishment. The fruits have been selected with great care as regards quality of fruit and hardiness of trees. The Nursery is located on the open prairie with a northern exposure. The land has never been manured and consequently the trees are perfectly hardy. Trees taken from this Nursery seldom fail to grow in transplanting. All are invited to call and examine for themselves as the Subscriber hopes from long experience and strict personal attention to merit a continuance of public patronage.

N. B. All letters of enquiry sent to Burlington Post-office will receive prompt attention.

Catalogues Gratis at the Nursery, and by mail post-paid. JOHN BELL.

Wisconsin Nursery, January 1853.

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LARGE Budded and Engrafted Apple Trees, with fine heads, at 15 to 25 cents each, or \$15 per 100—Average sizes, by the thousand, \$100 to 140. Plums and Quinces—a good supply, at 25 to 37½ cents each. Pears and Cherries—a small stock at old rates. Ornamental Trees, Flowering Shrubs and Plants, in great variety, and the lowest prices, in lots, principally at our selection. These last furnished to dealers on commission. Address,

J. A. KENNICOTT.

Northfield, Cook Co., Ill.

The New Edition of LAPHAM'S POCKET MAP

OF WISCONSIN, showing the surveys of the Menomonee Lands, &c., may now be had at the bookstores, or by application (accompanied by the cash) to the undersigned. It will be sent by mail to any address upon the receipt of one dollar. A liberal discount made to dealers.

I. A. LAPHAM.

Milwaukee, January, 1853.

WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V.

JANESVILLE, WIS., FEBRUARY 1853.

NO. 2.

PUBLISHED ON THE FIRST OF EACH MONTH, BY
MARK MILLER.

TERMS:

50 Cents a Year in Advance;

Five copies for \$2, if directed to one Post Office, and at the same rate for a larger number. All subscriptions to commence with the volume. Back numbers supplied to new subscribers.

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These terms will be strictly adhered to. The circulation of the FARMER is large, and the amount of advertising limited; which renders it a more valuable medium for advertising than if a larger space was appropriated to this department.

State Agricultural Convention.

A State Agricultural Convention, composed of delegates from the several Agricultural Societies in the State, was held at the Agricultural Rooms at Madison, on Thursday, Jan. 20th. The following officers were chosen:

Thomas T. Whittlesey, President.

Orrin Guernsey, Secretary.

On motion, Mark Miller, the publisher of the Wisconsin Farmer, was invited to take part in the business of the Convention.

A committee consisting of Messrs. Miller of Rock, Ingham of Dane, and Clapp of Kenosha, was chosen to prepare a bill to present to the Legislature now in session, asking an appropriation for the Agricultural Societies in the State.

Adjourned to enable the committee to prepare their report.

Met as per adjournment. The President being absent, J. F. Willard of Rock, was chosen President pro tem. Mr. Miller from committee, reported a bill, which after being amended was adopted.

By vote of the Convention, Mr. Ingham was directed to prepare a memorial to the Legislature, to be accompanied by the bill, asking that body to pass it into a law.

Voted that fifty copies of the forthcoming volume of the transactions be distributed to

each County Society, with the consent of the Legislature.

T. T. WHITTLESEY, Pres't.

ORRIN GUERNSEY, Sec'y.

State Agricultural Society.

ANNUAL MEETING, JANUARY 19TH 1853.

The second Annual Meeting of the Wisconsin State Agricultural Society was held at the State Agricultural Rooms in the Capitol at Madison, on the third Wednesday of January, at 3 o'clock P. M.

The President, Henry M. Billings, took the chair and called the Society to order.

Albert C. Ingham, the Corresponding Secretary, presented and read the report of the Executive Committee of the Society, which was accepted.

Simeon Mills, the Treasurer, presented the report of the receipts, expenditures and financial condition of the Society, which was read by the Secretary, showing the total receipts of the Society to be \$2,748 45, and the total expenditures for the same time to be \$2,714 48, with a balance in the Treasury of \$33.97.

Charges of mismanagement having been made against some of the officers of the Society, a committee of three, consisting of J. F. Willard of Janesville, John B. Smith of Milwaukee, and N. M. Donaldson of Fond du Lac, were appointed to investigate the manner in which the financial affairs of the Society had been conducted. The Society then adjourned until 6 o'clock P. M.

Met as per adjournment. The Society was called to order, the President being in the Chair.

Josiah F. Willard, chairman of the committee of investigation, presented the following report, which was read by the Secretary.
To the Wisconsin State Agricultural Society:

The Committee appointed by the State Agricultural Society to examine the books of the Secretary, and the books and report

of the Treasurer of the Society, have had the same under consideration, and beg leave to report:—

That they find the receipts and expenditures as stated in the report, correct. They find that the books of the Society are kept on correct principles, and in a neat and business like manner, and find nothing but shows that the receipts and expenditures are stated correctly. The Secretary has afforded your committee every possible facility in producing vouchers and making explanations to facilitate them in their investigation.

Some of the expenditures at Milwaukee during the Annual Fair held in the month of October last, your committee look upon as not warranted, or calculated to promote the interests of the Society—however, your committee feel it due to the Secretary to say that this perhaps was owing to circumstances beyond his control, the particular items being for expenditures at the United States Hotel, and for what is called refreshments at the President's tent on the Fair grounds. Your committee would farther say that with those exceptions, they are satisfied that the financial affairs of the Society have been conducted with fidelity.

The report of the committee was adopted; when the Society proceeded to the election of officers for 1853.

It was moved that a committee of five be appointed to select and recommend the names of persons suitable for the various offices of the Society.

The President appointed as such committee: Messrs. A. F. Pratt of Waukesha, Mason C. Darling of Fond du Lac, Horace A. Tenny of Madison, Josiah F. Willard of Janesville, and Hiram Barber of Juneau.

The committee retired, and after a short consultation reported the names of the following gentlemen, as suitable persons to fill the various offices of the Society.

President.—Elisha W. Edgerton, Waukesha County.

Vice Presidents.—Bertine Pinckney, Fond du Lac Co., Nathaniel B. Clapp, Kenosha Co., Charles Dunn, Lafayette Co.

Cor. and Rec. Secretary.—Albert C. Ingham, Madison.

Treasurer.—Simeon Mills, Madison.

Additional Members of the Executive Committee.—Hiram Barber, Dodge Co., Henry M. Billings, Iowa Co., Z. P. Burdick,

Rock Co., Martin Field, Waukesha Co., S. S. Daggett, Milwaukee Co., which report was accepted.

A committee of three was appointed to ascertain what amendments, if any, are necessary to the constitution, said committee to report at the next annual meeting, which was agreed to.

The President appointed Messrs. A. F. Pratt, Charles Dunn, and Hiram Barber, such committee. The Society then adjourned.

HENRY. M. BILLINGS, Pres't.

ALBERT C. INGHAM, Sec'y.

RACINE CO. AGRICULTURAL SOCIETY.—The Annual Meeting for the election of the officers of the Racine County Agricultural Society was held at the house of Jesse D. Searle on Monday, the 3d day of January 1853. Ezra Birchard Esq. was chosen President pro tem. Albert G. Knight, Secretary pro tem.

The following persons were elected officers for the year 1853.

President.—Stephen O. Bennett of Raymond.

Vice President.—William Ballock, Dover.

Treasurer.—Daniel D. McEachron of Yorkville.

Corresponding Secretary.—Philo White of the City of Racine.

Recording Secretary.—Albert G. Knight of the City of Racine.

Chatfield H. Parsons, Treasurer, made a report, which was accepted.

Voted, that the thanks of this Society are hereby tendered to Gen. Philo White for valuable statistical documents.

Resolved, That we recommend to the farmers and citizens of our County generally, the Wisconsin and Iowa Farmer, published at Janesville, as eminently worthy of their patronage.

EZRA BIRCHARD, Pres't, pro tem.

ALBERT G. KNIGHT, Sec'y.

FOND DU LAC CO. AGRICULTURAL SOCIETY.—We received a full report from S. Hall, the Secretary, of the doings of this Society for 1853,—Intended we suppose for publication in the Farmer, but its great length precludes it in full.

The report is well drawn up and opens as follows:

The first Annual Fair and Cattle Show of the Fond du Lac County Agricultural Soci-

ety was held at Rosendale, on the 29th and 30th days of Sept. 1852. The attendance of farmers and others interested in the progress of agricultural pursuits, was very large; far exceeding the fondest anticipations of the friends of the Society. The time elapsed since the first formation of the Society, was short of three months, consequently there was not space for suitable notice to be given, or sufficient preparations to be made; but judging from this first effort of the Society in its infant state, and laboring under all the disadvantages of circumstances, we may hope and trust that it will not, in its mature growth, and under favorable circumstances, come one whit short of the exhibitions of Societies of a similar character in other States.

The County is but newly settled; the Indian trail is not wholly effaced within our borders, and vast portions of our territory are still unoccupied and uncultivated.

There were entered in competition for the premiums, about 250 articles or lots.

An able and interesting address was delivered before the Society by M. Daniels of Ceresco.

Stock and Wool.

A correspondent of the Fountain City Herald, urges the farmers of Northern Wisconsin, to pay more attention to raising sheep, and less to grain. Among other reasons for the change he presents the following.

Our soil and climate appears to be well adapted to it, and they increase very fast, besides yielding wool sufficient to really doubly pay for their keeping; while hay and grain bring so little. It is certainly safer than raising grain, because the price of grain generally depends on the quantity we raise; the more we have the poorer the market. It is not so with wool; for large quantities call in more buyers, and we are sure to get all they can afford to pay. Now let us try the wool growing, for there is no danger but what we can live by it, if Eastern farmers can; we are sure to get within two or three cents on a pound, if not as much as they do, and at present, we can raise two pounds, with as little cost, as they can one—all that we are

to look out for is, that we are not deceived in the eastern market price.

There are many fine flocks of sheep in the northern part of the State already.—We learn that Erastus W. Drury, Esq., of Fond du Lac, has recently made a large accession to his flock of PAULOR MERINOS, by an importation of splendid sheep from the east.

A. Atwater, Esq., of Waupun, has a fine flock of SPANISH MERINOS, numbering several hundreds.

Protection to Animals.

The following remarks upon the advantages of sheltering stock from the inclemency of winter weather, which we find in the Ohio Farmer, are equally applicable to Wisconsin and the whole Northwest.—Farmers, read and heed them. [Ed.]

Few, even among those termed good farmers, we fear, fully appreciate the advantages of warm shelter for their stock. Certainly, one who travels over the State of Ohio, and yet farther westward, looking only at the farms, and buildings erected for the comfort of the stock, would get an impression either that we had no cold weather—no stock—or that we did not know the value of giving shelter.

Now we happen to know that Ohio farmers have some of the best stock in the Union, and that sometimes we have cold weather. We also know that our farmers do know the advantage of shelter, but from other engagements, or that the subject has not been fully brought before them, they have not attended to it.

Experiments have been made, with care and accuracy, and by practical tests, to gain a knowledge of the additional amount of food required to support an animal when exposed to the open weather, over one warmly stabled; and as the food eaten supplies carbon, and the oxygen which is respired in the atmosphere is its consumer, it is evident that the colder the temperature to which animals are exposed, the greater is the consumption of carbon, and, therefore, the greater amount of food required.

Certainly one-fourth may be gained in

the keeping of stock by providing warm stabling, rather than to have them *protected* by the *side* of a barn; and it is the interest of every farmer to save as well as earn, we trust soon to see every farm in the West supplied with warm stabling for the stock belonging thereto.

For the Wisconsin and Iowa Farmer.
Whitewater, Dec., 1852.

Discovery of Copper.

MR. MILLER:—I noticed a piece in the last number of the Farmer headed "Copper found." Now I suppose this is nothing new in Wisconsin. Two years ago last spring I was digging in the side of a hill on my farm for lime stone. I dug out a piece of mineral that is called copper, weighing five pounds, and on the out side there was a piece of silver sticking to it. This piece of silver was taken off by a goldsmith and pronounced pure. I send you a small piece of the copper which was cut from the lump, hammered and polished, and then put into a weak nitric acid. Now, if you can tell me why it is not all affected alike, you will oblige me very much, as I am suspicious that there is something besides copper in it. I have found some smaller specimens in the same place since; and now, I would like to know your opinion whether there would be likely to be any more, or enough worth digging for. A. CURTIS.

REMARKS:—The specimen is a good one of native copper. You are right in supposing the finding of such pieces of copper is "nothing new," especially in Wisconsin, frequently in Illinois and Indiana, and sometimes in Ohio.—It is likely to be found in the whole district of country south of Lake Superior, nearly to the southern limits of Ohio and Illinois. There have been repeated instances of this kind.—There are several specimens in the cabinet of Beloit College, found in Wisconsin and Illinois. In some instances the pieces of copper, have weighed some hundreds of pounds. The origin of all these pieces of copper is satisfactorily determined by Geologists to be the copper mines of Lake Superior. There is a peculiarity about this copper which characterizes it, wherever any of its fragments may be found; and that is, a combination of silver with the copper, but not as an alloy. The silver frequently covers the surface as in the case above. Copper from no other mines is like it. Sometimes the amount of silver is sufficient to pay for

working it for its own sake. But how comes it that these pieces of copper are scattered over so large a district and so far from their original position? It is supposed by Geologists that in one of the latest periods of the earth's history, called the *drift period*—by some agency—perhaps great currents of water or floating icebergs—boulders, or fragments of the different rocks in the northern regions were transported to the south. This view is verified by the fact that all the worn or smoothed rocks of any district may be traced back to their original quarry in a region farther north. The origin of the worn rocks in Wisconsin is the region of Lake Superior. All our gravel here comes principally from that region. The fragments increase in number and size as we approach the region of the Lake.

The reason why the nitric acid does not act alike on the whole mass, is because of the two different kinds of metal, copper and silver.

There is no reason to suppose that a sufficient quantity would be found to pay for digging, certainly at this distance from the original bed. No one would think of opening a quarry for limestone in a rail road embankment, because he had found a fragment of that kind of rock there. †

For the Wisconsin & Iowa Farmer.

Delavan, January, 1853.

The Present High Prices of Produce.

The present high prices of produce, are indeed most welcome, but how many will be shrewd enough to improve them and get out of debt—and how many will be stimulated thereby to get in 'just a little deeper?' Pork seems especially high—in view of which there is danger of a rush into that branch to the neglect of others equally necessary, and perhaps equally promising. With our recent disastrous experience in 'Hedgerow,' with the concurrent testimony of the shrewdest observers to the unprofitableness of this Ag. one-idea-ism, with a certainty that 'one extreme follows another,' shall we act wisely to rely wholly on any one staple? For one, I think not—although for years I have urged the comparative profitableness of pork over wheat raising—yet if all the

world grows pork, of which there is now great danger, it is evident there must be a vast surplus, followed by a serious depression in prices. This may or may not be next season—the writer only asks a careful consideration of the matter.

In the mean time this much is certain—that the profits of pork-raising do not depend so much on the number of hogs merely, that can be turned off, as on the amount of heavy pork that can be made from a given amount of corn and labor.—In fact, beyond a certain point, the more hogs the less profit every way.

Much, very much, in the writer's opinion—fully one-half, depends upon the breeds used and the care taken. Therefore, let the easiest keeping, earliest maturing, large breeds be selected for profit—let fewer hogs be kept and better accommodations provided.

Draining and Draining Tiles.

In travelling over the West the past season, I have noticed many newly dug drains or ditches, which, being left open speedily fill up, becoming almost worthless unless annually cleared out, at a considerable expense. They should therefore be regularly covered. The small stones often used to form a passage way for the water, in many Western localities, are not to be had, and are always expensive compared with draining tiles, if attainable at any reasonable price. Would it not then pay for some of the manufacturers of our world-renowned Milwaukee brick, to get on a tile machine? Considering the abundance of moist level lands, the present rapid improvement in agriculture—the multiplication of Agricultural Fairs, periodicals and warehouses in the West, there must, it would seem, ere long, be a great demand for draining tiles; and a factory at so commanding a point, would doubtless for years monopolize the market of this entire region. In New York State, notwithstand-

ing the great abundance of quarry and surface stones, there are at least two tile factories—one at Waterloo, and one at Albany, owned by John Gott, of whom doubtless all needful information on the subject may be obtained. F. K. PHENIX.

For the Wisconsin & Iowa Farmer.

Milwaukee, January, 1853.

Farming.

Our Profession, its Elevation when properly viewed.

The intelligent farmer from the nature of his profession is brought into immediate and constant companionship with the works of Nature in their most attractive forms.—The sown seed is viewed in all its various changes, from its first germination until its ripened grain rewards his patient toil.—What thoughtful hours may he not with profit expend in seeking and searching into the unseen causes which make grain a blade, the blade a stalk, the stalk to fulfil its office to bear grain. The same laws of nature here operate, which cause the giant oak to put forth its sweeping arms to the breeze and wave defiance to the tempest.—The particles which enter into the composition of each, once floated in the atmosphere, or rested in earth until a combination of causes should call them to fulfil their part, either to beautify vegetable or animal forms for a time, then to enter into some new combination and thus continue its course, endless as eternity.

The man of business as he is styled, the merchant, mechanic, or speculator, whose mind is engrossed with thought, and fears of debts, bank notes and wares, however estimable as men, or necessary to society they may be, are not placed in that close communion with nature, which is the lot of the tiller of the soil. The mind distracted with the cares of business, is not in a mood for the contemplation of nature's works,—the works of man have surpassed them, and Mammon taken possession of Nature's temple. How instructive to view the growth, maturity and decay of the vegetable world, emblem of our own, and so nearly allied,

that no one can say where one begins and the other ends. The great book is spread before us, each leaf and flower a lesson. With a noble profession let us not prove unworthy of it,—let us maintain its true elevation, dignity and importance,—let Science and Philosophy be our guides,—they will not prove false, but conduct our now wandering footsteps in the paths of prosperity and happiness. A FARMER.

Lake Superior.

Mr. Stuntz of Grant Co., Wis., has been deputed by the General Land Surveyor of this Northwest District to lay off such a tract of land about the Southwest point of the Lake into townships and sections, as emigration will earliest require. He returned by way of La Pointe and Stillwater last week. We have obtained from him some new views of that region.—From Fond du Lac, a trading post situated eleven miles inland on the St. Louis River, Eastward, for perhaps fifty miles, the margin of the Lake is a flat strip of land, reaching back into a rocky ridge about eleven miles off. The soil of this flat land is a rich red clay. The wood is of white pine, and of the most magnificent growth. The American line is beyond the mouth of the St. Louis, as far north-east as Pigeon River, 100 miles. A mountain extends all the way between the St. Louis and Pigeon Rivers. It evidently abounds in copper, iron, and silver. The terrestrial compass cannot be used there, so strong is the attraction of the earth. The needle rears and plunges 'like mad.' Points of survey have been fixed by the solar compass.

The Indian and half-breed packmen have astonishing strength. One Indian, who is described by the others as being as large as two men, carried for a company of 11 men, provisions for ten days, viz: one barrel of flour, half barrel of pork, and something else, besides the utensils. *Mirage* is a common phenomenon in spring and summer. For the Bays not opening so soon as the main Lake, or not cooling so early, an object out in the Lake is viewed from the shore through a dense medium of air, hence is a refraction of rays which gives so many wonderful sights, that the Chippawas call that the spirit of enchan-

ted land. Sail vessels that are really 30 miles off, are seen flapping and belling about almost within touch. Turreted islands look heavy and toppling towards the zenith. Forests seem to leap from their stems and go a rearing like thistles for the very sport of it.

The ice did not leave some of the Bays till the 10th of June. The fish was delicious, especially the salmon trout. But little land game. Mr. Stuntz calculates on wonderful enterprizes in that country after the opening of the Saut Canal.

Mr. S. describes La Pointe, a town on the Lake, as being situated at the head of a Bay some 25 miles from the High Lake, and secluded from the Lake by several islands. He saw there, a warehouse three hundred feet long, built with tamarack poles and roofed with bark. This building is warped by the pressure of age; it is entered by a wooden railway. The town is dingy and dreary. He saw a most luxurious garden by the former residence of Dr. Borup. It contained a variety of fruit trees and shrubs, such as plums, cherries, apples, pears, currants, &c. [M. Pioneer.

To Raise Barley.

First let the land be in tolerably good order, i. e., not too poor, or worn out too much. Plow and harrow it until it is well pulverized, and then sow a bushel or five pecks to the acre, and harrow it in. The practice, in my native country, England, is 'now to sow barley till you can sit down on a clod, without danger of taking cold,' which, in that country, is about the beginning of April, and, I suppose, in the neighborhood of Lexington, the same time will answer the purpose. When the barley is ripe, cradle it, and treat it exactly as you would oats, and I believe, this is all that is necessary to say respecting the raising and harvesting the crop. A few observations on the subject of the advantages of the culture of this may be advantageously added. It is a crop that will stand the drought better than corn, which in my opinion, fits it well for a staple crop for the South. It makes better bread than either rye or corn, and if ground into meal, will fatten hogs equally as well. The practice in England, is to sort out the small potatoes, and boil them, and then beat them up

and mix barley meal with them, and feed them to the fattening hogs.

Great quantities of barley are raised there, and used for making malt, and for other purposes. If their land is considered too poor, they sow turnips on it, and the next winter, pen the sheep on small portions of the land, and as soon as they have eaten up all the turnips on that portion, remove the pen, and so on till they have been penned all over the field. A two-fold advantage is thus gained: the sheep are wintered and fattened, and at the same time, the land is well manured. The practice is then, to plow up the ground as above directed for barley, in the spring.—Should any one be induced to try this experiment, I would advise him to sow the Swede turnip or ruta-baga, and sow them by the 20th of June, at least. This sort is the most hardy, and more nutritious than the white turnip, and if the ground is frozen, they must be stocked up with grubbing hoe.

I have never seen but one small crop of barley raised in the United States, and I cannot tell now what the yield was; but I know the man that raised it considered it a profitable crop. I have understood that considerable quantities of it are raised on Long Island, where they harvest it exactly as they do the oat crop. [Dollar News.

Moisture by Deep Plowing.

P. Morris says, in the Farm Journal, that he broke up a stiff sod for corn with a heavy plow drawn by four oxen. A sub-soil plow followed, running down six or seven inches deeper. The whole work was so thoroughly performed, that a stick could be thrust down into the loose earth, in almost any part of the field to a depth of fifteen inches. The summer was excessive dry, pastures were burnt and bare, and tillage crops suffered severely. But the corn on the sub-soiled land continued green and luxuriant throughout the season.

The above is from the Ohio Farmer.—We have long advocated sub-soil plowing, and among other reasons for its adoption, have urged the fact that well sub-soiled land never suffers from drought. We have so often repeated the rationale for this fact, that were it not for a continued enquiry by letter, we should not again recite it at this time.

The atmosphere at all times contains large amounts of moisture in the form of vapor, &c., and whenever cold surfaces are presented, this moisture undergoes condensation. The surface of a cold pitcher, or a piece of cold iron, left standing in the air, will become bespangled with drops of moisture. In sub-soiled lands the atmosphere is continually depositing moisture upon the surfaces of cold particles of earth, and the portions of atmosphere thus losing their moisture, are continually ascending and giving place to new portions capable of depositing new quantities of water.—Sub-soiled land not only protects the corn crop from curling, but when used for meadows will supply full crops, when land not so treated will be barren and useless.

Grain crops grown on such lands tiller freely, thus doing away with the necessity of thick seeding. Sub-soiled meadows seldom run out. Top-dressings of all kinds applied to soils thus prepared, are carried into a sufficient depth by dews and rains, not to be readily evaporated by the sun's heat. Less manure will answer in soils properly sub-soiled, than in those not so treated. [Working Farmer.

LEICESTERSHIRE SWINE.—MESSRS. EDITORS :—In your last Rural, I saw an inquiry about hogs; permit me to say that for forty years past, I have been in the habit of making more or less pork, and in that time have tried various breeds of hogs for that purpose. For the last seven years I have raised only the Leicestershires, which I think superior to all others with which I am acquainted. Their bodies are long, broad, and deep, they are of hardy constitution and easily kept and fattened; suffice it to say, with common feeding, at the age of twenty-one months, they can be easily made to weigh 500 lb.

Let them run in a good clover pasture, and the slops of the house are sufficient to grow them full size. They are good breeders. I have a sow that was one year old the first of April last,—on that day she had a fine litter of pigs, which will now, I think, average 160 lbs. each. On the 20th of Aug., she had another litter of 10 pigs. I have tried crossing the breed, but find no advantage in it. I have a pair of full bloods, five months old, weight, say 160 lbs. each, that I would dispose of. (Price, \$16 per pair. [Rural N.Yorker.

For the Wisconsin & Iowa Farmer.

Watertown, Jan. 1853.

Ice Houses.

MR. MILLER:—I subscribed for the Wisconsin Farmer at the middle of the last Volume, as an experiment, and I acknowledge the paper exceeds my expectations.

I had hoped before the Volume closed, to have found something said by yourself, or your able correspondents, in reference to the best manner of building Ice Houses.—It is argued by some that they should be built entirely above ground, and should be well ventilated; by others, that a portion at least should be below the surface.

Any information as to the best manner of building to preserve ice, by yourself, or any one that has had experience in the business, will be gratefully received. Also a Chapter on the building of cisterns for the purpose of cleansing rain water for common beverage in our families, would be esteemed a favor, and would be a public benefit in this country where all water is so hard.

HEBER SMITH.

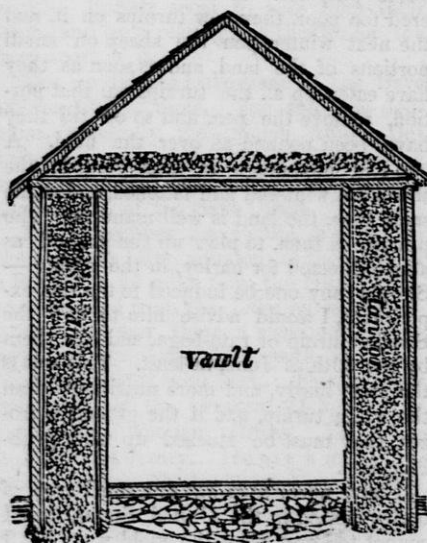
We have a poor opinion of underground ice houses. We know of no better plan for constructing an ice house, than the following, which was furnished to the Horticulturist, a year or two since by N. J. Wyeth, a celebrated ice merchant of Boston. It was published in the February number of the last volume of the Farmer. We republish it, not only to answer the inquiry of our correspondent, but for the benefit of several hundreds of others who are in the same category with himself.

CISTERNS.—We will give a 'chapter' on the construction of cisterns, in the March number. [Ed.]

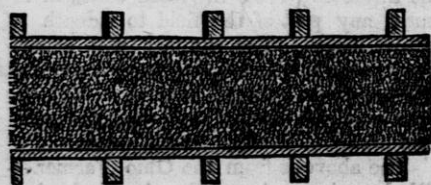
'An ice house above ground should be built upon the plan of having a double partition, with the hollow space between filled with some non-conducting substance.

In the first place, the frame of the sides should be formed of two ranges of upright joists, six by four inches; the lower ends

of the joists should be put in the ground without any sill, which is apt to let air through. These two ranges of joists should



be about two feet and one-half apart at the bottom, and two feet at the top. At the top these joists should be morticed into the cross-beams which are to support the upper floor. The joists in the two ranges should be placed each opposite another. They should then be lined or faced on one side, with rough boarding, which need not be very tight. The boarding should be nailed to those edges of the joists nearest each other, so that one range of joists shall be outside the building, and the other inside the ice room or vault.



MANNER OF NAILING THE BOARDS TO THE JOISTS.

The space between these boardings, or partitions, should be filled with wet tan, or sawdust, whichever is cheapest or most easily obtained. The reason for using wet material for filling the space is, that during

winter it freezes, and until it is again thawed, little or no ice will melt at the sides of the vault.

The bottom of the ice vault should be filled about a foot deep with small blocks of wood; these are levelled and covered with wood shavings, over which a strong plank floor should be laid to receive the ice.

Upon the beams above the vault, a pretty tight floor should also be laid, and this floor should be covered several inches deep with dry tan or saw dust. The roof of the ice house should have considerable pitch, and the space between the upper floor and roof should be ventilated by a lattice window at each gable end, or something equivalent, to pass out the warm air which will accumulate beneath the roof.—A door must be provided in the side of the vault to fill and discharge it; but it should always be closed up higher than the ice, and when not in use should be kept closed altogether.

COMPOST FOR GREEN-HOUSE PLANTS.—

The best and safest compost for all plants, is two-thirds leaf-mould, (entirely decayed leaves, to be found in the woods,) and one-third fine sand. Anything will grow in this, and a great many things will not grow without it.

PRUNING EVERGREENS.—

In pruning evergreen trees, the lowest branches should in all cases, be the longest, whatever the shape of the head should be. This style of clipping or pruning is in accordance with the natural growth and habit of nearly all evergreens, and produces that park-like appearance, so much admired in English landscape gardening, where the lowest branches seem to spring directly from the turf, and form a continuation of the grassy lawns of crisp and close-shaven verdure.

A correspondent of the Genesee Farmer, says that girdled trees may be preserved by the following means: 'Take out a block of wood extending into the bark above and below the girdle, and take from the body or limb of another tree, a block corresponding in size and shape, with the bark on, and adjust it in the place, and bind it there on the principle of engrafting.' This plan it is said, has proved completely successful.

ROOT PRUNING.—In rich, deep, alluvial soils, certain varieties of fruit will make a rank, vigorous growth, year after year, without becoming fruitful within any reasonable period. The remedy is, to curtail the supply of food by cutting off a large portion of the feeding root, to be replaced by fine fibres. The proper mode of doing it is to strip the earth off the ends of the large roots by digging a trench around the tree, deep enough to go below the roots, then with a sharp knife cut off the ends. This cut should be made on the under side and sloping outwards. It may be done much more quickly by having a spade ground to a sharp edge, so that it will cut a root an inch in diameter, clean through at a single stroke. The effects of transplanting on trees is well known.—If we take a vigorous growing tree of bearing size, but showing no signs of fruitfulness, and transplant it, fruit buds are almost invariably formed the next season.—This root pruning is similar in its effects and results to transplanting. It checks the superabundant vigor and brings the tree into a fruitful condition.

Nearly all fruit trees may be thus treated but we advise it to be done cautiously. If a tree has a large head, and the main roots are cut too short, the tree is liable to be blown down. We have heard of trees being successfully root-pruned in August, and we have this season tried it, but we think the safest time to do it is in the fall, when the growth is suspended, or even in the winter, if not convenient before that time.

LIQUID FERTILIZER FOR CHOICE PLANTS.

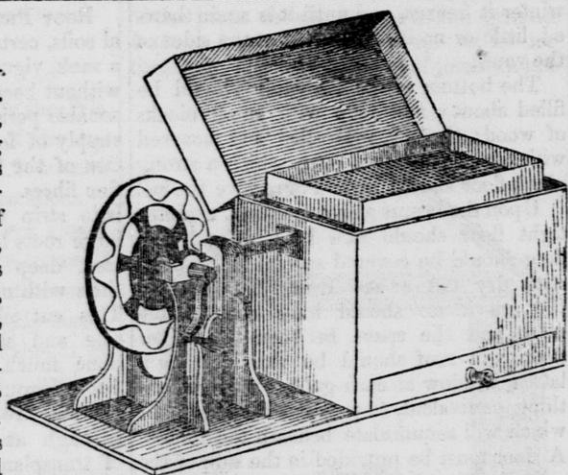
—Dissolve half an ounce of Sulphate of Ammonia in a gallon of water, and apply it to the roots of green-house or hardy plants with a watering-pot, every sixth time—the other five times use plain water. Plants should not be watered with it daily, or they will die—'just as certainly as man will who drinks nothing but pure brandy.' Properly used, however, the result will both surprise and delight every person who will make a trial of it. A barrel of it should be mixed every Friday and used each Saturday; and it is particularly recommended for Strawberries, Fuchsias, Dwarf Pears, Dahlias, &c. [Horticulturist.

See that your fences are in good order.

SIFTING MACHINE.

This is an invention of Samuel Harris, of Springfield, Mass.

It is intended for family use, also for sifting and bolting drugs and medicines. It is also an invaluable article for confectioners, stereotypers, snuff manufacturers, coffee grinders, bakers, dentists, apothecaries and chemists, pharmacutists, perfumers, and dealers in teas, spices and seeds, and hotel keepers, &c., and for all sifting purposes it is superior to anything we know of in use. As a labor-saving machine, its utility is seen and acknowledged at sight, and needs no more comment than the many advantages which arise from its use both in saving of time, and the perfect safety with which the most poisonous and noxious drugs and powders can be prepared without waste, as the operation is performed in a perfectly tight box, which prevents the escape of all dust which may arise. The sieves are made either of brass, copper, or iron wire, hair or batting cloth. This machine was awarded a medal at the last Ohio State Fair, and the general agent has in his possession certificates of some upwards of sixty individuals who have used them, which for the short time the machine has been in market speaks well for the invention. S. S. Barry & Co., Cleveland, Ohio, are agents for Western States.



One of the best gardeners in England has given me some instructions for the management of grapes, which some of my readers may be glad to receive:—

MANAGEMENT OF THE GRAPE VINE, WHEN FRUITING.—"With regard to the best way to manage the vine, when fruiting, I invariably stop the shoot *one* eye above the bunch; and it is the practice of the best gardeners in England. I generally leave one shoot not stopped, without fruit, and to fruit next season, and cut the shoots out that have borne fruit this year. On the short-spur system, every shoot is stopped an eye above the bunch, except the top one, and then it must be managed like the rest; all the lateral shoots *must be stopped one eye* above another, until they cease grow-

ing, as, the more leaves you get, the fruit will swell larger."

There is another article abounding in the markets here, which, though by no means unknown in the markets of the United States, is not common; and therefore, from the same intelligent gardener, I shall give the best account I could obtain of the mode of cultivating them. I mean mushrooms. There are few extensive gardens without a mushroom-house, which is a dark room fitted up with shelves, and with the means of producing the desired temperature.

CULTIVATION OF MUSHROOMS.—"The cultivation of mushrooms in the winter months, in order to have a daily supply, requires a house for the purpose. The house at Welbeck is divided into four tiers of shelves, three shelves in each tier. The shelves are ten inches deep, [that is, a sort of boxes, like the berths on board ship.—H. C.]

"The first three shelves are generally filled about the beginning of September, as the field mushrooms begin to go out then. The material used to fill the shelves is pure horse-dung droppings, without any straw. It is suffered to ferment a little before being put in, and beaten quite hard with a wooden mallet. As soon as the heat decreases to 65 deg. by the thermometer, or ascertained by a piece of wood thrust in, to see that the burning heat is gone off, the bed may be spawned, by opening holes two inches deep in the dung, and putting in bits of spawn about the size

of a walnut, nine inches each way, all over the bed. It is then covered with two or three inches of good fresh loam from a pasture field. If a little road-scrappings is added to the loam, it helps to bind it, which is important, as a great deal of the success of the crop depends on the soil and being incorporated into one solid mass, not liable to crack, or get too dry. The soil must be beaten with the mallet, like the dung, quite smooth and hard all over. In eight days after spawning, the bed will be covered with a whitish substance, which shows that the spawn is running all through it, and that the heat is right.

"Mushrooms generally appear in six weeks after making the bed, if the temperature of the house is kept from 55 to 60 deg. They are very impatient of too much water; and water is required to be put on them only with a fine rose watering-pot; and that when the bed gets dry; and it should be always of the same temperature as the house, or it chills all the young ones, and the crop never lasts so long. If hot-water pipes are used to heat the house, there is no occasion for watering. We generally make fresh beds every month, to keep up a succession all through the year, excepting the months they come naturally in the open fields.

"Mushrooms may be grown in winter in a dark cellar, where there is no artificial heat, by covering the top of the ridges, or box, with good dry hay, at least ten inches thick. They will not come in so quickly as in a house kept at a steady temperature, but will keep in bearing a great deal longer, so that one good bed will last all through.—As a good deal of the success of growing depends on the goodness of the spawn, it is necessary to get it from some respectable nurseryman, who generally sell it in the shape of bricks. Its quality may be easily ascertained, if good, by breaking it, and seeing it full of white threads, and the smell is exactly like a mushroom. If it smells musty, it has lost its vegetative powers. It will keep good for a year or two, if kept dry, and out of the power of frost. The best is made in London about Battersea, where many cows and horses are pastured in the fields. The old droppings are taken from the surface where the natural mushrooms grow, and mixed with fresh horse-dung, and cut into the shape of bricks.

There is always a good spawn in the old beds, which may be preserved to put into new ones."

I have gone thus fully into this, as it may appear to some, unimportant subject, because, as a vegetable, this plant is esteemed a great delicacy; and next, because of the great quantities of ketchup which are used, and which may be manufactured in the country, and of which mushrooms are the principal material.

[Coleman's European Agriculture.

Rancid Butter.

The Echo du Monde Savant says: "A farmer in the vicinity of Brussels, having succeeded in removing the bad smell and taste of some butter, by mixing it with chloride of lime, he was encouraged by this experiment, and he has restored to butter, the taste and odor of which were insupportable, all the sweetness of fresh butter. This operation is extremely simple, and practicable by all. It consists simply in working the butter in a sufficient quantity of water, in which from 25 to 30 drops of chloride of lime have been added to every two pounds of butter. After having mixed it till all its parts are in contact with the water, it may be left in it for an hour or two, afterwards withdrawn and worked again in clear water. The chloride of lime having nothing injurious in it, can with safety be augmented; but after having varied the experiment, it was found that from 25 to 30 drops to every two pounds of butter were sufficient.

Another method of restoring sweetness and flavor to rancid butter, said to be very effectual by those who have tried it, is to put it into a churn with new milk and work it till all the old salt and rancidity is removed, after which it is to be taken from the churn, worked and salted afresh.

TAR FOR SHEEP.—It is stated by a recent writer, that tar is a great preventive of disease in sheep. He feeds four or five gallons of tar to each 100 sheep during the year, and occasionally applies a little tar to the nose of each sheep, during the warm season, to keep the gad-fly from troubling the flock. His plan of feeding is to mix the tar with salt, by scattering the salt in a narrow trough and pouring the tar upon it, when the sheep eat it readily.



HORTICULTURE.

For the Wisconsin & Iowa Farmer.

Bowen's Prairie, Iowa. }
January 1853. }

Cultivation of Orchards.

DEAR SIR:—A recent number of the *Farmer* contains a report of a discussion on the subject of the Cultivation of Orchards, in which all the speakers agreed in opposition to the doctrine generally taught. In that discussion, two very distinct and different things—usually associated it is true, nevertheless, not identical—seemed to me to be confounded; namely: the mere tillage of the soil of an orchard, which is one thing, and the growing and removing from it of exhausting crops, which is quite another. With a due reference to this distinction, probably the discrepant observations and opinions might be brought to harmonize.

Surely no reflecting man, at least no one acquainted with the first principles of agricultural science, will maintain that the bearing off in annual succession full crops of corn or potatoes, with no corresponding return to the soil, has the effect to increase the quantity, or to improve the quality of the produce of the trees. No soil can long bear double cropping. The effect of cropping an orchard with grain must sooner or later prove detrimental to the trees and the fruit. The effect is essentially the same if the crop harvested, be grass from the sward. Whatever is gained in the hay is so much lost in the fruit.

In fields devoted to grazing the same injury does not accrue, for the obvious reason that a constant return is made to the soil, fully equivalent to the produce consumed. Orchards in meadows and cultivated fields would enjoy the same impunity were care taken to supply them with sufficient and suitable fertilizing materials.

As to the question whether orchards should be ploughed or not, without reference to the production of any other than their own legitimate crop, there certainly can be no one rule to fit all orchards, any more than there can be one only system or routine of cultivation and management for all soils. It becomes an individual question, to be answered for each case by itself, according to the nature and condition of the soil and of the trees. No general solution can safely be more explicit than the following, which I offer; that probably most orchards which have lain long in sward will be benefitted by loosening the turf and turning a new surface up to the sunlight and the air; and some will thrive best when this process is repeated oftener; but the crop cultivated, if any, should be that which is least exhausting to the soil.

POMOCULTOR.

DESTRUCTIVE EFFECTS OF THE TOMATO GROWING NEAR GRAPE VINES.—Mr. Holmes describes an instance of this kind in his own experience, where a healthy and exceedingly thrifty grape-vine, seven or eight years old, was nearly ruined, (poisoned) by the contact of a tomato-vine which had been planted within six or eight inches of the grape.

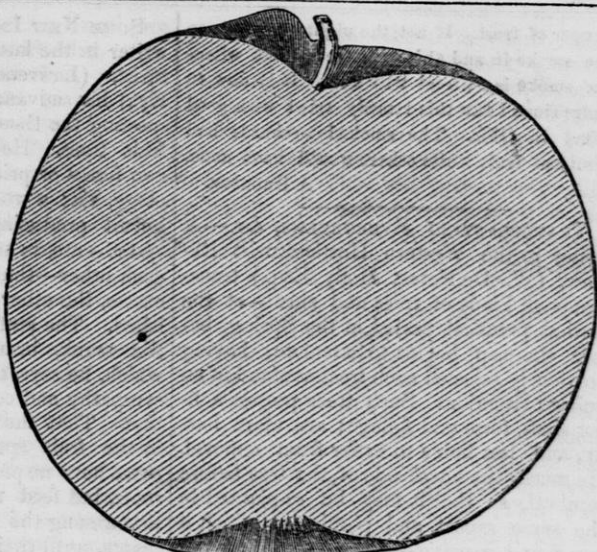
[Minutes of the N. Y. Farmers' Club.]

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.

[Val. Farmer.]

The accompanying cut is an exact outline of a seedling apple presented us by Mr. A. F. Lewis, of Turtle, grown in his orchard. It is an early winter apple. Color, uniform pale yellow—skin smooth and of an oily touch; flesh, white, juicy and fine flavored. Mr. Lewis informs us that the knob, or prominence shown near the stem, is a peculiarity of all the fruit grown upon the same tree. Were we propagating an orchard by budding or grafting, we should certainly make a draft upon this tree for stock. It is a beautiful apple in appearance and excellent for eating.



For the Wisconsin & Iowa Farmer.
Prairie du Chien, Jan. '53.

Orchards, in Winter.

In travelling over the country, I occasionally get a new idea from some farmer, which may be of use to others. Not long since, when the snow was a foot deep, and little or no frost in the ground, I passed a beautiful orchard of good size, for this new country, the snow being dug away from about the roots of the trees. Yankee like, I availed myself of the right and privilege usually awarded to 'the universal Yankee nation,' to ask questions; and enquired the object of thus removing the snow. The answer was, that the man had lost some fine trees in consequence of the sap starting on the sun side of the trees, in warm days in the winter, and afterwards *freezing*; that these occurrences only happened when there was no frost in the ground; and as the ground could not freeze with such a body of snow on it, he had removed it to let the ground freeze. The idea struck me at once, as a good one.

Some years since I lost about twenty Peach trees, large enough to bear a bushel apiece, and one Green Gage, and some apple trees, from a similar or the same cause. Among the remedies then prescribed by the *knowing* ones was first, to tramp the snow down round the roots of the trees so that the frost would go through it, and second, to place straw or litter from the stable on the snow or frozen ground,

if there was frost in it, but no snow, and thereby prevent the ground from thawing so soon in those places.

The tramping of the snow requires more work than to remove it, and as there will still be snow on the ground, the ground will not freeze as deep, if it freezes at all, as it would if the snow was entirely removed. And as to the straw or litter, the remedy is worse than the disease, for while it does but little to retard a thaw, it provides a nest for the mice, which will damage the tree probably more than the frost after a thaw. On the whole, it strikes me that the removing of the snow is the better remedy. This is not necessary if the ground freezes before the snow falls, if the frost is of sufficient depth; if not, then the removal of the snow allows the frost to deepen in the ground.

To prevent the effects of late frosts in the spring, when the trees are in, or just out of blow, have your trees as near together as may be in the orchard. Haul old or decayed logs and make numerous heaps in different places, say 6 or 8 rods apart. This you can do in the winter. The frost that kills the fruit, usually comes from the 15th to 25th of May, and it may always be known when it will be likely to come, a day or so before hand, being generally preceded by a rain, followed by cool nights. And when the cool evening indicates a frost that night, then kindle your fires, so as to raise smoke. If the wind blows, there is but little

danger of frost. If not, the night air will keep the smoke in and about the trees, and where the smoke is no frost will hurt. It is now 40 years since I saw this remedy tried with good effect in Ohio. The smoked orchards had plenty of fruit while others would have none.

A BRUNSON.

TRANSPLANTING EVERGREENS, &c.—A writer in the *Western Horticulturist Review*, (W. De Forest Holly Esq.,) transplants all kinds of trees and shrubs at the earliest practical period in the Spring, before the sap begins to circulate, having previously selected such trees as stand in an isolated situation. Such trees possess a finer shaft, form and foliage; are more hardy, and less liable to suffer from removal. He marks the *north* side of the tree before removal, so that it may be re-planted in the same aspect and position in which it was found growing—digs a trench around the tree, and raises with the roots as large a ball of dirt as possible—cuts off all bruised or mutilated roots, with a sharp knife, to enable them to granulate and form new fibres—prunes in the head of the tree to correspond with the unavoidable destruction of roots—lowers the tree carefully into a large hole, spreads out the roots, sifts fine surface soil among them, and puddles in around them with enough water to close up the holes and interstices, leaving the surface of the ground slightly concave to retain water, and supporting the tree in its position by firm braces. He also mulches the surface of the ground with leaves or straw to retain moisture, and binds some peices of loose matting around the trunk of the tree to shade it from the sun. All the necessary and fundamental operations of tree planting are embraced in this method, and those who adopt it will rarely have to complain of the death of their fruit trees.

PARSNIPS FOR SWINE.—In the Isle of Guernsey, the raising of parsnips for swine is a leading branch of farming. The root is almost exclusively used for pork making. A gentleman who once resided there, noticing the peculiar fine flavor of the pork, inquired the reason of it, and was informed that it was owing to the hogs being fattened on raw parsnips. The pork, he says, was beautifully white, juicy and firm.

Be punctual in all things.

SOME NEW IDEAS ABOUT PRUNING.—A writer in the last number of the *Horticulturist*, (Lawrence Young, of Louisville, Ky.,) has advanced some new ideas respecting the theory and practice of pruning fruit trees. He considers that there are two forces or principles in vegetable physiology, viz: a wood producing system, and a fruit producing system—that these two systems are, in some degree, antagonistic to each other—that is, if one is promoted to excess, the other is correspondingly diminished. The seat of the wood system is in the trunk, branches and roots, between which, he says, there is evidence of strong sympathy and continued action and reaction. That the seat of the fruit system is in the fruit spurs and fruit buds; that these have no particular sympathy with the roots, but feed upon the juices in circulation among the branches, like parasitical plants, until their demand upon these juices even starves out the wood buds and kills the trees.

The best state, then, in which to have a fruit tree, is to bring about an equilibrium of these two forces. A disturbance of this equilibrium towards either extreme, is injurious to the tree. [Maine Farmer.]

PERPETUAL BEARING RASPBERRY BUSH—Early last spring, says the *Providence Post*, Mr. Perry B. Phillips, of Cranston, saw in the woods a thrifty raspberry bush, which he transplanted to his own garden. The bush put forth blossoms in good time and yielded a handsome crop of raspberries. Immediately it blossomed again, and two days ago we ate some of the fruit.—The berries were large and delicious.—What adds more to the wonder is, that the bush has blossomed again, and a third crop is nearly half grown.

GRAFTING GRAPE VINES.—Mr. Curtis stated at one of the Agricultural meetings in Albany, that he had been successful in grafting the *Isabella* on the wild grape.—He takes about fifteen to eighteen inches of the root of the wild vine, and inserts it in a cleft or 'split' grafting. The vine is planted so that the connection of the stock and scion will be just below the surface of the ground. The operation is performed in the spring before the vines come into leaf.

UPLAND CRANBERRIES.—At length we have ocular proof of the fact, that, cranberries in the greatest perfection, can be raised on upland, sandy, and gravelly soil. Mr. Joseph Orcutt has brought us for exhibition, a large root of cranberry vine placed in a box, which is made to contain a quantity of the soil from which it had been removed, the vines thickly hanging with ripe fruit. He made the experiment three years ago last May, planting 40 bunches in a row two feet apart, without previous culture, merely removing the sod, and planting the cranberries, with no more trouble or attention than he would have taken with a cabbage plant.

The soil is a sandy gravel, fit for peach trees, and in which 223 are growing in an orchard so near as to shed their leaves on the cranberry vines. The first year he picked about a pint of fruit, the second year, four quarts, the third or present year, from seven to eight quarts, of remarkable fine fruit. The vines have shot the present season, three feet six inches in length, and the old wood is loaded thickly with the berries.

We now consider the question, "can cranberries be cultivated with success on upland?" as decided in the affirmative. [Boston Cultivator.

Lime and its Use in Agriculture.

Lime is one of the most abundant substances in nature—usually as a carbonate, consisting of $56\frac{1}{2}$ parts of carbonate, and $43\frac{1}{2}$ of carbonic acid, in 100 of the mineral. In burning, the acid escapes in the form of steam. It is then quick-lime.—After exposure to the atmosphere, it absorbs water, slacks, and falls into an apparent dry powder; it is then hydrate of lime, and is in the form in which it is generally used for agricultural purposes. It is the most valuable, when used directly after it has fallen into powder. If long exposed to rain and dews before being spread upon the land, it loses a great portion of its fertilizing powers, which principally consist in its action upon vegetable matters, causing them to decompose, and its neutralizing power upon acids, which abound in some soils.

The Quantity of Lime to the Acre.—In Great Britain, from 100 to 400 bushels are applied at once, at intervals of ten, fifteen

or nineteen years—the term which leases run. In this country, the most common practice is to apply 30 or 40 bushels once in three years, which is the preferable mode. We have seen it applied with good effect, however, at the rate of 300 bushels to the acre. This was upon a very stiff, cold clay. Three hundred bushels would be about ten tons to the acre. Ten inches depth of soil, would weigh about 1000 tons. That would give one per cent. of lime. A case is reported in England, of soil upon which 120 bushels of lime had been used, being analyzed, which apparently contained the same component parts as that along side, which had not been limed for a number of years. Yet the limed land produced 20 tons of turnips to the acre, while the unlimed portion only produced two tons, tops and all. This was upon red sand-stone land. One of the effects of lime is, it gives the soil power to absorb ammonia from the atmosphere, and retain that which is disengaged by the decomposition of vegetable matter and manure in the soil. Hence the importance of applying lime with green crops, or using coarse manure with the lime.

Indications of want of Lime in the Soil may be seen in heavy crops of straw, and light crops of grain; and in root crops where they seem to run to *fingers* and seed. Experiments should be made by every farmer, with lime, upon various crops in all his fields, to ascertain whether lime would be beneficial to him. Very few places will be found where it will not be so.

To Apply Lime to the Soil, spread it evenly upon a crop of clover about to be plowed under, or sow it upon the surface with the wheat, and harrow thoroughly.—It should never be combined with manure, unless the whole is immediately plowed in.

To what Soils is Lime Applicable?—Every clay soil, every peaty soil, and every soil in which vegetable fibre does not readily decay, because that is a sign that it contains some antiseptic acid, which prevents decay. This is the case in peat beds and swamps. Sandy, or thin soils, may be overlimed and injured; because, in causing the decay of vegetables, it sets free the ammonia, the very substance of fertility required. To prevent this, more food must be given for the lime to act upon. No farmer, who knows what the action of lime is,

upon all soils, will ever do without it, as an accessory to his manure. It is a component part of all crops grown by the farmer. When applied to land which had not borne wheat for many years, it has at once restored it to fertility for that crop. Where it has failed once to remunerate the farmer using it, it has proved of the greatest benefit a hundred times.

Use of Lime with Peat.—The slow decomposition of peat is an objection to its use. By the term, we mean all swamp muck, partaking more or less of that character. All peat contains resinous matter, which prevents decomposition. By adding lime, the resin is combined and forms soap, and the fibre then decays as rapidly as any other vegetable substance.

Lime in the Soil.—Many farms which once produced good crops of wheat, because there was lime enough in the soil to supply the requisite quantity to the grain, have ceased to be productive. They still produce a large growth of straw, but not a remunerating growth of grain. In some instances, such lands have been restored to their former fertility without applying a bushel of lime. Do you ask how? Simply by plowing deeper. In the hard untouched and unexhausted subsoil, there was plenty of lime lying hid, which only wanted stirring up and exposing to the action of the atmosphere, and bringing within reach of the roots of the plants, to produce the same effect originally derived from the top soil before it was exhausted. Our constant advice will be to use lime, plow deep, subsoil and drain stiff lands, increase your crops, and grow rich, which you will if you read and heed. [The Plow.

Future Prospects of Wool and How to Grow it.

It is a fact worthy of the most profound consideration, by every grower of wool, that his occupation for the next ten years, promises rich returns for invested capital and labor. During the last decade, there has been, in many of the Wool growing States, a large falling off in the number of Sheep raised, and pounds of Wool grown. In 1840, New York had upwards of 5,000,000 Sheep, being some over a quarter of all in the United States. Vermont then had over 1,600,000. Now, New York has

only 3,500,000, and Vermont only a fraction over 900,000, and by January, 1853, her flocks will doubtless not exceed 600,000! The causes which have led to this result are various, but it is foreign to our purpose to speak of them. In many other States, there has been a similar decrease, or falling off.

For ten years, the increase of Sheep throughout the Union, has been only one and a half millions, while the population has increased from eighteen to twenty-four millions. The American population doubles in about twenty-five years, without the aid of foreign emigration; and it is more-over true, that the annual increase of our population requires the fleeces of 1,000,000 of Sheep. Six pounds of Wool to every man, woman and child in the United States is the estimated average amount required yearly for their comfort and use. Consequently, they would consume 150,000,000 lbs. Of this amount, we grow 52,500,000, or a trifle over two pounds for each individual. Now, we actually consume, annually, three times the amount we grow, and this compels us to buy of foreign nations, 100,000,000 lbs. Of this, 25,000,000 is bought in the raw material, and the remainder in manufactured goods.

If it be a correct estimate, that the inhabitants of the Northern and Middle latitudes require, annually, the Wool of two Sheep to each individual, then it follows that in many of the Wool growing countries of Europe, we shall look in vain for exports, in consequence of the large gain of population over the gain of their flocks.

France, with a population of 36,000,000 keeps only a fraction over 36,000,000 Sheep. Austria, with a population of 36,000,000, has only 33,000,000 Sheep.—Great Britain and Ireland, with a population of 29,000,000, keep only 32,000,000 Sheep. The Sheep of Russia number 39,000,000, while the population is 60,000,000. Spain does better; a population of 13,000,000 keep 18,000,000 Sheep. Prussia has 15,000,000 inhabitants and 16,000,000 Sheep. Turkey, with a population of 11,000,000, keeps 14,300,000, while Sweden and Denmark keep less than 3,000,000, with a population of over 5,900,000. In short, in seventeen of the largest nations of Europe, the Sheep num-

ber only 207,171,351, while the sum total of the population of these countries, is over 225,000.

It appears clear that these nations cannot export Wool, for in many of them Wool growing has reached its utmost limits and yet they do not raise enough for their own consumption! The Australian colonies, since 1843, have never exported less than 16,000,000 lbs. annually, and often as high as 40,000,000. Since the discovery of the gold mines, however, which has caused great neglect of the flocks, England has suffered materially in her receipts of Wool from that region. It appears that there is a deficiency of Sheep and Wool throughout nearly all of the great Wool growing sections of the globe; and hence we infer that Wool, especially good Wool, will command a high price for a series of years to come.

Heavy drafts are being made upon the old stocks of cloths in market, and when these are exhausted we may expect a permanent rise in the manufactured fabric.—Many of the countries that once exported fine Wools now export none. The South American States still export large amounts of Wool, but it is of the coarser grades and cannot enter into competition with Wool grown in the United States. From whatever point we view the subject, we must utter it, as the strong conviction of our best judgment, that the inducements to grow Wool, present stronger claims upon the attention and enterprise of the American farmer, than those of almost any and every other of the varied pursuits of agricultural wealth.

'But,' says the reader, 'to enable me to grow more Wool, must I not purchase more Sheep?' I reply,—not necessarily. You can grow much more upon the same number than you ever have, doubtless.—Every one knows that the same acre of tillage land may be made to produce from 30 to 50 per cent. more than its usual yield, by the aid of fertilizers. So may a flock of Sheep be made to shear from 30 to 50 per cent. more of Wool, by the aid of fertilizers, or in other words, by adapting their feed to the make and growth of Wool. One of the constituent parts of Wool, is albumen; hence those grains which contain the largest per cent. of albumen, make the most Wool when fed to Sheep.

Wheat and Rye contain largely of it,—Peas and Beans have 29 per cent. of it,—Oats 10½ per cent. only.

It has been ascertained by actual experiment,* that the following are the results of feeding different kinds of roots and grains for the production of Wool:

1,000 lbs. of potatoes, raw, with salt, make	6½ lbs. wool.
Do. Mangel Wurtzel, raw,	5 1-2 "
Do. Wheat,	14 "
Do. Oats,	10 "
Do. Rye, with salt,	14 "
Do. Rye, without salt,	12 1-2 "
Do. Barley,	11 1-2 "
Do. Peas,	14 1-2 "
Do. Buckwheat,	10 "

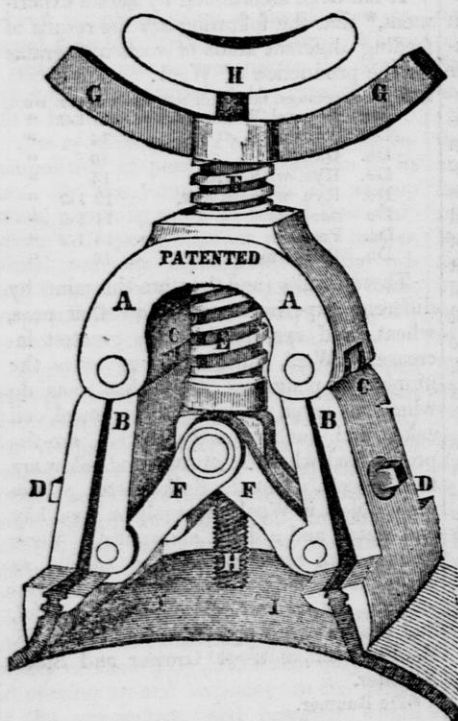
These results (and they are the same by different experimenters,) show that peas, wheat, and rye, produce the greatest increase of Wool, and give about twice the number of pounds of Wool that roots do when in equal weight. Corn meal, oil cake, and such gross substances, are the proper feed when fat mutton and tallow are the objects. But the flock-master, whose main object is Wool, must rely on good hay and water, and a daily allowance of these grains, with some potatoes or carrots as green food, for the attainment of his object, viz., *the greatest amount of good Wool*, and that in the very best condition. [S. B. Rockwell, in Wool Grower and Stock Register.

*De Raumer.

FLESH FOR HENS.—If you keep hens, and desire to render them a source of profit, as well as luxury, see that they are liberally supplied with flesh. The fish taken in ordinary streams, afford an excellent and most grateful substitute for the flesh of animals, and can generally be obtained in almost any desirable quantity, and at comparatively small expense. When at large, the hen is carnivorous, and procures much of her daily food from the resources of the insect world, devouring almost indifferently, and with little discrimination, all such insects, bugs, flies and worms, as fall in her way. These promote fecundity, and in situations where she is deprived the privilege of catering for herself, either these, or some adequate substitute, in the form of more solid viands, must be supplied, or she will cease to lay. Neglect of this, is the principal cause why hens, closely confined, are so generally complained of as unprofitable. [Granite F.

Vroman's Patent Girder & Lasting Machine. the arch; A F F are straps, there being

FIG 1.



This is one of the most ingenious and valuable inventions that we have noticed for some time, and the variety of uses to which it is capable of being applied, must insure its general use in all cases with those who wish to accomplish the work of lasting, crimping, and girding or belting emery wheels with greater expedition and at much less cost than the usual manner. [O. Farmer.

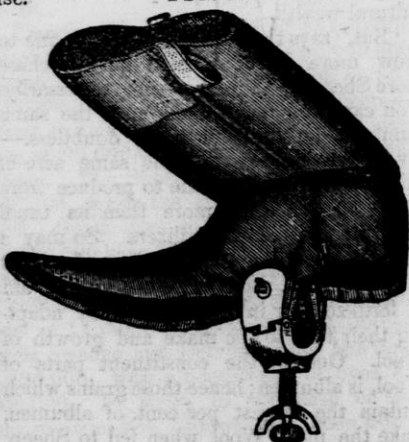
Fig. 1. represents the machine in a position for obtaining any degree of tension on a flexible substance drawn round a circle, as in the case of covering an emery wheel preparatory to tacking. A represents the circle or base of the structure, to each end of which is attached a pair of jaws; B B, connected at C C by a hinge-like joint; each pair being thrown open to receive the girding substance, by coiled springs, and closed by the screw bolts, D D, they being operated by a moveable thumb wrench. E is a hollow screw passing through the centre of, and acting upon

the arch; A F F are straps, there being two on each side, the ends of the jaws with the lower end of the hollow screw, E, working in a joint at both ends, thereby giving the screw E entire control over the end of the jaws, expanding or contracting them when the screw is operated by means of the arms 'G G.'

'H' is a screw-rod running through the entire length of the hollow screw E, and takes effect on its inner surface, and passes, as will be seen, down to the face of the wheel I I, and rests upon it; its office being to control the motion of the whole machine towards or from the wheel when such separate motion is required.

The following is the operation or movement of the machine when used.— Let the jaws B B be thrown apart by turning the screw to the right; each pair is then opened, and the leather or girding substance adjusted between them; the screw-rod H is then turned to the right, moving the whole machine from the wheel, producing any desired tension of the girding substance; H and E are returning to the left simultaneously, giving a compound movement to the jaws, both bringing them together or contracting them, and settling down to the wheel, on which the machine rests, thereby bringing the ends of the girding substance in close contact, and covering the entire face of the wheel with a uniform pressure on its parts; the leather being first prepared and glued on its whole surface ready for use.

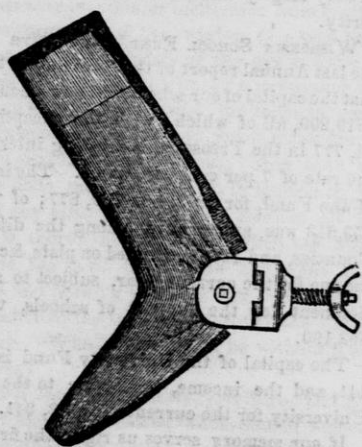
FIG. 2.



The same machine of suitable size but differently formed jaws is used with complete success in the lasting and crimping of boots and shoes as in fig. 2.

The upper leather should be first drawn tightly over the toe and balls of the last; the machine is then attached to each side of the upper in the shank; the hollow screw is then turned to the left until the jaws commence contracting; the centre screw H is then turned to the right, until the upper is brought sufficiently down over the instep; the screws E and H are then turned together to the left, producing a compound movement of the jaws, both contracting and running them down to the inner sole; by turning the screw H to the right or left, the machine is moved too or from the boot or shoe, or when an upper does not last hard in the shank, the machine may be used with more facility by removing the screw H, the upper being then drawn down over the instep, at the

FIG. 3.



same time it is brought in the shank, by using the whole instrument as a lever; first drawing down one side of the upper and then the lower, alternately, as the screw E is being turned to the left to produce contraction as may be found over desirable.

Further information in regard to sales may be had of S. S. Barry, Cleveland, O.

Discontent will live and be vigorous on such slender diet, that it is next to impossible to starve it to death when it has once been brought into existence.

A New Method of Roofing.

A patent has recently been granted, in England, to Mr. Cowper, for improvements in coverings for buildings, by means of tiles, or plates of sheet-iron, rendered applicable for that purpose by coating it with an enamel or composition capable of enduring and protecting the metal from the weather.— Tiles, according to this manufacture, may be of any suitable form, with a view to render them more or less ornamental, combined with utility. the body of the tile, which is of thin sheet iron, is cut up or stamped of the proper shape. It also has a raised head formed round the edge, to prevent the water from running off the tile, with the exception of the lower end, where it drops on the next. Two holes are also punched for fixing the tiles to the wood-work. The upper or narrow end of the tile is bent at right-angles, which is introduced in an opening between supporting laths or strips of wood. The hook, or right-angled portion, sustains the tile, while two nails, introduced at the holes, steady and keep it in its place. In lieu of the nails, before referred to, to fix the tiles, the patentee sometimes rivets a hook so as to project on the under side of the tile; the stem of the hook is riveted through a hole in the metal plate before it is enameled, which, when so coated, is impervious to water, and obviates the necessity of an India rubber washer under the head of the nail, which is required when fastened by nails through the holes. The coating of these tiles is applied in two separate compounds, the one as the body, and the other as a glue for the surface of the composition. The coating for the body, consists of sand or silica; the glue, or second coating, is applied in the shape of fine powder, which is dusted on the wet coating until the entire surface is covered. The powder adhering to the moist coating causes it to set in some measure, when the tile is deposited in a drying room, previous to baking or firing. The tiles may be rendered ornamental by the application of coloring matters, according to any design or pattern, which are burnt in, and thereby rendered indelible, as well understood in porcelain manufactures. [London Morning Jour.

Happiness is promised not to the learned, but to the good.

EDITOR'S TABLE.

TRANSACTIONS OF THE SECOND SESSION OF THE AMERICAN POMOLOGICAL SOCIETY, held in Philadelphia on the 13th and 14th of Sept., 1852.—This pamphlet contains much of interest and value to horticulturists throughout the country, and closes with a feeling and eloquent tribute to the late A. J. Downing, by Hon. M. P. Wilder, of Boston; together with a collection of testimonials in memory of the lamented dead, from the Massachusetts, Pennsylvania, New York and other Horticultural Societies—showing how wide-spread was the regard for this gifted, genial-hearted and useful man, so early lost to the cause in which he was engaged.

In order that all—who are so disposed—may have an opportunity to contribute to the noble object of erecting a suitable monument, or offering some other suitable testimonial of regard to the memory of one whose death is so widely mourned, this Society resolved to issue the following circular.

CIRCULAR

OF THE

AMERICAN POMOLOGICAL SOCIETY.

The undersigned were appointed a Committee by the American Pomological Society, at its late meeting in Philadelphia, (with powers to add to their number,) to solicit from individuals, subscriptions, each of *one dollar or upwards*, to procure such testimonial as the Committee may deem suitable and expedient, in memory of the late ANDREW JACKSON DOWNING.

His private virtues, his great worth and important services in Horticulture, Rural Architecture and the various branches of terra-culture, and his numerous and valuable publications, justly entitle him to this distinction.

In discharge of the duty imposed upon us, we transmit to you this Circular, and earnestly request your prompt co-operation in fulfilment of this benevolent design.

Associations as well as individuals who may receive this Circular, are requested to transmit by mail or otherwise, their contributions to either of the subscribers, who will register their names, residence and subscription.

Marshall P. Wilder, Boston.

Robert Buist, } Philadelphia.

Caleb Cope, }

H. W. S. Cleveland, Burlington, N. J.

Benjamin Hodge, Buffalo, N. Y.

F. R. Elliott, Cleveland, Ohio.

Lawrence Young, Springdale, near Louisville, Kentucky.

W. D. Brackenridge, Washington, D. C.

John A. Kennicott, Northfield, Illinois.

The several Vice Presidents of the American Pomological Society, and the Chairman of

the various State Fruit Committees, are hereby constituted members of the above Committee, with authority to appoint associates in their respective States and Territories.

MARSHALL P. WILDER, *Chairman.*

We cannot doubt, that very many readers of the Farmer, will esteem it a privilege to aid with their contributions, in executing this praiseworthy design; and it is to be hoped that such testimonials may be furnished from this quarter as will be alike honorable to the people of the Northwest and the memory of Downing.

TRANSACTIONS OF THE N. Y. S. A. SOCIETY.—Our thanks are due to B. P. JOHNSON, Cor. Secretary, for the 11th Vol. (1851) of this work.—It is a handsome volume of 970 pages, elegantly illustrated with engravings of Farm Stock Implements, &c.—containing a great fund of information on agriculture, conveniently arranged, and exceedingly neat in its typography.—Mr. Johnson is eminently fitted for the responsible post of Secretary. May the Society long enjoy the benefit of his labors, to which it is already largely indebted for much of its prosperity.

WISCONSIN SCHOOL FUND.—We learn from the last Annual report of the Secretary of State, that the capital of our school fund now amounts to \$819,200, all of which, with the exception of \$4, 777 in the Treasury, is drawing interest at the rate of 7 per cent per annum. The income of the Fund, for 1852, was \$39, 877; of which \$53,613 was apportioned among the different Counties, and \$586 expended on plats, &c. The income for the current year, subject to apportionment for the support of schools, will be \$63,190.

The capital of the University Fund is \$45,441, and the income, applicable to the State University for the current year, \$3, 041.

If our memory serves us right, the first sale of school lands in this State, was made in the summer of 1849, only four years ago. The first section sold, was that belonging to the town of Racine, and which, fortunately for the school fund, was located in and near the heart of the city of Racine. This section sold for about \$75, 000. Thus it will be seen, that this fund, within the short space of four years, has been augmented to nearly a million of dollars. If properly guarded, it must ere long, amount to as many millions as it now does hundreds.

SEEDS.—Our acknowledgments are due Messrs H. T. Woodward, of Beloit, E. D. Phil-

lips, Mineral Point, O. H. Platt, Sheboygan Falls, and I. S. Grandy, of Racine, for sundry packages of seeds. We shall reciprocate these donations. We mean to return ten fold for all such favors. We are making a collection of rare and valuable seeds.

OHIO WINES.—The production and sale of Catawba wines in the vicinity of Cincinnati, is getting to be an extensive business. The Cincinnati Gazette is informed that the value in material, land and labor at present involved in the culture within a few miles of that city, is full half a million of dollars.

NATIVE WOODS.—Mr. Denning, of Presque Isle, N. Y., lately made a collection of native woods for a Scientific Institution in France, comprising 107 varieties; all of which were gathered in Dutchess and Putnam Counties.

A NEWSPAPER.—The Boston times says that a man eats up a pound of sugar, and the pleasure he has enjoyed is ended; but the information he gets from a newspaper is treasured up in the mind to be enjoyed anew, and to be used whenever occasion or inclination calls for it. A newspaper is not the wisdom of a man or two men; it is the wisdom of the age and the past ages too. A family without a newspaper is always half an age behind the times in general information, besides they never think much or find anything to talk about. And then there are little ones growing up in ignorance without any taste for reading. Besides all these evils, there's the wife, who, when her work is done, has to sit down with her hands in her lap and nothing to amuse her, or divert her mind from the trials and cares of the domestic circle. Who, then, would be without a newspaper?

It is the highest duty, privilege, and pleasure for great men and whole-souled women to earn what they possess, to work their own way through the world,—to be the architects of their own fortunes.

TO ASCERTAIN A HORSE'S AGE.—Every horse has six teeth above and below. Before three, he sheds one or more on each side of the central teeth; between four and five, the horse cuts his under tusks, at which time his mouth will be complete. At six, the grooves and hollows will begin to fill up a little; at seven, the groove will be nigh filled up, except the corner teeth, leaving little brown spots where the dark brown spots formerly were. At eight, the

whole of the hollows and grooves are filled up. At nine, there is very often seen a small bill at the corner of the teeth—the point of the tusk is worn off, and the part that is concave begins to fill up and become rounding—the squareness of the central teeth begins to disappear, and the gums leave them small and narrow at the top.

THE FAMILY CIRCLE.—We can say nothing more in praise of this work than we have said time and again. The Jan. No. is on our table, with its usual attractions. See what the Editor says, 'The Family Circle and Parlor Annual,' for January, contains a new steel plate of the NEW CRYSTAL PALACE at New York, with a description. Also, another of those beautiful *Flowers Personified*—*Dahlia*, on steel, colored, with a continuation of the 'Floral Festival,' complete in each number. *New Year's Realities and New Year's Anticipations*; a new *Morning Song*, by Thomas Hastings, Esq., &c. &c.—This work gives 25 *Steel Engravings*, 12 of them colored, and nearly four hundred pages of original reading matter, during the year, on good paper, with index for binding. Also, a beautiful Steel Plate of Stewart's Washington, 14 x 22 in., or Christ Blessing Little Children, as a premium, at subscriber's option, for \$1 a year in advance, by mail. James G. Reed, Publisher, New York.

WALWORTH COUNTY JOURNAL.—This is a new weekly hailing from Delevan, Walworth County, by J. C. Bunner, formerly of the Racine Advocate. Friend Bunner is a spirited Journalist—his Editorials are always spiced with the real snap. The Journal is *Free Soil*, politically, though devoted mainly to matters of general interest, making it an excellent family paper.

THE JANESVILLE FREE PRESS.—This is another new organ of Free Soilism, issued in this village. It is a large sheet, handsomely printed and ably edited. This, too, contains a large amount of matter suited to the general reader. Joseph Baker, Editor.

GODEY'S LADY'S BOOK, for January, is on hand, with its characteristic promptness—laden with amusement and instruction. This monthly is more diversified in its subjects than many suppose, who do not read it. It is in place, in the work shop as well as in the parlor.

THE WATER CURE AND PHRENOLOGICAL JOURNALS, for January, are at hand, full of interest to the admirers of the sciences upon which they treat. Now is the time to send in your subscriptions.

JOURNAL OF THE NEW YORK S. A. G. SOCIETY.

—The reports contained in this Monthly Journal render it ever an acceptable visitor.

BELLOIT COLLEGE.—We have received the Annual Catalogue of this Institution, which we are pleased to learn is in a flourishing condition, under the care of its present efficient Faculty.

The Catalogue shows the number of students for the academical year, just closed, to have been 186. This Institution aims to fit its members for the active, practical duties of life—especially to qualify those 'who may engage in the Agriculture and Mechanics arts, to apply the principles of science in those important employments.' This we consider an important feature of this Institution, one which entitles it to the consideration of those who have sons and daughters to educate.

THE OHIO FARMER.—We often call the attention of our readers to this excellent family paper. We can say nothing more in favor of it than we have often said before. Subscribe for it at once, and our word for it, you will acknowledge at the close of the year, that you never made a better investment. Two dollars per year. Thos. Brown, Editor and Publisher, Cleveland, Ohio.

THE WORKING FARMER.—Fred'k McCready, N. Y., Publisher, one dollar per year. If there is a truly Scientific Agricultural Journal published in this or any other country, it is the *Working Farmer*. Edited by Prof. J. J. Mapes, a name familiar to the Agricultural world.

NORTON'S LITERARY REGISTER.—This will be found a very useful and convenient work for those wishing to make selections for libraries.—It contains a complete list of the American publications issued in 1852; together with the Publishers address and price of each work.—Also a list and price of the most popular works published in England during the past year. It contains a brief sketch of several of the largest libraries in this country; and the location, title, number of volumes, and date of founding every public library in the United States.

Sent by mail *pre paid*, for 25 cents. Address Chas. B. Norton, New York.

THE BOOK TRADE.—A Monthly Literary Journal and record of all new publications as they issue from the American press, worth five times its price—25 cents per year. H. Wilson, New York.

FARMERS COMPANION, Detroit, Mich.—Messrs C. Fox, C. Betts, L. Cone, and J. E. Holmes, Publishers and Editors. This is a neat quarto of 16 pages, Monthly, and promises to be a first rate Agricultural and Horticultural paper.—Fifty cents per year.

THE HORTICULTURIST.—We are in receipt of the January No. of this valuable Horticultural Journal. It is now Published at Rochester, N. Y., by James Vick, Jr., and Edited by P. Barry. The No. before us is an earnest, that the enviable standing acquired by this Journal, under the charge of Mr. Downing, will be sustained by its new conductors. Its pages are illustrated in the best style of art. A *decided* improvement is discoverable in this feature of the work. \$2 per year.

NEW ENGLAND FARMER. This Monthly is ever a most welcome visitor to our sanctum.—It is a perfect storehouse of practical agricultural knowledge, from which the most humble tiller of the soil can appropriate. Published at Boston, by Reynolds & Nourse, \$1 per year.—Simeon Brown, principal Editor,—Fred'k Holbrook and Henry F. French, associates, all, we believe, practical farmers.

THE NEW YORK FARMER, published by C. & E. Comstock, Albany, is an excellent family Journal. Its pages are devoted to agriculture, education, the most important news of the day, miscellany, &c. Those in want of a weekly paper from the Capital of the Empire State, cannot do better than subscribe for the *Farmer*. \$1.50 per year.

SCIENTIFIC AMERICAN.—This is the very best publication for Mechanics and Inventors that we know of. Weekly, \$2 per year. Munn & Co., N. Y.

MICHIGAN FARMER.—The Jan. No. comes out much improved, besides giving unmistakeable evidence of increased usefulness. The *Farmer* has an accomplished Editor and a large force of able correspondents.

JOURNAL OF AGRICULTURE.—This is an excellent Agricultural Journal, published in Boston, at 50 cents a year. Wm. R. King, Editor, Prof. J. J. Mapes and Levi Bartlett, associates. With such an array of talent, no one can doubt the ability of the Journal and its value to the farmer. It costs but a trifle—subscribe for it, all ye who would be posted in what our brethren of the plow are doing in the Bay State.

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THE OHIO FARMER,

AND MECHANICS' ASSISTANT,

Edited and Published in Cleveland, Ohio,
by Thos. Brown.

A Family Newspaper, devoted to Agriculture, Horticulture, Mechanic Arts, Domestic Economy, Social Improvement, and General Intelligence.

The Wholesale and Retail prices of all the leading articles bought and sold in the New York, Cleveland, Cincinnati, and Pittsburgh Markets, are also accurately reported each week.

The Farmer is one of the largest, and is acknowledged by all who are acquainted with it, to be one of the best Agricultural Family Newspapers in the United States.

Sample Copies will be sent to any part of the United States, if the request be made of the Publisher, by letter, *post paid*.

TERMS.—Single Subscribers, \$2, Clubs of two or more, \$1.50 each—invariably in advance.

A limited number of Advertisements will be inserted in the Farmer at the rate of \$1 per square, (ten lines or less,) for the first insertion and 50 cents for each subsequent insertion.

Cleveland; Jan'y 1st, 1853.

MOORE'S RURAL NEW YORKER.

This popular Journal is now permanently established,—its high reputation and extensive circulation rendering it *the standard in its sphere*. It embraces more Agricultural, Horticultural, Mechanical, Scientific, Educational, Literary and News Matter, interspersed with numerous engravings, than any other periodical in the Union,—and *has no superior* as an AGRICULTURAL, LITERARY AND FAMILY NEWSPAPER.

The high literary and moral tone of the paper renders it a safe and desirable companion for the Young, and one of its special objects is to instruct, Entertain and Improve all members of the FAMILY CIRCLE. Each number embraces the latest and most important news, briefly yet definitely stated—Reports of Grain, Provision and Cattle Markets, &c.

The NEW YORKER is published in the best style. Each number contains EIGHT DOUBLE QUARTO PAGES, (forty columns,) illustrated with handsome engravings.

TERMS.—IN ADVANCE:—Two Dollars a year —\$1 for six months. Three copies one year for \$5; six copies, and one to agent, for \$10; ten copies, and one to agent, for \$15; twenty copies for \$25.

[For two dollars we will send the RURAL ONE year, and either volume of the Wool Grower and Stock Register.

THE WOOL GROWER AND STOCK REGISTER.

This is the only American Journal primarily devoted to the interest of Wool and Stock Growers, and should be in the hands of every owner of Domestic Animals. It is ably conducted, published in the best style, and finely illustrated. Each number contains a careful review of the Wool and Cattle Markets, and much other useful and reliable information which can be obtained from no other source.

TERMS:—Fifty cents a year; five copies for \$2; eight for \$3; eleven for \$4. Back volume, bound in paper, at 40 cts. each,—unbound at 35 cts., or three for one dollar.

Published monthly, in octavo form. Special numbers sent free.

Address D. D. T. Moore, Rochester N. Y.

HORTICULTURAL!!

Rock County and the State can now be supplied with Cahoon's far-famed Mammoth Seedling Pie Plant,—unequaled by any other kind from Maine to Texas. Also a large assortment of the choicest varieties of Gooseberries, Currants, Grape, Strawberries, Quince, &c. Any orders for Fruit Trees of any kinds, and Ornamental Shrubbery, will meet with prompt attention on most reasonable terms. Arrangements are being made to supply this market with Cahoon's entire stock from Kenosha.

Yard near Monterey, Janesville, Jan. 25 '53.

n2tf

GEO. J. & S. H. KELLOGG.



WAUKESHA COMMERCIAL NURSERY.

THE Subscribers offer for sale, this season, a fine assortment of Fruit Trees, comprising the best now cultivated. They are very thrifty and will be sold at wholesale or retail, for cash or approved credit, at reasonable prices.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruit, to merit the confidence of his friends and the public in general.

All orders accompanied with cash or satisfactory references will be promptly attended to, and trees will be packed and forwarded without delay. We will give cheerful and prompt attention to all post-paid communications requiring information, &c.

D. VAN KIRK, & CO.

Waukesha, January 1, 1853.

NURSERY BUSINESS.

FRUIT & ORNAMENTAL TREES

FOR sale at Janesville, Racine and Koskonong Nurseries, Wis. The proprietors are now enabled to offer to the public, a stock of trees heretofore unequaled in the West. Remarkable for their hardiness, vigorous growth, and adapted to our western climate; embracing fruit trees of every description. Apples, Dwarf Pears, Plums, Cherries, Flowering Shrubs, Bulbous Roots, &c.—comprising all the most popular sorts now in cultivation—and having devoted their personal attention to their propagation and rearing, feel warranted in recommending them to the confidence of the public. Nurserymen, Dealers and Planters are respectfully invited to call and examine for themselves. All pre-paid orders containing a remittance or proper reference will receive prompt attention addressed to,

E. B. & J. F. DRAKE, Janesville.

F. DRAKE, Racine.

Janesville, January, 1853.

WISCONSIN GARDEN AND NURSERY, On Gardner's Prairie, town of Spring Prairie, Walworth Co.

THE Subscriber takes this method to inform his patrons and the public, that he may still be found at the old and well known establishment, at which he offers for sale the coming spring, over Forty Thousand Apple Trees of a fine size and from five to seven years from the graft. Sound, healthy and stocky trees at 18 cents each. Also Pears, Plums, Peaches, Cherries, Quinces, Grapes, Currants, Gooseberries, Strawberries, Raspberries, &c., at prices to correspond to the times. Of the ornamental, a large assortment of Shade Trees, Shrubs, Flowering Plants, Hardy Roses, Bulbous Roots, Dahlias, a choice assortment. Green House Plants, any quantity. Ever Greens; Spruces, Firs, Pines, Cedars and in fact almost every thing usually to be found in such an establishment. The fruits have been selected with great care as regards quality of fruit and hardiness of trees. The Nursery is located on the open prairie with a northern exposure. The land has never been manured and consequently the trees are perfectly hardy. Trees taken from this Nursery seldom fail to grow in transplanting. All are invited to call and examine for themselves as the Subscriber hopes from long experience and strict personal attention to merit a continuance of public patronage.

N. B. All letters of inquiry sent to Burlington Post-office will receive prompt attention.

Catalogues Gratis at the Nursery, and by mail post-paid. JOHN BELL.

Wisconsin Nursery, January 1853.

THE GROVE NURSERY AND GARDEN.

LARGE Budded and Engrafted Apple Trees, with fine heads, at 15 to 25 cents each, or \$15 per 100—Average sizes, by the thousand, \$100 to 140. Plums and Quinces—a good supply, at 25 to 37½ cents each. Pears and Cherries—a small stock at old rates. Ornamental Trees, Flowering Shrubs and Plants, in great variety, and the lowest prices, in lots, principally of our selection. These last furnished to dealers on commission. Address,

J. A. KENNICOTT.

Northfield, Cook Co., Ill.

The New Edition of LAPHAM'S POCKET MAP

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I. A. LAPHAM.

Milwaukee, January, 1853.

WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V. JANESVILLE, WIS., MARCH 1853.

NO. 3.

PUBLISHED ON THE FIRST OF EACH MONTH, BY
MARK MILLER.

TERMS:

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Winter Wheat.

We noticed a short time since, an article in the Grant Co. Herald, on the "Successful Remedy against the failure of Winter Wheat." The author says that "all are satisfied that the cause [of failure] is either in the *season*, or in the *soil*." That the fault cannot be in the *soil*, he thinks is evident from the fact, "that *heavy* crops of wheat have been produced" on it "for years in succession," and "and that every quality of the soil is present, necessary to produce similar crops again." He therefore concludes that the cause of failure, "five times in six," is to be attributed to the *season*—to the freezing and thawing—the chilly winds of February and March, &c., and proposes a "rational and successful remedy against the season and climate" which has been "well-tryed" in that County. The remedy proposed, is, "to sow early, harrow in, and along through the winter months, cover the fields with the straw products of the previous year."—This may be done "by feeding, and hauling out straw—managing to cover the ground as evenly as possible."

We have given the above abstract of the article referred to, for the purpose not only of inducing farmers, desirous of raising wheat, to try what may be done in this way in order to secure a crop, but, also, to serve as the basis of some remarks we wish to make on the culture of wheat in this region.

It is true that wheat *has been*, and we think ruinously so, the leading staple product of Wisconsin, but that it "*ought to be the leading one*," we are quite sure is not so true. We are more and more inclined to believe in the truth of the remarks of a careful observer of times and seasons—Dr. Kennicott—in an article on the "Agriculture of Northern Illinois," found in the Volume of "Transactions," just published by our State Ag. Society—that Wisconsin and Northern Illinois cannot compete with the unexampled districts of Michigan, Western New York, and Northern Ohio, in the raising of wheat. The grand reason, and one which in itself is insurmountable, is, that our soil is not *naturally* a wheat soil, like that of the regions mentioned.—It is not meant by this, that good crops of wheat *cannot* be raised in our State, by a judicious and proper treatment of the soil. We do mean, however, that in our view, the farmers of Wisconsin will labor at a great disadvantage in endeavoring to compete with the above mentioned districts in raising wheat for an Eastern market, and that they will not find it for their greatest interest to make the raising of wheat their "leading business." Nature seems not to have intended that wheat raising should be the most profitable object to which our farmers

can give their attention, but has signally pointed out this region of country, by its most fertile and broadly extended prairies, ever yielding an abundance either of native or tame grasses, as the great dairy and stock growing portion of the world.

In the greater portion of the soil of the southern portion of our State, and the northern part of Illinois, there is not a sufficient quantity of clay in the surface soil, to render it sufficiently firm and adhesive to form a good footing for the roots of wheat, which, in a light soil, distribute themselves near the surface and are therefore easily thrown out of the soil by frost, or left bare by the dry winds. Again, our prairie soil is peculiar in its origin, being composed mostly of vegetable ingredients, with a comparatively small amount of inorganic, or mineral matter,—it is therefore unfit for a succession of crops of any of the cereals, among which is wheat, requiring as they do large amounts of soda, potash, and phosphoric acid, &c., unless the ingredients are liberally and annually furnished to the soil by artificial means. We should therefore very readily come to the conclusion that the soil in Grant Co., as well as in other districts from which such a succession of crops of wheat has been taken, has become deficient in some of those necessary ingredients for a wheat crop.

This is well known to be the case in regard to some portions of this State, and it is asserted by Prof. Mapes, one of the most distinguished agricultural chemists of this country, to be true of much of the natural wheat growing soil of Ohio. It is true, that we have had no chemical analysis, lately, of the soils, either of Grant Co. or other portions of the State, to demonstrate these views, but the well known origin of our soils and a former analysis of the soils of Grant Co., even by Dr. Owen, given in his geological report of that region, both

point very strongly to the justness of this conclusion.

We would advise every farmer whenever he attempts to raise a crop of wheat, or any other crop, of course, to do his best to ensure a full yield and return for his labor. That he should raise wheat in sufficient quantity to supply his own want, we also consider a settled point. We would therefore encourage every promising effort to secure success. The one mentioned above has often occurred to us as being well worthy of thorough trial. The theory of its *modus operandi*, as physicians would say, or of its manner of operating, certainly favors its trial. We fear, however, in regard to it, that it will require too much labor and too much straw to render the process a practicable and profitable one,—for according to our own estimate,—as we cannot speak from experience,—which is the surest data—it would require the straw product of three acres properly to cover one of sown grain.

We shall continue these remarks (applicable to spring as well as winter wheat) in the April number,—for we more than suspect, that a large amount of wheat will be put in the coming spring. We fear the dear bought experience which many have had with *Hedgerow*, in past years, will be lost sight of in view of present high prices.

For the Wisconsin & Iowa Farmer.

Madison, January, 1853.

FRIEND MILLER:—Although a little ahead of the time, I propose to suggest to your readers a way to keep their potatoes for next summer's use; to prevent sprouting and keep brittle.

Put them, after having removed all unhealthy ones, in a snug pile in one corner of your cellar, and cover with sawdust to the depth of three or four inches. This article is readily procured in most places, and causes but little trouble to use it.

It is probable that turnips, beets, &c., might be choicely preserved in the same

manner. Potatoes preserved as described above, will require no care after the dust is placed upon them; thus all the trouble of "sprouting" them is saved.

J. L. ENOS.

A Good Cow.—William Ellsworth, of Mayville, Cuyahoga County, Ohio, has a cow, a cross of Devonshire and Durham, that gave fifty-two and half pounds of milk per day during twenty-one successive days, and gave as high as three pounds four ounces of butter per day, her feed being hay and eight pounds of bran per day.

There is no doubt in our mind, that of all other breeds, a portion of Durham blood is almost indispensable to make a tip top milker. We believe, from some years of observation, that a cross of our common stock, of good *quality*, with the Durhams—say half and half—makes about as good cows, both for the dairy and the shambles, as any other breed or mixture. We have never seen a cross of this kind that was not a good cow.

PLANTS AND ANIMALS—DEEP PLOWING.

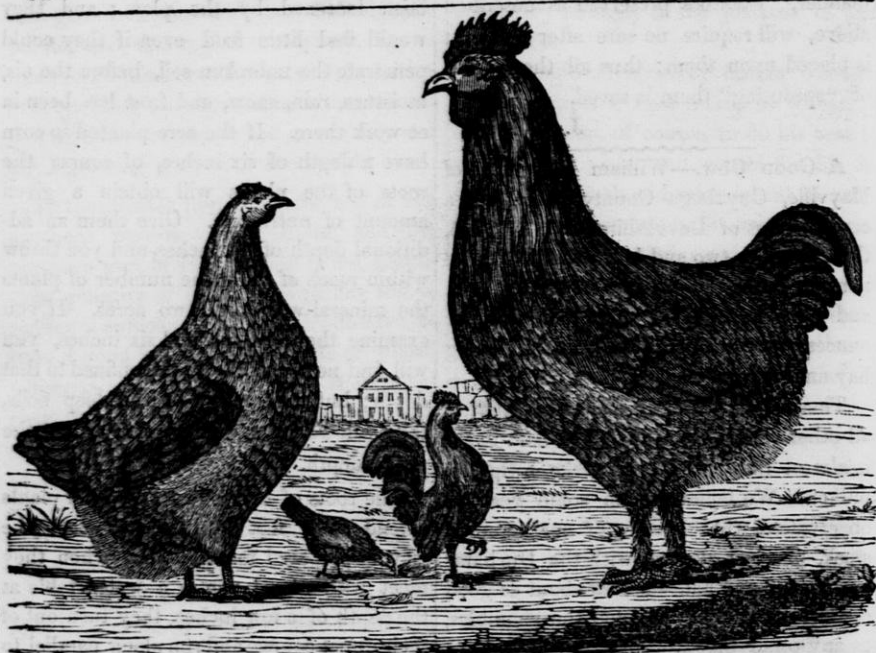
—We abstract the following remarks from an interesting article in the *Granite Farmer*, on deep plowing. They are full of truth and sound argument in favor of properly preparing the soil in such a manner as to insure full and healthy crops.

"One difference between a plant and an animal is this—an animal takes food in sufficient quantity into a stomach and then goes to hunt up more. A plant on the other hand finds its food, if it gets any, in the soil in which it is planted and rooted, and picks it up by sending out in all directions, little fibrous spongioles, which suck up whatever they find prepared for the use of the plant. When there is none provided, these roots will go a great distance from the central stalk in search of its food. But the roots of cultivated plants cannot well extend into the soil farther than it has

been loosened by the plow; and they would find little food even if they could penetrate the unbroken soil, before the air, moisture, rain, snow, and frost has been in at work there. If the acre planted to corn have a depth of six inches, of course the roots of the plants will obtain a given amount of nutriment. Give them an additional depth of six inches, and you throw within reach of the same number of plants the mineral wealth of two acres. If you examine the piece plowed six inches, you will find nearly all the roots confined to that depth; but in the twelve-inch-deep soils, they will be found rioting throughout the whole depth.

The roots of corn and many other plants extend many feet into the soil when the way is prepared for them, but when they meet with a hard pan or a water table at the depth of a few inches, they turn out of their direct course, and run along parallel to the surface. If they cannot do this they die rather than attempt so unpromising a region. Deep plowing when a hardened bottom has been formed by the frequent shallow plowing, subsoiling and draining in the other case will throw open a much wider field of operations to these roots."

A HOAX.—The story which has been going the rounds of the papers, that a bed of coal had been discovered in Kendall Co., Ill., proves to be false. A subscriber living in that County, writes us thus:—"On page fourth, January No., you notice a bed of coal, said to have been found in this County. I believe it to be all humbug, and the story to have arisen from a person living in this neighborhood having imposed on the Editor of the Kendall Co. Courier. We who live here know nothing of any such bed of coal; and it is generally believed to be a hoax. The story grows, as I find, by seeing different accounts in the papers."



Shanghai and Seabright Bantams.

We have procured the above portraits of a pair of Shanghai and Seabright Bantams, which correctly represent two, out of thirteen varieties of fowls bred by Dr. M. Freeman, of Schoolcraft, Mich. We need not tell our readers that these are fine specimens,—their likenesses show what they are. Dr. Freeman has taken premiums on these two varieties, the two past years, at both State and County Fairs, in competition with choice selections from the East.

We would advise those who are intending to make purchases of improved fowls this spring, to visit Dr. Freeman's Poultry Yard before going farther east. We have good reasons for believing that his stock fully equals the best that can be found in this country. The commencement of Dr. Freeman's experiments, in the breeding and improvement of domestic fowls, is not of recent date. He made himself familiar with the subject, long before any of the for-

eign breeds were imported into this country. To these he has given especial attention—taking care to obtain stock to breed from, directly from importers. His prices are moderate and we think those who purchase from him will not be deceived.

For the Wisconsin & Iowa Farmer.

Hudson, January, 1853.

INDIA WHEAT.—MR. MILLER:—As the frost destroyed almost the entire crop of buckwheat last season in the Northwest, I would recommend your numerous readers to try India wheat in its stead.

It takes but half a bushel to an acre,—ripens in sixty days,—is not blasted by the sun, and produces as many, or more bushels to the acre. It weighs fifty pounds to the bushels, and is considered as *good*, if not better, than buckwheat, for every purpose that buckwheat is used, and is used in the same manner in cooking.

The seed may be found by inquiring at the Turtle Mill in Beloit, or at my house in Hudson, St. Croix Co., Wisconsin.

W. MARTIN.

For the Wisconsin & Iowa Farmer.

Albion, Dane Co., Feb., 1853.

Fallacies

SELECTION OF PUMPKIN SEEDS,—WHEAT AND CHESS.—On looking over the January number of the "WISCONSIN & IOWA FARMER,"—I met with an article entitled "Selection of Pumpkin Seeds,"—by a writer from Fond du Lac, which is calculated to produce erroneous ideas as regards the Gourd family of plants, (*Cucurbitaceae*,) and confuse the grower of this valuable fruit, (on which he treats,) in his selection of seeds for a future crop. This writer says, "In a conversation with a learned Scotchman on the subject of raising Pumpkins,"—he advised him to "save seeds only from the female species." Now this would give the grower of pumpkins, (unacquainted with the Botanical characteristics of this tribe of plants,) the idea, that he must seek for his seeds from a *particular species* which he may, or may not have;—or, that he must search his ground over for particular plants from which to collect his seeds. But he need not be at this trouble;—the class *Monoecia*, order *Monadelphia*, which claims all of the Gourd family of plants, offers indiscriminately the finest fruits, for the selection of seeds; the male, and the female blossoms are separate and distinct, on the same plant; the male blossom never does, nor can it bear a fruit, not being organized for that purpose; the female blossom is organized to bear a fruit, and being impregnated with pollen from the male, will bear good seed; and as this is seldom done artificially, except with plants of this class grown under glass, you may select from your vines indiscriminately the finest pumpkins, from which to collect your seed for the next year's crop.

CHESS AND WHEAT.—Another writer says in the same number of your valuable periodical, that there has been a controversy as to the fact of wheat turning to chess,

which as far as he is informed, is yet undecided; he says,—“It has come under the observation of several farmers, that wheat that has been pastured late is more apt to have a larger proportion of chess amongst it than that which has not been pastured. This circumstance has suggested the idea, that where the main stalk of wheat has been destroyed, that the side shoots produce a grain differing from the parent grain.”—If those farmers would but extend their sphere of observation, they would find that chess is indigenous to the country, and climate; whereas wheat, is, I believe an exotic; chess is one of the common prairie grasses, the seeds of which, like many others, will live in the ground for an indefinite period without germinating; but when circumstances are brought into existence, favorable to the germinating process, you will then have enough of them; the seeds of which being harvested with your grain, will again be scattered with it for another crop at some future time. The nature and character of a plant never alters; changes take place frequently it is true, but the characteristics which the Creator has stamped it with, always remain. As well might you expect to see a pine change into an oak, as wheat to turn into anything unlike itself.

Again he says,—“In proof of this, I would instance the cabbage, where the head has been removed the sprouts from the stalks produce a seed, which will not again produce cabbage,”—this he gives as an illustration of the idea, that wheat turns to chess; but this is also a fallacy. The English Nurserymen and Gardeners, always cut the cabbage they intend for seed, and this they do for two reasons, viz: The profit arising from the sale of the heads, and the extra profit arising from the greater quantity of seed the beheaded plant will yield; and there is not finer, or more choice cabbage grown in the world than is grown in that country; indeed, the East-

own Seedsmen import from thence, great quantities of seeds yearly. Let any farmer, or gardener, try to raise his seeds in this way, and I dare venture to say he will no more raise from the cabbage heads.—Let no kindred species be suffered to flower at the same time near them, if so, a deterioration of the seed will be the consequence.

JAMES CLARK.

For the Wisconsin & Iowa Farmer.
Schoolcraft, Mich., Jan. '53.

Raising Fowls.

MR. MILLER :—The pleasing interest which I have taken for thirty years in propagating fowls,—studying their habits and peculiarities,—their qualities, and modes of managing them, has become still more gratifying, as a much greater opportunity is now offered to test new varieties, and seeing a similar spirit of improvement manifested for the past two years by a large number of citizens through the different States, in that too long neglected branch of domestic economy, we may confidently hope the time is fast coming when an account of the poultry yard will stand as an important item in the farmers account of yearly sales.

My experience fully concurs in the remarks made by the author of the American Poultry Companion, also some authors of practical experience—who say, “The breeding and rearing of domestic poultry, as one of the branches of rural economy, includes two special though different objects. The first is that of rearing poultry for amusement and for the table of the owner; and the second is doing the same thing for the sake of profit.” Again, “The importance of rearing poultry in a pecuniary point of view has been little appreciated by the farmer, and on most farms very little attention is paid to breeding and rearing a greater number than can subsist by picking up waste grain or what might escape the pigs; and are considered as unprofitable and a very insignificant part of live stock on the farm. The object of rearing poultry and eggs for market may appear to some, but a small concern, but a glance at the late agricultural census would surprise many who had paid little or no attention to the subject, or been in the habit of reflecting on the various items that go to swell our agricultural prosperity.” “Every poulterer, farmer and villager, should be aware that some kinds of do-

mestic fowls are more prolific and hardy than others—that some are of much greater size—that the flesh and eggs of some varieties are much superior in richness and flavor to others.”

“The many suppose that a pullet is a pullet, an egg is an egg, and that is the end of it, but now in the advancing state of agriculture, a peculiar interest is beginning to be thrown around every means calculated to advance the interest of rural economy—domestic poultry though among the last, but not the least, is now coming in for a share, and I am pleased to perceive that more attention of late has been directed to the subject.”

I have said that in early life fancy prompted me to devote considerable attention to fowls, though I knew of but one variety at first, save a particular breed kept for fighting; my greatest amusement consisted in propagating fancy colors, while at the same time I also enjoyed in my family a luxury and profit from them; but circumstances forced upon me conclusive evidence that a great difference even then existed between different yards, which I now attribute to a dash of game blood, as none others but the common dung hill and game were known in my section of country. I have since satisfied myself that the *game variety* are *free layers*, and very hardy—and now within a few years the improvement in many poultry yards, as well as my own, are quite equal to that of any of the domestic animals. I write with all spirit of candor, but facts are stubborn things, and as a general remark—all domestic animals should be fully and fairly tested, and only those selected to breed from with established properties peculiar to their kind, and the nearest perfection for certain purposes—though certain circumstances may exist which claim consideration, when either fancy or profit is the object,—however, with some persons there is a desire to follow some new and fashionable opinion, oft times permit trifling and accidental circumstances to decide their claims to excellence. A judicious breeder will duly consider his main object in the selection of animals—viz: whether his horse is for the turf, or a roadster—or for all work—his cattle for the dairy, or shambles—his sheep for wool, or mutton—his hogs for early or late pork—his fowls for eggs, or chickens,—for instance; at the present day who would select a light, pure bred, high mettled racer for a draft horse—an elderly cow for the shambles—the common coarse

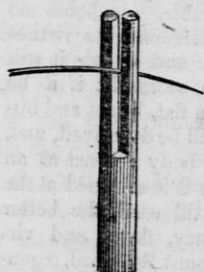
wool sheep to grow wool for market, or the Saxony for mutton, or the large Leicestershire hog for early pork,—and who ought to keep any of the small varieties of fowls for chickens or for market. But to return to the subject of this communication, and *detail the tested results of my experience* with many of the late imported varieties. I find I have far exceeded my intentions at the commencement, and I much fear the limits of your paper.

M. FREEMAN.

For the Wisconsin & Iowa Farmer.

Harmony, Jan., 1853.

Stripping the Osier.



MR. MILLER:—I saw in the October number of the Farmer, an inquiry, “if there is a machine to take off the bark of the Osier, or basket Willow, faster than by hand.” I have

never heard of a machine that will do the work without the assistance of the hand; but I herewith send you a little instrument which is used in Germany and wherever the Osier is prepared for baskets. It is very simple,—nothing more or less than a round stick of hard wood about an inch thick, and a foot long. Quartered about half the length of the stick, and two opposite quarters cut off, so that it will leave a sharp edge on both the remaining two. Take the stick in your right hand—insert the willow with the left, in the slit—press the thumb and fore-finger of your right hand, and pull the willow through, and the bark is loose. But there is one thing that must be considered—the time or season when the bark ought to be stripped off. If you prepare your willows for market, you have to cut them in the spring when the sap starts freely, as soon as the buds begin to swell. Warm sunny weather is the best. As fast as you have a little bundle stripped, cure them, by laying them in the sun until they

are perfectly dry; then you may tie them up in bundles, three feet around the butt end of the bundle, and stow them away in a dry place, else they will mould or mildew and will not be good. They should be kept free from dust. With a little experience any one will find out how to do it, as well as when the time is passed for cutting. None but one year's growth are used for weaving the baskets; but small two year's growth are used for bottom sticks, and larger ones for handles.

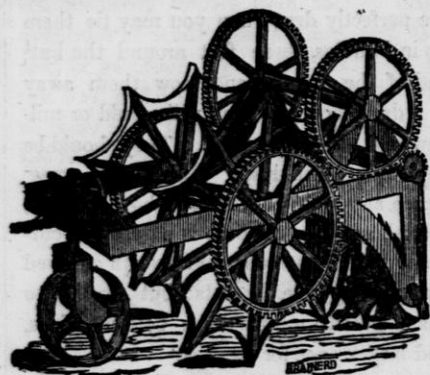
P. SCHMITZ.

The Osier Willow.

The Osier is becoming an article of commerce of considerable importance. It is extensively used in this country and the demand for it is rapidly increasing. As yet but little attention has been paid to growing it. The supply for this country is obtained mostly from France and Germany. It is estimated [though we think too high] that the annual importation now amounts to nearly five millions of dollars. There is no more reason in our sending this large sum of money abroad annually, to pay for the Osier we wish to use in making our baskets and cradles, than there would be in paying it out for pork and flour to fill our mouths. It will grow as well in this country as in any part of Europe, and its cultivation should be sufficient to supply the home demand at least.

The cultivation of the osier is extremely simple. It is propagated by cuttings, in the same way our common willows are, and is equally as hardy. The cuttings should be planted in rows, on moist land, and the ground kept clear of weeds,—that's all.

SHINGLES.—The Manitowoc Herald says:—“During the good sleighing an average of two hundred thousand shingles found a daily market in Manitowoc. One day last week two yoke of oxen brought twenty thousand at one load.”



Rotary Plow.

Above we present a representation of a new agricultural implement, combining the plow and harrow. The shares have a rotary motion which it is claimed obviates a great amount of the friction always attendant upon the use of the common sliding plow. We are informed that with four horses, this machine will cultivate about sixteen acres per day—stirring up the ground to any desired depth, and finely pulverizing it. This machine plows a breadth of five feet to each furrow,—it is admirably adapted to our prairie land (if to any,) and we hope some of our large farmers will test its claims to superiority over common plow and harrow.

“Two driving wheels are attached to one shaft; its journals being in the side of the frame. From the periphery project spars which prevent slipping, and cause the rotation of the shares when drawn by the team; on the wheel rotating one spar is leaving or relinquishing its hold, as the next in succession is in contact with the ground.

As the driving wheels revolve, an accelerated motion is given to the gang of shares or cultivators, which are secured to a shaft at the lower back part of the carriage.

Directly in advance of the gang of rotary shares, are a gang of coulters, which cut into the ground the depth of the share.

On the upper portion of the standard which supports the swivel-wheels, is an adjusting screw for the purpose of guaging the depth of the cut of the shares, and if

desirable to raise the shares entirely from the ground, which will be found convenient when it is necessary for the machine to traverse without cultivating.” S. S. Barry & Co., Agents, Cleveland, Ohio.

COFFEE.—Here are some facts worth knowing. Read and ponder them well.—The generality of families make their coffee too weak, and use too much sugar, which often cause it to acid in the stomach. Almost every house-keeper has a peculiar method of making coffee; but it never can be excellent unless it may be strong of the berry. And make it as you will, strong or weak, sweet or bitter, unless properly roasted, it will be a miserable, unwholesome beverage. If it be underdone, its virtues will not be imparted, and to use it will load and oppress the stomach; if it be overdone, it will yield a flat, burnt and bitter taste; its virtues will be destroyed, and, in use, it will heat the body and act as an astringent. The closer it is confined at the time of roasting, and till used, the better will its volatile pungency, flavor and virtues be preserved. Count Rumford, a gentleman of science, taste, skill, judgment and ability to say the truth, says: “Coffee may be too bitter—but it is impossible that it should be too fragrant. The very smell of it is reviving, and has been found to be useful to sick persons, and to those afflicted with the headache. In short, everything proves that the volatile, aromatic matter, whatever it may be, that gives flavor to coffee, is what is most valuable in it, and should be preserved with the greatest care, and that in estimating the strength or richness of that beverage, its fragrance should be much more attended to, than either its bitterness or astringency. This aromatic substance, which is supposed to be an oil, extremely volatile, and escapes into the air with great facility, as is observed by its filling the room with its fragrance if suffered to remain uncovered, and at the same time losing much of its flavor”—and he might have aid, by long exposure, will lose all its valuable qualities. [N. Y. Plow.

The government of Russia expends in three veterinary schools, a year for instruction, 754,000 francs; for instruction in agriculture, 700,000 francs; for improvement in the breeds of horses, and science connected with it alone, 1,776,400 francs.

FIELD BOOK OF THE REVOLUTION.—The above is the title of a very good history of our Revolution. But, farmers, we wish to call your attention to another *Revolution*, connected with your farming history, which would be achieved without bloodshed, but with *blood-infusion*, were you to commence this blessed new year by keeping a book which may literally be called the *field book*.

Suppose you open a regular and strict account with every field you cultivate this year, charging to the several fields the expenses of cultivating and harvesting, and the interest on the estimated value of the field, and crediting to them the value of the proceeds; strike the balance and see how the matter stands. Do this also with every branch of your operations,—the dairy, poultry, pork, and sheep. This, with a little supervision of the head of the establishment, might be done by the younger members of the family, especially the sons; and it will be of great service to them in learning to keep accounts, (which, by the by, few farmers ever learn for the want of experience,) and in cultivating their judgment of matters relating to the farm. But the great benefit will be in your knowing to which branch of your business you owe your income. It will also furnish you a correct basis for future operations, and will be of immense value in a statistical point of view, if you ever wish to make out a report of your farming, and of your farm. Try it.

For the Wisconsin & Iowa Farmer.

Mineral Point, 1853.

DISEASES OF DOMESTIC ANIMALS—KIDNEY POTATOES, &c.—FRIEND MILLER:—There may be an improvement made in the Farmer, which we all say it ought to contain; and that is—to treat more on the diseases of domestic animals,—showing the cause, symptoms, and cure for every disease it treats of. Some very valuable information has been published in the Farmer

on this subject; but the cause and appearance by which we might know what was the matter, is but little spoken of. You will allow, that the recipe is of but little use if a man must go and get a Farrier to tell him what is the matter. I think you will oblige the subscribers of the Farmer in this particular, which you and your contributors can do.

I saw an enquiry in the December No. for *Kidney Potatoes* and *Coffee Beans*; well, if you wish, I can send you three or four varieties of the potatoes, but I do not consider any of them the “king of the genus.” The earliest, we call the ash top kidney, and is the best I have ever seen of the kidney variety.

There is a variety of oat among us which we call the *Talovena*, which is more productive than the common oat—a few of which I send you. E. D. PHILLIPS.

For the Wisconsin & Iowa Farmer.

Shoneau, Col. Co., Jan. '53.

Farmer's Clubs.

MR. MILLER:—In one of your late numbers you expressed a wish that your readers would write for your paper, or communicate anything that they may think of importance to the farmers of Wisconsin.—I would like to call their attention to the importance of forming in every School District in this State, a Farmers Club, for the discussion of Agricultural subjects; such meetings can do no harm nor cost much of anything, and may be of immense benefit to great numbers. The farmers of Wisconsin are from almost all parts of the world, consequently their ideas differ,—they having been taught different systems of farming, and of course amongst such a mixed population, there must be some good, some bad, and some very indifferent. Now, by getting together at stated periods and discussing the different modes of farming, a better system (or I might say

a system) might be adopted greatly to our advantage. But to be brief, I would say, form Farmers' Clubs or Societies of some kind, and meet monthly in every school district in the State, and let the result be sent to the Editor of some Farming publication, for him to select what he thinks will be of interest to his readers; by such a course the public will be benefitted and the Editors will have plenty of "copy." I herewith send you the organization and constitution of a Farmer's Club established here.

W. T. WHIRRY.

A meeting was held at School House No. 5, in the town of Randolph, Columbia Co., on Monday evening, Jan. 10th, for the purpose of forming an Association for the discussion of Agricultural subjects. A Club was organized, a constitution adopted and the following officers elected for the ensuing year.

President—George Knowles.

Secretary—W. T. Whirry.

REMARKS.—We would gladly publish the constitution of our Randolph friend's Association, in the Farmer, as desired, were we not crowded with other matter possessing a more general interest. In fact, there is necessarily so much sameness in the constitutions of all Agricultural Associations, that we look upon their publication as useless, except in a suitable form for free distribution among members. We are glad to chronicle the establishment of such clubs and hope the day is not far distant when there will be a regularly organized club in every school district in the Northwest.—These clubs may be auxiliary to, and act in concert with the town societies. The means used to keep up an interest and render these meetings profitable and instructive, will more surely and more speedily result in an improved and better system of farming than any other course we know of.—[Ed.]

Hay is now worth in Lowell, from \$22 to \$25. Last year at this time it was worth from \$12 to \$14.

DODGE COUNTY AGRICULTURAL SOCIETY.—The citizens of Dodge County met at Juneau, on the 22d of Jan., and formed a County Society. A constitution was adopted, and the following officers were elected for the ensuing year:

President—G. W. Green, Beaver Dam.

V. President—M. Webster, Fox Lake.

Secretary—E. Perkins, Juneau.

Treasurer—Joel Rich, Juneau.

An executive committee consisting of nine members, was also chosen.

For the Wisconsin & Iowa Farmer.

Fond du Lac, Jan. 1853.

Raising Hops.

MARK MILLER, ESQ.:—Having listened with pleasure to the address of Mr. Daniels, at the Fond du Lac Society's first annual meeting, in which he particularly dwelt on farmers turning their attention to some other crops besides wheat, the idea occurred to me that some of the farmers of Wisconsin, might with profit, try the cultivation of hops. Not having seen any directions for their culture, in your paper, I propose a few suggestions, hoping it will elicit something more practical from some person more conversant with the subject.

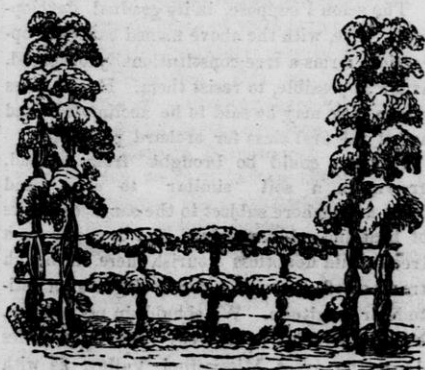
The hop succeeds best in a deep rich soil, with a subsoil through which the water can percolate freely. The ground should be deeply plowed and thoroughly manured with well rotted manure, before planting. The method I have adopted, is to plant five feet apart each way. Take two pieces of roots, each about one foot long and containing one or two eyes or buds, and plant crosswise, about three inches deep. The poles, (one to each hill) should be about twelve feet long. As soon as the vines get about one foot high, they should be loosely tied to the poles, allowing not less than two, nor more than four vines to each pole; they will require very little more attention until ripe, except to keep them free from weeds and cut off all superfluous shoots that spring from the roots. They are generally ripe about the

21st of September, which may be easily known by their assuming a light brown color. The easiest mode to gather them, is, to cut the vines close to the roots, pull up the poles with the vines attached, and lay them horizontally on benches, at a convenient height for picking—which should always be performed when they are dry.

The operation of drying hops is not materially different from that of drying malt, and the kilns are generally of the same construction.

When the ends of the flower stems become shrivelled and dry, they are taken off the kiln and laid on a floor until they are cold, when they may be packed into bags. For domestic use or a local market, I have found them to dry well in a warm chamber. I think about 1200 lbs. may be considered an average crop. A plantation with proper care will last 20 years without renewing. It is a good plan to put a few shovels full of well rotted manure or compost on each hill, in the fall.—The best season to make a plantation is as soon as the ground gets dry in the Spring.

ARTHUR H. STEEN.



In-England hops are trained both horizontally and vertically, as shown in the above cut.—[Ed.]

"The best hops grown at Lewisham have been trained horizontally in the espalier form, on poles five feet high, and three feet apart, with a long pole or two at such

intervals as may be desired, fixed to the top of the horizontal ones to keep them steady. A plant is set at each stake, and the rows are formed one way across the field. This method may be adopted with success where poles are scarce, and where the ground is exposed to winds. All the male plants should be placed on the long poles, that their farina may drop on the female flowers on the lower ones."

TO PRESERVE BEANS AND PEAS.—A new method of keeping the above fresh for any length of time, so that they shall lose neither their taste nor original softness, has been lately introduced into notice by A. Albert of Paris. Take the beans when not much bigger than large peas, and pursue the following directions for both vegetables:

Plunge them for a minute in boiling and afterwards in cold water, and after having washed off the water, spread them out for several hours on canvass frames. Then place them in an oven slightly heated, on frames covered with paper, leave them long enough to be of the same warmth as the oven, and then expose the frames to a current of air until the articles are cold. The frames are then replaced in the oven and again exposed to the air, these operations being repeated until the beans or peas are perfectly dry, not so as to break, but almost like beans dried naturally. The articles should be gathered and dried on the same day, if not, they should be left during the night in the oven; they should be kept in dry and clean bottles, and to each bottle of beans there should be added a bunch of dry savory. Before using the vegetables they should be steeped for some hours in tepid, or over night in cold water; if they are beans the water is thrown away and they are cooked in the usual manner, but if peas, they are only just covered with the water, which will be entirely absorbed, and they are cooked like green peas. Vegetables prepared in this manner are quite as good as if they had been just gathered.

[Genie Industriel.]

If any of our readers are troubled with loss of appetite, or a diseased liver, let them take brush and currycomb, (don't swallow them,) clean off three or four horses before breakfast every morning for a month. If that fails, carry in your own wood and saw it.



HORTICULTURE.

For the Wisconsin & Iowa Farmer.

Axtalan, January, 1853.

Management in the Nursery—Importation of Fruit Trees, &c.

MR. MILLER:—I planted 12 quarts apple seed, last spring, from which I pulled 75,000 plants this fall, over one-half of good sizes for working. It is inferred that the trees spoken of by your Correspondent, Vanderbelt & Co., were left standing in the seed beds, year after year. If so, this fact may sufficiently account for the slowness of growth noticed. Such seedlings usually get their *death blow* the first winter, from freezing back, and consequent destruction of the heart wood.

They may live after it for many years, but having the consumption, can never make good stocks or profitable trees.

Seeds should be planted about the first of May, or when they begin to sprout, in deeply worked beds of rich soil, in drills about one foot apart and scattered evenly, in such quantities as to use about 40 quarts per acre—or if the seed is all good, one bushel is sufficient for an acre.

The beds should be stirred frequently, and kept perfectly clear of weeds.

About the first of November, all should be taken up and buried until spring—those intended for root-grafting, in the cellar—those for budding, may be buried out doors, and re-set in nursery rows the following spring. I have succeeded best, with seed gathered from fruit of young orchards in Central Illinois. The trees grow more rapidly there, than in New York or New England, and will produce more rapid growing stocks.

The vicissitudes of climate are as great in Central Illinois, as here, hence they are predisposed to be hardy, and perhaps more so than those brought from the East.

Of Eastern trees and varieties, many seem to require acclimation,—and with some, all attempts to acclimate have been unsuccessful the '*patient*' having given out in the attempt. Some sorts otherwise tender have succeeded worked in the tops of large seedlings or of hardy engrafted trees. The R. I. Greening and Baldwin, are examples.

As to Pears on Quince stocks, I cannot recommend any sorts—have tried some 20 varieties, embracing all but two in your list of six. But they have all given out or have the *consumption*, without producing fruit. Some upon the Thorn are still promising; time will throw more light upon their case. I will communicate the result.

Of Pears on their own stocks—some have borne fruit and are promising. From present light, would recommend Flemish Beauty, White Doyenne, Fred. de Wertemberg, Passe Colmar, Bartlett & Winter Bonchertien, (local name.)

Grafts brought from the East have generally made as good and hardy trees, as those of the same sorts brought from 150 miles South.—But with trees grown sufficiently for orchard planting, I have observed a marked difference in the fruit falling a prey to our rigorous winters, or to the long continued excessively bright sunshine of our summers, producing destruction of the heart wood, or bark blight, from which they but seldom entirely recover.

The scion I suppose, in its gradual development here, with the above named causes in operation, forms a tree constitutionally prepared, as far as possible, to resist them. Hence trees grown here may be said to be acclimated, and are of the first class for orchard planting.

If trees could be brought from abroad, grown in a soil similar to ours, and in an atmosphere subject to the same extremes of heat and cold, moisture and dryness, such trees would doubtless flourish here, although transported through several degrees of latitude or longitude. We should, in my opinion, be as successful with trees from 1000 miles down the great Mississippi Valley, as with those grown East, near the Atlantic coast—for the reason that the soil and climate are as similar to ours in one locality as in the other.

Whether or not the true cause of failure in trees imported from the East is given, the fact remains, that Eastern grown trees do badly here, to which many of our farmers can attest, from a very unprofitable experience in planting

them. Twenty thousand trees, (we are informed) brought from Ohio, were sold, and planted last spring in a portion of this State, of which not 5000 survived the summer. Many who planted those trees instead of home grown ones, did so because they were near at hand, or perhaps brought to their door; when to have procured their trees from our nurserymen would have cost them two days time with their team, which would in most instances have been doubly made up in the price of the trees. Our home grown trees, when planted according to the best light now before the public on the subject, have lived, although the season was dry and unfavorable in most localities.

We have now in Wisconsin, as many trees grown in the Nurseries in the State, and in two days drive, in most cases, from the places where they are wanted, as our farmers will be likely to plant. Then why send your money abroad for an article of less value to you than that which you can buy of your neighbors, who have taken immense pains to procure it to supply your wants. Do you imagine that we, the Nurserymen of Wisconsin, know nothing of those fine Apples which you or your neighbors had on your Eastern farms? Don't believe it. We have procured our scions from the East and from the West,—no pains has been spared to procure the best, and if you can give us the true name of your favorite variety, we can generally produce your favorite tree, grown in our Nurseries.

The nomenclature of trees is in a bad fix, it is true, and many mixtures may be detected in Western Nurseries. But our Pomological Conventions are correcting these very rapidly. Most of these mixtures have been entailed upon us by Eastern Nurserymen. But those who take the pains to inform themselves, by carefully studying the characteristics of different varieties, as they appear in the growth and foliage of their trees—and who avail themselves of the opportunities presented by our Pomological Conventions, of comparing notes, have tricken out of their lists, and ceased to cultivate unworthy fruits, and have detected nearly all the mixtures entailed upon them, and which they may themselves have made in a moment of haste. Buy them of the best informed, if he is accessible to you, if not, of any one established in business nearest you. If he cheats you, he knows you will find it out to his disadvantage.

The Eastern or Ohio Nurseryman is too far

off to be injured by you, when you have found him out by the fruit of the trees bought of him.

I might offer other reasons why the farmers of Wisconsin and the West generally, should buy their trees of home growth if possible, but this article is already spun to a wearisome length, and I close.

J. C. BRAYTON.

STRAW AS A COVERING.—Clean straw is an excellent covering for many things; thousands upon thousands of sea-kale in frames or under hoops have no other blanching material; and how clean they grow in it! Rhubarb, in winter forcing an early spring, grows beautifully pinky. It is well known that early spring frosts destroy rhubarb; but if a six inch layer of straw is put on every crown, as the heads put up, they raise the straw with them, and it not only gives the stalk a better color, and makes them less "stringy," but it keeps the leaves from growing too large. No wind will blow it off, nor will the most intense frosts injure the plants. Straw should not be looked upon as a mere litter; it is as good as a frame upon a large scale. What sort of eatable strawberries would we have without straw? In summer, every crop, such as gooseberries, currants, and many other things, should have the protection of straw, which keeps the sun from drying up the surface, and the surface roots dry and cool, while all weeds are kept down. Market gardeners use it for their frames; it matters not whether for cucumbers, melons or potatoes, straw is their covering, and their crops are more secure than when protected by a thin mat. But some may object to the use of straw, on account of the litter it makes in a garden; but if any of those who object to use it for this reason, will just take a peep into Covent Garden market, at any season, they cannot fail to be struck with the quality of the produce, in the raising of which straw plays an important part. Straw is also the best of all manures for a strong retentive soil, when it is dug in fresh, as it decays and leaves innumerable worm-like holes which act as drains for the roots.

[Gardener's Chronicle.]

NATIVE RUSSET.—Fine specimens of a native russet, from the orchard of Mr. Ichabod Boothby of Livermore, received. These apples are the fruit of a tree which Mr. Boothby found in the forest, and took

up and set out on his farm. They are about medium size, form round, slightly conical. The ground color russet, splashed with streaks of red around the base; stem short, in a deep, narrow cavity; calyx small and close, in a narrow, shoal cavity; flesh fine grained, white, of a pleasant, sub-acid flavor, rather dry. It is stated to be a great bearer, and a very long keeper.—We think it will be a valuable acquisition to our long-keeping varieties, and propose for it the name of "Boothby Russet."

[Maine Farmer.]

LIMING ORCHARDS.—We cut the following paragraph from a notice of Dr. Bailey's orchard, at Adrian, Mich.

"In traveling through Dr. B.'s orchard with him on the 21st of October, my attention was called to notice one tree with plenty of apples on one side and but very few or none on the other. The Doctor informed me that in sowing lime under his trees three seasons previous, he sowed under the tree on one side where the apples grew, but not on the other, as he had no more lime, and the result was as has been stated."

LABELS FOR FRUIT TREES.—We have found the following recipe, taken from an English work, to make an indelible ink for writing on zinc, and one not affected by the weather: Cut up the common sheet zinc into strips about half an inch wide by two or three inches long, and write with a quill pen. The zinc should previously be made bright. Through a hole at one end introduce a thin copper wire, long enough to encircle a branch or limb, and it will remain for years, giving to the owner of a newly planted orchard the satisfaction of knowing, at all times, his varieties. Care in respect to labels would obviate much of the confusion in all parts of the country, as to correct nomenclature. "Take one drachm of verdegris, one drachm sal ammonia powder, and half a drachm of lamp black, and mix with ten drachms of water." Shake before using.

DISEASED PLUM TREES.—A correspondent of the N. E. Farmer, says: "I am very well satisfied, from personal observation, that the circulation of the sap has nothing to do with forming the wart, so prevalent in many sections of the country.

But a disease probably arising from an insect that works its passage into the very heart and pith of the twig, or branch affected. I observe that this insect ascends upwards, and in order to exterminate its ravages, the branch should be cut at least one foot below the wart, and as much farther as is found necessary, until you come to sound, healthy wood and pith, even if the whole tree goes in consequence. Then burn the cuttings. I am satisfied that if one tree is left to destruction, that the disease is as contagious to the remaining ones as the yellows to a peach orchard. I have many standard plum trees and many in nursery rows, all of which are in a sound healthy condition; it has always been my practice to watch carefully this disease, and cut freely, sparing no imperfection of wood. I have seen plum trees not fifty rods apart, some clean and round and others literally covered with black warts; therefore no one will presume that *locality* has much to do with the disease." G. B. SLADE.

POTASH WATER.—The Editor of the Farmer and Planter, published at Pendleton, S. C., in cautioning people to use all alkalies with great care when applied to fruit trees, says: "Two springs since we killed some young trees by applying too liberally a solution of one pound of pearl ash and one pint of soft soap, in three gallons of water. A very dry spell followed the application, and hence not being washed off, the caustic liquid turned the bark of several trees quite yellow, and much injured those that escaped."

Horticultural Premiums.

The amount of Premiums offered by the Massachusetts Horticultural Society, in the various departments, is as follows:

Prospective prizes for new variety of fruits, flowers, &c.,	\$750
For gardens, green-houses, &c.,	200
For fruits during the season,	200
For plants, flowers, and designs,	700
For vegetables,	260

Total, \$2520

Such an amount held up to the gaze of skillful culturists, cannot fail to bring out a rich display of interesting objects, and spectators as well as competitors, who live within convenient access to such a society's exhibitions, possess privileges which must be very highly prized.

The premium list of the Cincinnati Horticultural Society, just issued for 1853, is coming along according to its ability.

For prospective prizes,	\$900
For flowers and plants,	335
For fruits,	211
For vegetables,	134

Total, \$1580

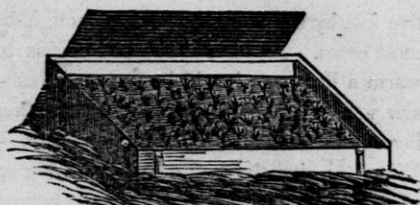
Let us, too, hope that all who may be within reach of our exhibitions, either as contributors or as spectators, will also consider it "a privilege to be highly prized," that such liberality, calculated to bring forward noble efforts to make a grand display, will furnish them an opportunity.

[Western Hor. Review.]

The Garden.

In this latitude, but very little can be done in the garden this month,—still, if the weather proves mild, preparations may be made which will help on the work as soon as the ground is in a proper condition.—The oldest and best rotted manure upon the premises should be selected for the garden—the stock of seeds on hand should be examined and all deficiencies provided, so that when the hurry of sowing time arrives there will be no delay for the want of seeds. In this climate certain vegetables should be brought forward earlier in the spring than they can be by planting the seeds in the usual way. Tomatoes, cucumbers, squashes, peppers, cabbages, &c., may be ready for the table several weeks in advance, by starting the plants in a hot bed, and having them ready for transplanting in the open ground as soon as the danger of frost has passed. With the outlay of a few shillings and a little labor, every man, who has a vacant patch of ground twenty feet square can raise a supply of early vegetables for family use when the sultry weather comes on, and the appetite craves something more palatable and healthy than old potatoes and their usual accompaniments.

Farmers, see that you have your garden seeds all ready to sow.



Early Vegetables—Hot Beds.

The prevalent notion, that a *hot bed* is out of the question for an ordinary farmer, on account of its cost and the difficulty of managing it successfully, is erroneous. It is not so well known as it should be, how easy and cheap a hot bed can be made,—both construction and management are cheap and simple.

Any kind of plank or inch boards will answer for the lumber required; or even an old cast off box, minus top and bottom, of a proper size, will answer all purposes for which lumber is used about a hot bed. Dig a pit the size desired for the bed, six or eight inches deep—(or instead thereof, commence on the surface, and protect the bed by banking up on the outside to the height of twelve or fifteen inches) then form a box with plank or boards—setting them up edgewise and confining them in their place by driving stakes on the outside. The box should be raised about thirty inches in height at the back, and sloped to about twenty inches in front. The bed should have a southern aspect, and if possible, be placed against a building, or tight fence. Fill the enclosure thus formed, with well mixed unfermented horse manure—packing it down tight by tramping or pounding as the filling proceeds, and moistening a little, if dry. When the box is filled up to within six or eight inches of the top—level, and cover the manure with five or six inches of fine rich loam. If manure be used to enrich the loam, it should be well rotted and thoroughly mixed together. The bed may be made any

size to suit one's convenience. Four or five feet by six or eight, is large enough in most cases. As soon as the bed begins to warm a little—as it will by fermentation—sow your seeds,—taking care that the first heat of the manure be not too violent.—Water, to give the bed a sufficient degree of moisture. And now for the covering, which should be ready as soon as the bed is prepared. Any old rug or blanket *may* be used for this purpose, though we would recommend something a little better, and which makes a very good substitute, (at a mere nominal expense) for the expensive glass sashes commonly used. This is a transparency, made by stretching cotton cloth upon a frame and brushing it over with a composition made after the following directions: To one pint of boiled linseed oil, add one ounce of white wax—heat, and when thoroughly mixed, add half an ounce of sugar of lead ground with a little oil.—One or two applications of this mixture with a brush, will render the cloth transparent and impervious to wind or water.

The bed should be covered at night, but kept open through the day, unless the weather is too cold, or in case of a storm. No further directions for the management of the hot bed are required. The exercise of a little judgment, will guide the gardener as to all that is necessary to be done, till the season arrives for removing the plants to the open garden.

The middle of March is early enough in this region, to prepare the hot bed and sow the seed, and the first of May, quite as early as safety from frost will allow of transferring to the open ground.

The dealer in merchandise simply causes wealth to change hands; and what he gains another loses. Not so with the farmer; for any increase in the quantities produced is adding so much to the wealth of the nation. [Prof. Mapes.

Plow deep, while the sluggard sleeps.

State Agricultural Society.

MEETING OF THE EXECUTIVE COMMITTEE.

The new Executive Committee met at the Rooms of the Society, in the Capitol at Madison, on Thursday, January 20th, A. D. 1853, at 3 o'clock, P. M.

Present—Messrs. Elisha W. Edgerton, Bertine Pinckney, Nathaniel B. Clapp, Albert C. Ingham, Hiram Barber and Henry M. Billings.

Elisha W. Edgerton, President, in the chair.

Albert C. Ingham, Secretary.

The subject of the location of the next Annual Cattle Show and Fair of the Society being brought up, after a free interchange of views on the part of the gentlemen present, on motion of Mr. Barber it was

Resolved, That the Corresponding Secretary be requested to open a correspondence with such places as may desire the location of the next Annual Cattle Show and Fair of this Society, and report the results of the same at the next meeting of the Executive Committee.

On motion of Mr. Billings,

Resolved, That Messrs. Albert C. Ingham, Bertine Pinckney, and Charles Dunn, be appointed a Committee to prepare a premium list, and regulations for the next Annual Cattle Show and Fair of this Society, and that they be requested to report the same at the next meeting of the Executive Committee.

On motion of Mr. Pinckney,

Resolved, That the Corresponding Secretary be requested to notify the Officers elect of the Society, of their election, and request their acceptance, and that they be required to signify their acceptance, and become members of the Society before the next meeting of the Executive Committee, in default of which their places will be declared vacant.

A lengthened discussion then took place upon the condition of the Society, its prospects and plans, in which each member participated, after which,

On motion of Col. Billings,

The Executive Committee adjourned until Thursday, February 10th, A. D. 1853, at 10 o'clock, A. M.

Thursday, Feb. 10th, 1853.

The Executive Committee met at the Rooms of the Society, in the Capitol at Madison, at 10 o'clock, A. M.

Present—Messrs. Elisha W. Edgerton, Bertine Pinckney, Albert C. Ingham, Simon Mills, Hiram Barber, Henry M. Billings, Martin Field, S. S. Daggett.

Elisha W. Edgerton, President, in the Chair.

Albert C. Ingham, Secretary.

The Secretary laid before the Board the resignation of Hon. Charles Dunn, Vice President elect from the Second Congressional district.

Also the letter of Z. P. Burdick, Esq., one of the additional members elect of the Executive Committee.

On motion, the resignation of Judge Dunn was accepted, and Hon. Jeremiah E. Dodge, of Grant, was elected Vice President of the Society, from the Second Congressional district.

Mr. Ingham from the Committee on that subject, reported the premium list and regulations of the next State Fair, which was laid on the table temporarily.

Mr. Ingham also presented the Charter of the Society recently granted by the Legislature, which on his motion was laid on the table.

On motion of Mr. Mills the Board adjourned until 2 o'clock, P. M.

2 O'CLOCK, P. M.

The Executive Committee met pursuant to adjournment.

Present, as before.

Hon. Jeremiah E. Dodge, Vice President from the Second Congressional district appeared and took his seat.

Several Bills and accounts were then presented, and audited, and orders drawn on the Treasurer for the payment of the same.

The letter of Mr. Burdick was then taken up, resigning the place to which he had been elected, which was accepted, and the vacancy filled by the appointment of Mark Miller, Esq., of Rock, as an additional member of the Executive Committee.

On motion of Judge Barber, the Charter of the Society was then taken from the table and being read and considered by Sections, it was

Resolved, That the Corresponding Secretary be requested to call a meeting of the

Society on the fourth Wednesday of May, at Madison, for the purpose of completing the legal organization of the Society and for the transaction of such other business as may come before the meeting.

On motion of Mr. Mills the Premium list and regulations of the next Annual Cattle Show and Fair of the Society, was taken from the table.

The Board then spent some time in the examination of the same, but without completing it, adjourned until 7 o'clock, P. M.

7 O'CLOCK, P. M.

The Executive Committee met as per adjournment.

Present, as before.

The consideration of the premium list and regulations was resumed and continued until a late hour of night, when the Committee adjourned till the next day at 8 o'clock, A. M.

Friday, February 11th.

The Executive Committee met as per adjournment.

Present, as before.

The consideration of the premium list and regulations of the next Annual Cattle Show and Fair of the Society, was resumed; without finishing the same, the Board adjourned at 2 o'clock, P. M., for half an hour.

2½ O'CLOCK, P. M.

The consideration of the Premium List and Regulations was resumed, and being gone through with, the same was adopted.

[Many changes have been made in the Premium List, and some very important changes made in the Regulations; among which are, fixing the price of single tickets uniformly at twenty-five cents each, and dispensing with member's badges at the Fair, each member receiving in lieu thereof, four tickets; also, no carriages are to be admitted upon the Fair grounds. This course has become necessary to guard the Society from the constant imposition and fraud practiced at the Fairs; members badges being purchased in the name of one person by several persons jointly, and then used to admit an indefinite number of persons with their families—one case being known at the late Fair in Milwaukee where seventy-three persons and nine carriages were admitted upon a single member's badge.]

The Committee then adjourned till 2 o'clock P. M.

2 O'CLOCK, P. M.

The Executive Committee met as per adjournment.

Present, as before.

Mr. Ingham presented several propositions for the location of the next State Fair, upon which a free interchange of views took place, and after some time spent in their consideration, it was

Resolved, That the next Annual Cattle Show and Fair of this Society be held at, or near the village of Watertown, on Tuesday, Wednesday, Thursday, and Friday, the 4th, 5th, 6th, and 7th days of October next, Provided that the corporate authorities of said village enter into contract with this Society—on or before the first day of March next, to provide ground and enclosures suitable, and to enclose and prepare the same, and erect the necessary buildings, tents, fixtures, and structures, as may be required by the Executive Committee, and also furnish the necessary and proper attendance and superintendence, Clerks, Police, and Forage, and other incidentals, free of all expense to the Society, and also furnish an agreement of the Hotel keepers, specifying the charges to be made by each during the week of the Fair.

[These conditions have since been complied with.]

The appointment of Committees to decide upon the merits of the various articles was then taken up without completing the appointments of which, the Board adjourned until 7 o'clock P. M.

7 O'CLOCK, P. M.

The appointment of Committees was resumed, but without finishing the same the Board adjourned until 8 o'clock, A. M., of the next day.

Saturday, February 12th.

The Executive Committee met at 8 o'clock, A. M.

Present, as before.

The appointment of Committees was renewed and completed.

On motion of Mr. Ingham,

Hon. Wm. H. Seward was invited to deliver the Annual Address before the Society.

The various members of the Executive

Committee were then assigned places at the next State Fair, as follows:

Cattle Department—Judge Barber.

Horse Department—Col. Billings.

Sheep Department—J. E. Dodge.

Swine and Poultry—A. B. Clapp.

Farm Implements, &c.—Mark Miller.

Dairy, &c.—Judge Field.

Floral Hall—Col. Pinckney.

Miscellaneous and Discretionary—S. S. Daggett.

Plowing Match—E. W. Edgerton.

General Superintendent of the Grounds—Wm. F. Tompkins, of Janesville.

Committee on the reception of guests, Delegates from other Societies, &c.—E. W. Edgerton, A. C. Ingham, and W. Chappell.

Committee to attend to arrangement and preparation of grounds—E. W. Edgerton, A. C. Ingham, and H. Barber.

Delegates to the World's Fair, to be held at New York City—Messrs. Bertine Pinckney, A. C. Ingham, and H. M. Billings.

Delegates to the N. York, Ohio, Mich., Indiana, and Illinois State Fairs—Messrs. E. W. Brury, A. C. Ingham, E. W. Edgerton.

On motion of Mr. Edgerton,

Resolved, That the Corresponding Secretary be requested to procure the printing of one thousand copies of the Premium List and Regulations for the next Annual Cattle Show and Fair.

Mr. Ingham presented and read, letters from Hon. Marshall P. Wilder, President of the U. S. Ag. Society—urging the appointment of three members of the National Board of Agriculture, upon which a lengthened discussion took place took place, after which, on motion of Col. Pinckney,

Resolved, That three members of the National Board of Agriculture be appointed.

Messrs. Albert C. Ingham, Elisha W. Edgerton, and Jeremiah E. Dodge, were appointed such members.

The Executive Committee then adjourned,

ALBERT C. INGHAM,

Cor. Secretary.

PORK.—The Potosi Signal says pork is selling in that place at \$5.50. For the first time in the history of Grant County, it has supplied the home market. The present high prices of produce are beginning to open their eyes and expand their pockets. We set it down as an era among the farmers.

Domestic Economy.**ENGLISH MODES OF COOKING MUTTON.—**

Much is said and written by American travelers, about the superiority of the mutton in England as compared with that at home; and believing as we do that some of this superiority is attributable to superior skill and care in cooking, we copy from an English work of high merit a few receipts for cooking mutton:

"The Neck of mutton is also boiled, and served with mashed turnips and caper sauce. It should be boiled in the skin; but this should be stripped off from it before it is served.

Saddle of Mutton, Roasted.—Saddle is one of the most favorite joints of mutton. It is always roasted. The fat on its surface is scored in squares; the skin previously separated from the fat by the butcher, is generally skewered by the cook as a preservative of the fat, but which is removed in time to froth and brown the surface. The juice of the meat that flows on carving, is by many esteemed the best gravy, but it is usual to have a tureen of mutton gravy and some jelly sauce served with the joint.

Broiled Mutton Chops.—Cut the chops from either the lion or the best of the neck, trim them neatly, and take off some of the fat, if requisite. Pepper them lightly—put them on a gridiron over a clear fire. Turn the chops with a proper pair of tongs three or four times. When sufficiently done, remove them to a hot water dish, sprinkle a little salt over them, and lay upon them a few small bits of butter. One of the principal points to be observed in dressing chops and steaks, is sending them hot to the table."

The juice of one bushel of sugar beets, worth twenty-five cents, and which any farmer can raise without cost, will make from five to six gallons of vinegar, equal to the best made of cider or wine. Grate the beets, having first washed them, and express the juice in a cheese press, or in many other ways which a little ingenuity can suggest, and put the liquor into an empty barrel; cover the bung with gauze, and set it in the sun, and in twelve or fifteen days it will be fit for use. [Far. Advocate.

A writer in the Ohio Cultivator gives the following method for preparing pork for

summer use.—"In packing pork for summer use, add to each layer of pork, a sprinkling of fine ground black pepper. I put about two pounds of pepper to a barrel of side pork, containing about 400 lbs. I have been a house-keeper for nearly forty years, and I can truly say that I never had pork keep so sweet and fine put up in any other way.

Not one in a hundred of those who are so fond of pop corn, know how to pop it.—It is a simple process, attended with very little labor, and a rich, tender, luscious dish is prepared, that Queen Vic. or Pope Pius probably, with all their splendor, know nothing about.

Lard is to be heated in the same manner as for frying "dough-nuts," and half a pint, or such a matter, of the "eight row, tucket corn" is to be thrown in, and covered immediately to prevent the kernels from flying out on to the floor. In an instant a pop, pop, popping will commence—such as you never heard before. A minute after the popping ceases take off the cover, and dip out with a skimmer, draining off the grease, and turn into a sieve, put upon a pan, to drain. The pan should be kept upon a stove, so that the corn will retain its heat long enough for the lard to run off, otherwise it will be too greasy. While cooling, salt to your taste.

Try it, all ye who have a mind to, and if you don't say it is "neck and shoulders" ahead of any other method, why, we caved in that's all. [Sandusian.

LIME WATER FOR HENS—ACCIDENTAL DISCOVERY.—During the last season, Mr. Joseph Wilcox, of this town, having occasion to administer lime water to a sick horse, inadvertently left a pail of the preparation in his barn, which remained there for some months, serving as a favorite drink for his hens. He soon afterwards found that the laying of his hens was apparently increased to a considerable extent. Being convinced of the importance of the (to him) new discovery, he has, during the present season, kept his hens constantly supplied with lime water placed in troughs within their convenient access, and the result was an increase of eggs of nearly four-fold as compared with previous experience.

He is willing to share the benefits of the experiment with his neighbors, if they choose to try it; and hence this publi-

cation. The newness of this discovery (though it may not now be new to all) is claimed only as applicable to the mode of imparting the lime in this case—its use in another form for the same purpose having been previously understood by many.

[Wayne Sentinel.

—**PROFIT OF BEES.**—Mr. Asa Stewart of Saco, Maine, sold in 1851, 52 lbs. of honey, from one hive for \$13, in addition to which he received a premium of \$3. In 1852, he sold 40 lbs. from the same hive for \$9.20, and received the same amount of premium as in 1852—making an aggregate amount for the two years of \$28.20.

—**SNAILS FOR FOOD.**—The snail is becoming a fashionable article for diet in France. A French Journal says "Snails were highly esteemed by the Romans, and are now raised in many of the departments with success. In the sixteenth century the Capuchins of Fribohy, recovered the art of breeding snails. There are now more than twelve hundred snail tables in Paris, where snails are accepted as a delicacy."

—The Cleveland Herald says that the cattle growers of Madison County, Ohio, have organized a cattle importing company, the capital stock, \$10,000, all taken. The company will shortly send one of their number to England, to make selections and purchases. A similar company is being formed in Indiana, with a capital of \$25,000.

—**SELF ACTING LAMP LIGHTER.**—Mr. S. Mayo of Augusta, Maine, has invented a self acting apparatus for lighting a candle at any hour of the night desired. The Maine Farmers says of it, "The apparatus is attached to a small alarm watch. You set the index to the hour of the night you wish to be waked up—then put a friction match into the claw of the apparatus, and a candle in a socket—then set it on the stand or table by your bed-side. At the appointed hour the alarm sets up its clatter, the match gets a rubbing and takes fire, and in time lights the candle. It is small and portable."

—Many of the farmers and others of Pennsylvania, New York, and Delaware, are selling off their farms and town property, and moving to Maryland and Virginia. They are selling their farm land for 60, 80, and \$100 per acre, and buying at from 20 to \$40 per acre in the last mentioned States.

—**DANGEROUS FLOUR.**—Patent self-rising flour is an article entering into very general consumption, one thousand barrels being now manufactured at the Croton Mills per month. Its peculiar properties are imparted by incorporating with the flour, during its manufacture, super-carbonate of soda and tartaric acid, in suitable proportions. We hope any incorporation of drugs in flour, the food of the million, will be avoided. A slight mistake in the article might send thousands from the table to their graves. Out with such compounds.

[Cin. Gazette.

—**TOBACCO IN NEW YORK.**—The Syracuse Journal states that about 1000 acres of tobacco were grown in Onondago Co., the past season, and that the average crop is about 1,400 lbs. per acre, though 2,000 lbs. are often produced. The entire crop of the County is estimated at 2,240,000 lbs., which at ten cents makes the snug little sum of \$224,000 gained by the cultivators.

—The Hartford Courant says that there stands on the "Charter Oak Place," owned by Hon. L. W. Stuart, an Apple Tree imported in 1638, by George Wyllys, and is therefore at least two hundred and fourteen years old. It is an English Pearmain. The past season it bore quite liberally, and a small branch on which it has a number of apples, has been preserved in spirit and presented to the Historical Society.

—**CONVERTING SALT WATER TO FRESH.**—The New York Journal of Commerce says that Mr. Ericsson, the inventor of the caloric ship, "is now making a condensing apparatus for the conversion of salt water to fresh, during long voyages, for washing, drinking, &c., capable of producing from 300 to 400 gallons of pure water per day. He will thus do away, not only with large coal-bunkers, but water-tanks, and a voyage may be prolonged to almost any desired extent."

—A TRUE farmer is a philanthropist. He labors not only to provide for his own wants, but he is urged by a constant desire to leave the world better and more beautiful than he found it, and add to the stock of human comforts.

—**HOGS.**—Three thousand two hundred and thirty seven hogs were transported over the Erie and N. Y. Railroad from the West, on Christmas day.

—**DEPTH OF MINES.**—It is stated that the deepest mine of any description is that of Eselschacht, in Bohemia, a lead mine, which is 3,778 feet deep. The greatest depth below the sea-level is that of some coal mines in Newcastle, England, which are from 1500 to 2000 feet below this level.

—**CURIOUS EXPERIMENTS ON SILK WORMS.**—By experiments that have lately been made, it appears that the natural silk from the silk worms can be obtained colored as desired by administering colored articles of food to silk worms just before they begin spinning their cocoons. The first experiments were conducted with indigo, which was mixed in certain portions with the mulberry leaves, serving the worms for food. The result of treatment was successful; blue cocoons were obtained. Small portions of bignonia chica having been added to the mulberry leaves, the silk worms consumed the mixture and produced red colored silk.

[Scientific American.

—**MANUFACTURE OF GLASS IN WISCONSIN.**—Three miles from Omro, Winnebago Co., a fine quality of glass sand has been discovered. A sample has been tested in an eastern manufactory and proved to be a superior article. A company has been formed for manufacturing it.

—**TOBACCO VS. LITERATURE.**—Four hundred years have elapsed since the invention of printing, yet books are not in circulation all over the globe; while the use of tobacco became universal within fifty years after its discovery.

—**TO MAKE MAPLE SUGAR CUSTARD.**—Make a crust as for custard in the ordinary way.—Take Maple sugar, one pound; butter, half a pound; milk, one pint; one egg; one nutmeg; and a tablespoonful of flour.—Spread the sugar over the crust, and then the butter on top of that; beat up the egg with the nutmeg and the milk, which pour over the sugar; dredge or dress on the flour with grated nutmeg, and bake in an oven or stove.

—**RHUBARB WINE.**—To make this, wait till the Rhubarb is ripe, at the end of June or beginning of July. Cut it in thin slices, about 8 lbs. to a gallon of boiling water; cover it, and stir it daily for a week, then strain it through a cloth and add 3 lbs. of sugar to each gallon, which, at 3d. per lb., makes a cost of about 1s. per gallon (loaf sugar however, is best.) It may then be casked up, or put in large bottles, and in six months it will be delicious.

—**CALL ON HORSES.**—A correspondent of the Spirit of the Times, writing from France, says it is the practice in that country, when horses get their hair rubbed off, or the skin scarified, to apply a blister to the part at once. This, if applied as soon as the injury is done, will, it is said, restore the growth of hair. He states that it has never been known to fail when applied in time.

—**THE SMELL OF NEW PAINT.**—A bundle of old dry hay, wetted and spread about, presents a multifarious absorbing surface for this; especially if not on the floor only, but over pieces of furniture which allow circulation of air, as chairs laid upon their faces, &c. Large vessels of water, as trays and pans, are not uncommonly used, with good effect; but the multiplied surfaces of the loose hay give it a great advantage. It must be kept wet, however, or at least damp, for the oily vapor does not seem to be readily absorbed unless the air is kept moist by evaporation.

—**GUM ARABIC STARCH.**—Get two ounces of fine white gum arabic, and pound it to powder. Next put it into a pitcher, and pour on it a pint or more of boiling water, (according to the degree of strength you desire,) and then having covered it let it set all night. In the morning, pour it carefully from the dregs into a clean bottle, cork it, and keep it for use. A table spoonful of gum water stirred into a pint of starch that has been made in the usual manner, will give to lawns (either white or printed) a look of newness to which nothing else can restore them after washing. It is also good (much diluted) for thin white muslin and bobinet.

—**POISONING RATS.**—Mix, dry, equal parts of corn meal and plaster Paris, with a small quantity of white sugar. This mixture will be eagerly eaten by the rats, and when it comes in contact with the moisture of the stomach the plaster forms an insoluble mass, causing death.

—**REMEDY FOR CHILBLAINS.**—ORIGINAL, SIMPLE AND SURE.—Put on a pair of cotton socks, dip your feet in cold water, and draw on your woolen stockings outside; then go about your business as usual. The torment will be assuaged in about two minutes, and a cure for the season effected in a day or two:

[Bangor Mercury.]

—**HOW TO MAKE OLD OAK.**—The appearance of old oak may be obtained by exposing any article of new oak to the vapors of Ammonia. Every variety of tint may be procured, according to the duration and temperature of the volatile compounds. A new oak carved arm-chair, exposed to the vapors of the ammonia, will, in about twelve hours, have all the appearance of having been made 200 years before.

—**MERCURY** for thermometers is purified by agitation in a bottle with sands, and then by straining it through leather.

—**PARSNIPS VS. CARROTS.**—The Bedford (Ill.) Times states that, at the Horticultural Show in that town, the judges decided that a bundle of white carrots were the best parsnips, and gave the prize accordingly.

—**LARGE SHEEP.**—The New York Tribune says:—"Mr. Joseph Beers, of Keyport, has five large sheep in his flock, (of the Leicester, English breed) which he intends to have on exhibition during the continuance of the World's Fair, next summer. The aggregate weight of the five sheep is 1,560 lbs., the largest being 379 lbs. in weight. The largest sheep in England which Mr. B. has any account of, weighed 368 lbs.

—**SUPERIORITY OF THE U. S. AS A WOOL GROWING COUNTRY.**—The Economist says:—"By recent scientific researches on the part of Peter A. Brown, Esq., of Pennsylvania, it has been established that the United States can outrival the world in wool as well as in cotton. Thus, Spanish sheep, yielding naturally, wool 2000 to the inch, carried to England, degenerated to 1900 to the inch, and brought to the United States, recovered to 2100; or finer than the original. The fact being once established that our climate and soil produce finer wool than other countries, will give to our manufacturers inevitably the superiority in cloths, if the manufacturer is allied in his interest to the grower."

By 2000 to the inch is meant that it would take 2000 fibres of such wool, when laid side by side, to cover the space of an inch. Of course the greater number it takes the finer the fibres must be.

The New York Times contends that so far, the Smithsonian Institute has done but little towards accomplishing the objects of its founder, in the dissemination of knowledge among the people.

—**AFRICAN EXPLORATION.**—An exploring expedition, sent by the English into the interior of Southern Africa, has returned, and reports the discovery of large rivers, fertile valleys, and powerful tribes of blacks.

New Custom Flouring Mill.

We would call the attention of our readers to the fact, that the **RED MILL** on the race, which has been standing idle for some months, has been put in operation again, and is now turning out a very superior quality of flour.—We do not hesitate in saying, that we have purchased at this mill, the *best flour* that has been used in our family for months. The opinion of our "better half" accords with our own, which of course settles the matter, as she is a "*Miller*," and ought to know what good flour is.

Try the **EXCELSIOR MILLS**, and our word for it, you will not only get *good flour* but a *large quantity* to a given amount of wheat.

SUPERINTENDENTS REPORT.—Our thanks are due Dr. Azel P. Ladd—State Superintendent of Public Instruction, for a pamphlet copy of his report to the Legislature, for the year 1852. Dr. Ladd has been indefatigable in his efforts to elevate the standard of our Common Schools. He has labored zealously to awaken an interest in the public mind in their behalf, and has already accomplished a great deal for the time he has been in office, towards bringing our system of Common School Instruction to some degree of order and profit.

MOORE'S RURAL NEW YORKER.—This is one of the very best papers extant. The editorials and correspondence of the **RURAL** are of the highest standard, while its selections evince the nicest taste and discrimination. No family can make a more profitable investment, of the price of the **Rural**, than to subscribe for it at once. Vol. V. commences with the new year. See Prospectus in Feb. No.

THE SCHOOL FELLOW.—This juvenile magazine has been transferred from Charleston, S. C. to New York, where it is now published by C. M. Sexton. \$1 per year. This monthly, as its name indicates, is designed for boys and girls. No parent can spend a dollar to better advantage than to send it on for the **School Fellow**.

THE ILLUSTRATED MAGAZINE OF ART.—We have received the February No. of this new magazine. \$3 per year. Alex Montgomery, publisher, N. Y. From the hasty perusal we have given this work we are inclined to place it among the best magazines of the day. It is copiously illustrated with fine specimens of wood engravings. It is devoted to history, mechanic arts, American antiquities, natural history, &c. We shall speak more in detail of the work at some future time.

We have not received the Jan. No. Will the Publisher please send us a copy?

YOUTH'S CASSET.—This is a monthly magazine for the juveniles, by Beadle & Brother, Buffalo.—50 cents per annum. The Feb. No. comes to hand much improved, filled with good things both instructive to the mind and pleasing to the eye.

Where is the Jan. No.? We have not received it.

THE LADIES WREATH.—\$1 per annum. J. C. Benedict, Publisher, N. Y., and Edited by Helen Irving. The **Wreath** is a monthly, got up in fine style. Its illustrations of flowers and other subjects are good. The sale of the "*Pet Lamb*," in the number before us, is illustrated to a dot.

BEAVER DAM REPUBLICAN.—This is the title of a new Democratic paper recently issued at Beaver Dam, by E. C. Hull, Esq. Mr. Hull possesses the requisite qualifications to make a useful paper, as the numbers before us clearly show.

PITTS'

CORN AND COB MILL.

This celebrated Mill is now made and sold by H. A. Pitts, the inventor, at his shop, West Randolph Street, Chicago, better known as H. Witbeck's Wagon and Plow Manufactory.

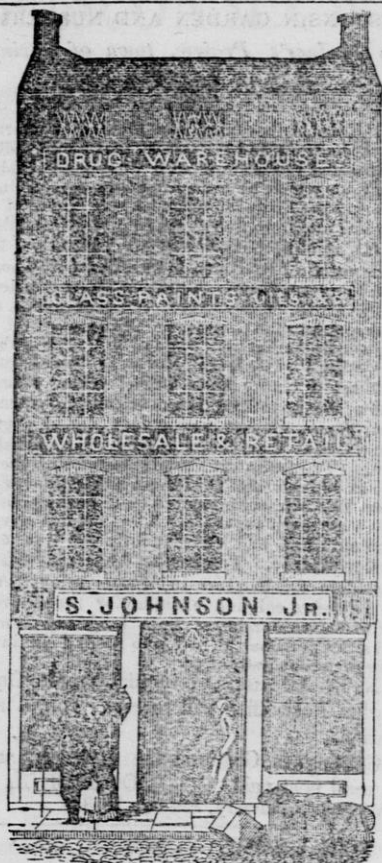
This Mill reduces the corn and cob to a proper degree of fineness by a different mode from any other mill in use, and is undoubtedly the best in existence. It will grind the cob and corn, if it is wet or dry, better and more of it, with less power, than any other. It is more durable and more easily kept in condition to grind than any mill ever before offered to the farmer.

H. A. PITTS.

March, 1853.

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Wisconsin Wholesale Drug WARE HOUSE.

ESTABLISHED IN 1844.

S. JOHNSON, JR.,

Wholesale Dealer in Drugs, Medicines, Paints, Oils, Dye Stuffs, &c. General Agent for most of the popular Patent Medicines sold in Wisconsin.

Proprietor of Johnson's Chemical Hair Invigorator, Johnson's Cherry & Liverwort, and the famed Bone & Nerve Liniment.

151, East Water St., Milwaukee.

T. LITTELL,
WHOLESALE AND RETAIL DEALER
IN

Agricultural Implements, Seeds, &c.,

**109, East Water-st.,
MILWAUKEE,**

Is prepared to supply Dealers and Farmers with any kind of **PLOWS**, manufactured by *Ruggles, Nourse, Mason & Co.*, at manufacturers prices,

adding only cost of Transportation. Their new Series of Plows, comprises the most desirable patterns that have ever been introduced.

Their **EAGLE PLOWS**, are already too well known to have one word said in their favor.

And is also prepared to furnish Extra Points, Mould Boards, Land Sides, or any part of the Plow that may be wanted. Wherever their Plows have been introduced, they have received the highest commendation.

I am prepared at all times to supply Hay Cutters, Harrows, Cultivators, Corn Shellers, Road Scrapers, Thermometer Churns, (and all other desirable patterns,) Fan Mills, Seed Sowers, Corn Planters, Meat Cutters, Field and Garden Seeds. Also Wholesale Dealer in

GROCERIES AND PROVISIONS,

Agent for the sale of **Dupont's Celebrated Powder.** 5n3

HORTICULTURAL!!

Rock County and the *State* can now be supplied with *Cahoon's* far-famed *Mammoth Seedling Pie Plant*,—unequaled by any other kind from *Maine* to *Texas*. Also a large assortment of the choicest varieties of Gooseberries, Currants, Grape, Strawberries, Quince, &c. Any orders for Fruit Trees of any kinds, and Ornamental Shrubbery, will meet with prompt attention on most reasonable terms. Arrangements are being made to supply this market with *Cahoon's* entire stock from *Kenosha*.

Yard near Monterey, Janesville, Jan. 25 '53.
n2tf GEO. J. & S. H. KELLOGG.

AZTALAN NURSERY.

THIS Nursery is now well stocked with choice Fruit Trees, Shrubs and Vines.

The stock of Apple Trees of choice varieties, is large and complete.

The stock of Pear and Plum Trees small; comprising only the most hardy of the choice varieties.

Persons ordering trees can rely upon being fairly dealt by, and will get no trees but those which have proved good in the West, if the selection is left to the proprietor.

J. C. BRAYTON.

Aztalan, Jefferson Co., Wis.,
March 1st, 1853.

D. B. TRAVIS,
GENERAL LAND AGENT, SURVEYOR AND NOTARY PUBLIC,

ONALASKA, LA CROSSE COUNTY, WISCONSIN

Will attend to locating Lands, Purchase, Sale and location of Land Warrants, locating State Lands at Madison, securing Pre-emption Claims, Payment of Taxes, &c., &c.

References.—Gov. L. J. Farwell, Madison, Washburn & Woodman, M. Point; Hon. T. T. Whittlesey, Peasant Branch; R. C. Van Ransseler, Waukegan, Ill; Col. G. H. Slaughter, U. S. Land Office, M. P.; Van Ransseler & Rowe, Onalaska

Post Office address, La Crosse, Wisconsin.



WAUKESHA COMMERCIAL NURSERY.

THE Subscribers offer for sale, this season, a fine assortment of Fruit Trees, comprising the best now cultivated. They are very thrifty and will be sold at wholesale or retail, for cash or approved credit, at reasonable prices.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruit, to merit the confidence of his friends and the public in general.

All orders accompanied with cash or satisfactory references will be promptly attended to, and trees will be packed and forwarded without delay. We will give cheerful and prompt attention to all post-paid communications requiring information, &c.

D. VAN KIRK, & CO.

Waukesha, January 1, 1853.

NURSERY BUSINESS.

FRUIT & ORNAMENTAL TREES

FOR sale at Janesville, Racine and Koskonong Nurseries, Wis. The proprietors are now enabled to offer to the public, a stock of trees heretofore unequalled in the West. Remarkable for their hardiness, vigorous growth, and adapted to our western climate; embracing fruit trees of every description. Apples, Dwarf Pears, Plums, Cherries, Flowering Shrubs, Bulbous Roots, &c.—comprising all the most popular sorts now in cultivation—and having devoted their personal attention to their propagation and rearing, feel warranted in recommending them to the confidence of the public. Nurserymen, Dealers and Planters are respectfully invited to call and examine for themselves. All *pre-paid* orders containing a remittance or proper reference will receive prompt attention addressed to,

E. B. & J. F. DRAKE, Janesville.

F. DRAKE, Racine.

Janesville, January, 1853.

WISCONSIN GARDEN AND NURSERY, On Gardner's Prairie, town of Spring Prairie, Walworth Co.

THE Subscriber takes this method to inform his patrons and the public, that he may still be found at the old and well known establishment, at which he offers for sale the coming spring, over Forty Thousand Apple Trees of a fine size and from five to seven years from the graft. Sound, healthy and stocky trees at 18 cents each. Also Pears, Plums, Peaches, Cherries, Quinces, Grapes, Currants, Gooseberries, Strawberries, Raspberries, &c., at prices to correspond to the times. Of the ornamental, a large assortment of Shade Trees, Shrubs, Flowering Plants, Hardy Roses, Bulbous Roots, Dahlias, a choice assortment. Green House Plants, any quantity. Ever Greens; Spruces, Firs, Pines, Cedars and in fact almost every thing usually to be found in such an establishment. The fruits have been selected with great care as regards quality of fruit and hardiness of trees. The Nursery is located on the open prairie with a northern exposure. The land has never been manured and consequently the trees are perfectly hardy. Trees taken from this Nursery seldom fail to grow in transplanting. All are invited to call and examine for themselves as the Subscriber hopes from long experience and strict personal attention to merit a continuance of public patronage.

N. B. All letters of inquiry sent to Burlington Post-office will receive prompt attention.

Catalogues Gratis at the Nursery, and by mail post-paid.

JOHN BELL.

Wisconsin Nursery, January 1853.

THE GROVE NURSERY AND GARDEN.

LARGE Budded and Engrafted Apple Trees, with fine heads, at 15 to 25 cents each, or \$15 per 100—Average sizes, by the thousand, \$100 to 140. Plums and Quinces—a good supply, at 25 to 37½ cents each. Pears and Cherries—a small stock at old rates. Ornamental Trees, Flowering Shrubs and Plants, in great variety, and the lowest prices, in lots, principally of our selection. These last furnished to dealers on commission. Address,

J. A. KENNICOTT.

Northfield, Cook Co., Ill.

The New Edition of LAPHAM'S POCKET MAP

OF WISCONSIN, showing the surveys of the Menomonee Lands, &c., may now be had at the bookstores, or by application (accompanied by the cash) to the undersigned. It will be sent by mail to any address upon the receipt of one dollar. A liberal discount made to dealers.

I. A. LAPHAM.

Milwaukee, January, 1853.

WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V.

JANESVILLE, WIS., APRIL 1853.

NO. 4.

PUBLISHED ON THE FIRST OF EACH MONTH, BY

MARK MILLER.

TERMS:

50 Cents a Year in Advance;

Five copies for \$2, if directed to one Post Office, and at the same rate for a larger number. All subscriptions to commence with the volume. Back numbers supplied to new subscribers.

ADVERTISING;

One page per year, \$30. Half page, \$30. Quarter page, \$18. Eighth page, \$10. One square, (twelve lines or less,) 1 year, \$3.50. (Less than one year,) for first insertion, \$2.00. For each subsequent insertion, 50 cts. And at the same rate for a larger amount.

These terms will be strictly adhered to. The circulation of the FARMER is large, and the amount of advertising limited; which renders it a more valuable medium for advertising than if a larger space was appropriated to this department.

Winter and Spring Wheat.

It is well known to the cultivators of the soil in Wisconsin, that in most districts, we have, just beneath the surface soil a stratum of reddish brown clay which when mixed with the surface soil renders it much more adhesive and compact. We should therefore recommend to those engaged in the culture of wheat, with much confidence of greatly enhancing the probability of success, the practice of deep plowing or as it is termed subsoiling. Instead of the scarifying process (shallow plowing) usually practiced in preparing the soil for wheat as well as other crops, plow deep enough to reach the clay, and thus bring up from below and mix with the surface, an ingredient so essential to form a proper footing for the roots of wheat and furnish them with the peculiar and necessary pabulum. Says Dr. Lee—"Good virgin clay always abounds in the elements of fertility in a dormant or nascent state, also the light and heat of the sun, the frosts of winter, the oxygen and carbonic acid of the atmosphere, and the rains and dews that fall

upon every square foot of land, are invaluable in developing the latent powers of rich clays."

Another item which we deem of much importance in securing a good crop, is the putting in of the seed at a proper depth. The sowing of seed broadcast and merely harrowing it in, we regard as wholly insufficient. The roots of the plants are necessarily spread out *upon* or *near* the surface and are thus too much exposed to the inclemencies of the season. Plowing in the seed, or, which we should much prefer—drilling it in where the nature of the soil will admit,—and what we consider, next in importance—thoroughly rolling, with a heavy roller, offers almost if not quite a sure remedy not only to the injury of freezing and thawing, but great drouth. In the spring, as soon as the ground is fairly settled, the rolling should be repeated, which will re-pack the soil about the roots—loosened up by the action of the frost—giving them a firm hold upon it and the power to resist the effects of wind and drouth. The application of leached or unleached ashes either cultivated in with the wheat at sowing time or as a top dressing in the spring, promises much both for the growing crop and in relieving the exhaustion that may have been produced by a previous succession of crops.

A particular attention to the selection of seed, especially as it regards the *kind*, *quality* and *purity*, must ever be a requisite to the returning of a good crop. It is a well known principle of vegetables, as well as of animals, that there is a constant tendency to *degeneration* or *deterioration*, which is

to be sedulously guarded against by the selection of the most perfect berry in different grains, and of the most perfect animal from which to breed.

We consider it all important that the seed be soaked five or six hours in a strong brine—as strong as salt will make it—then place the seed in a box or on a tight floor, and add for each bushel, a peck of recently slacked lime, or instead thereof, the same quantity of unleached sifted ashes, which we consider quite as good if not better than lime—mixing them well together and sow immediately. There is much to be gained in preparing seed wheat in this manner, besides invigorating its germination and growth—that is, all the foul seed will rise in the soak (which it will not do in fresh water) and thus may be separated from the seed.

We are aware that the above considerations are not characterized by anything particularly *new*, but we deem them of so much importance, that we feel it to be a duty to press them upon our readers.

We hope, however, that our farmers will not rely on the culture of wheat for their *income*, when a so much more profitable, sure, and pleasant business offers itself to them in the raising of stock, wool, in dairy products and pork making. †

For the Wisconsin & Iowa Farmer.

Johnstown, Wis, March, 1853.

Value of Seed Corn.

BROTHER FARMERS:—If our stock of hay, oats, corn, &c., was scanty last season, an all wise and ever benificent Providence has given us a *short, mild*, and beautiful winter—almost beyond a parallel, so that although our “store houses” were but scantily supplied last autumn, yet are they not emptied, and spring is upon us, full of promise.

Our short crops last year were *in part* attributable to the season, but the scantiness of our corn crop was mainly chargea-

ble upon ourselves—we planted poor seed—let us see to it, that we do better next May. The question may well be asked, what is the true value of a bushel of seed corn? I will endeavor to answer this question.

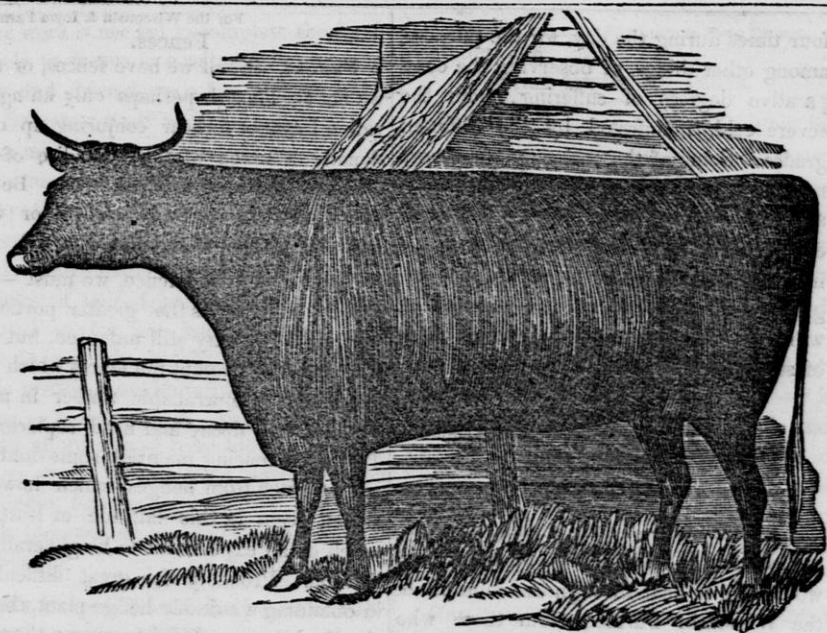
Crossing neighbor A's field last May, I saw him putting in his corn by the handful—on inquiry he said “that his seed was not very good, that he took it out of the crib—but he meant to put in enough.”—The weather just at that time turning unfavorably—the consequence was that nearly all his seed rotted in the ground.

The same day I crossed neighbor B's field, and saw him putting in from three to five kernels to the hill—*his seed* of course was *good* and he knew it to be so. In October, I crossed A's field again, and I think fifteen bushels per acre would be a large estimate as to the yield of his field. B. estimates his yield at seventy-five bushels per acre—but deduct fifteen for over estimate and we will endeavor to ascertain the value of a bushel of seed corn. One bushel of seed corn will plant six acres—we will therefore make our estimate on the quantity of A's and B's fields. B's produced forty-five bushels to an acre, the most, or two hundred and seventy bushels on six acres—worth forty cents per bushel, or in the aggregate \$108. Deduct from this, five dollars for the additional expense of harvesting B's six acres, (the cultivation being the same) and it would appear that A. could have paid one hundred and three dollars for a bushel of seed corn, and still been the gainer, as the increased quantity of stalks would have been of some value.

If there is any mistake in this estimate will some of your readers point it out in the next number of the “Farmer.”

NELSON ELDRED,

Show us a horse that is joyful, and turns round with a look of recognition on the approach of his master, and we will point you to a humane man.



DEVON HEIFER—"RED LADY." TWO YEARS OLD.

The property of M. C. Remington, of Seannet, Cayuga County, New York.

For the Wisconsin & Iowa Farmer.

Fond du Lac, Feb., 1853.

Fine Wooled Sheep vs. Coarse.

EDITOR FARMER:—I noticed in Mr. WELD's article in the January number of the Farmer, an inquiry respecting the "Comparative hardness of coarse and fine woolled sheep, as tested in Wisconsin."—Four years ago last June, I landed in Wisconsin, and brought with me a small flock of Spanish Merino sheep of the choicest kind. Sheep then, in Fond du Lac Co., were a rarity; and the growing of wool as a staple product, to make money from, was as foreign to the minds of the inhabitants of the County, generally, as it now is, to propagate the Angora Goat.

I was often at that time, and am still met with the rebuff, "that fine woolled sheep have not the constitution and hardness to stand the severe winters in this high latitude, equal to those of coarse wool." I have had some experience on

this subject, both in Wisconsin and in Vermont. The first two years after I came into this State, I kept no sheep but those I brought with me and their descendants.—I then bought a small flock of grades—from one to seven-eighths blooded—all of which I have kept together ever since, but crossed with my fine woolled buck. In addition, at the present time, I am wintering a few regular *Hoosier* ewes, for a friend—making in the whole a motley collection.—They are all wintering well; but the fine woolled are in the best condition. I do not say but there may be fine woolled sheep got up, possessing slender constitutions and unfit for this climate; but the flock-master who understands his business, will have no such sheep, and the man who makes such an assertion as applicable to fine sheep, generally, has yet much to learn.

On Tuesday, the 8th inst., the thermometer ranged from eight to sixteen degrees below zero; I visited my flocks of sheep

four times during the day, for the purpose, among other things, of observing the comparative degrees of suffering, from the severe cold, manifested by the different grades. Some of the coarser portion were nestling under their coat of dry loose wool, apparently trying to shrink to half their ordinary size, as if they thought by so doing, they could escape a proportional degree of the severity of the atmosphere, while my best fine wools showed no signs of suffering from cold.

S. N. HAWES.

For the Wisconsin & Iowa Farmer.

Ceresco, Wis., January, 1853.

Sheep Raising.

ED. FARMER:—I am making a commencement in the sheep business and would like to hear through the columns of the Wisconsin Farmer, from those who have had some experience in the business in Wisconsin or elsewhere, in the Northwest. I am a new beginner in the business and seek instruction.

I will merely state here, that a year ago I started the winter with three hundred and seventy-two sheep. I turned out in the spring, the same number. I raised one hundred and forty-two lambs—sheared thirteen hundred lbs. of wool—sold my wool at thirty-five cents per lb.; (\$455,) and could have sold my lambs for \$284, but I kept them and sold some older ones.

My treatment of sheep, I may give at some future time, if any one is desirous, or I should think it worth a corner in the Farmer.

RUSSEL SMITH.

We should like to hear from Mr. Smith again on the subject of sheep raising. To carry a flock, numbering that of Mr. Smith's through the unusually hard winter of 1851 and 52, without losing a single head is no easy task. The man who could do it must have a thorough knowledge of his business though he be a novice at it.—Ed.

For the Wisconsin & Iowa Farmer.

Fences.

FENCES.—Shall we have fences, or shall we not? Though perhaps only an aggravation I cannot forbear conjuring up occasionally a vision of that paradise of farmers where fences are unknown. Be the inhabitants Nomades, Socialists, or what not how can they help being happy?

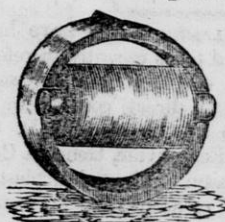
Yet "if we must fence, we must"—but how? Not only is the greater portion of our prairie country still unfenced, but in a few years the present rail fences which used up most of the available timber in many districts, will decay and need replacing.—To furnish fencing material, some doubtless expect much from hedges, which however, as yet, seem in this latitude at least, too much of an experiment to be generally relied on. Probably the great difficulty is in obtaining a suitable hedge plant, though the Buckthorn seems deserving a thorough trial. So far as the writer is aware, there is every prospect of hedges coming into general use a degree or two south of this where the Osage Orange proves hardy.—Some are confident it will prove hardy in Wisconsin—a consummation most devoutly to be wished—whereof there is, perhaps more hope than prospect. In the mean time it is being thoroughly tried. Dr. Hascall, of Rockford, Ill., has a promising piece, of two years growth, which, when the writer saw it last summer, bid fair to become a good fence in two years more.—Picket or stake, or post and board fences are now generally superceeding the present uncouth, wasteful rail fences, and must soon banish them from our prairies. In many places however, even these must be much more expensive than a kind of living fence or fence-row in use on many farms in the west. Seeds or "sprouts," i. e., cuttings of some rapid growing tree are duly planted along the road sides and boundaries of the farms, and on good soils they become so large in four or five years that but little

more work is needed to complete the fence; merely to weave in a rail or strip horizontally and drive down a few stakes, which the fence-row itself will perhaps furnish.—Thus may be had a cheap, strong, durable, easily repaired fence—the most so, I have always thought that could possibly be had where the soil is good and timber or other good fencing material scarce. The Locust or Balm of Gilead, are doubtless the best adapted to this use here—flourishing as they do in nearly all soils. The fence-rows while growing would furnish many useful sticks or loads of fuel. In summer they would afford a most refreshing shade, and always would form a most agreeable and profitable feature to introduce into our bleak, monotonous prairie landscape.

Delevan.

F. K. PHOENIX.

Pease's Patent Elastic Roller Sash Supporter.



“This Invention consists of a metal box with a shaft or roller covered in the centre with India rubber or other elastic substances. The ends of the shaft play in the journal of the box which is placed in the edge of the sash. The bearing of the elastic roller upon the frame holds it in any desired position and at the same time allows the sash to be moved with ease; it is not liable to get out of order, and the roller being elastic does not wear the frame, it also keeps the sash from being shaken from the wind. We have no doubt but that it will come into general use, as the saving by its use over weights and pulleys is from one to two dollars per window. Address S. S. Barry, Cleveland, Ohio.

STITCHING SHOES BY MACHINERY.—Sewing Machines for stitching shoes are now used in many of the shoe manufactories of Massachusetts. It is said that one of these machines will do the work of ten men in the old way of stitching by hand.

For the Wisconsin & Iowa Farmer.

Racine, Feb., 1853.

Grass for Slough Lands.

FRIEND MILLER:—Will you permit me to ask through the columns of the Farmer, a few questions on which I want information. I have a good deal of wet land (prairie) of different kinds. First, what is called slough land—Second, between dry and wet. Now, if I dry up the slough land I can get nothing from it—I cannot plow it, because it will not hold up a team after the turf is broke. I wish to know if timothy can be put into such land, and which is the best way with the wet and dry—break it up or try to get it into tame grass? Can tame grass be got in so as to drive out the wild grass without plowing?

WM. G. ROBERTS.

REMARKS.—Our course with such land as you describe above, would be, to burn off the wild grass in the spring, as soon as the frost leaves the ground—sow herds grass and harrow in thoroughly. This we have seen done, and the result was a good meadow of tame grass within three years. For *very* wet land, we should prefer *fowl meadow* to herds grass, but we doubt whether the seed can be found in this region.

For the Wisconsin & Iowa Farmer.

Magnolia, Feb., 1853.

Plaster or Gypsum.

FRIEND MILLER:—Where can I obtain two or three barrels of land plaster? I wish to try the use of it on corn and grass here, for I practiced the use of several tons per year when living in the State of New York, and found it good on corn and all kinds of grass. Perhaps we have many farmers in Wisconsin who know the value of plaster for crops in York State. Eighteen years ago I moved from the town of Patterson, Putnam Co., to Candor, Tioga Co., where I introduced it upon my own farm. The profits of its use being seen—

my townsmen sowed hundreds of tons to great profit. It did the best on sandy or gravelly dry land, where it doubled the crops of corn and grass and greatly benefitted all other crops. If any farmer has tried plaster in Wisconsin, I would like to hear from him through your paper. I suppose its effects will be the same in Wisconsin as in York State, on the same kinds of land. But what will it do on our deep black prairie soil?

A. K. BARRETT.

For the Wisconsin & Iowa Farmer.

Racine, Feb., 1853.

PLASTER.—ED. FARMER:—Can you or some of your correspondents give me some information about the use of plaster?—Have not you or some of your numerous readers had some experience with it? I would like to know all about it—where it can be had—price—how much should be put on an acre—on what kind of land does it do best and for what crops?

Please also state what you think common wool will fetch this spring.

ROBERT ROBERTS.

REMARKS.—Plaster may be obtained in Milwaukee soon after navigation opens.—We are informed by some of the warehouse men, that heretofore, there has been but little demand for plaster for agricultural purposes; but judging from recent inquiry, quite an amount will be used this spring. The price varies from \$1.25 to \$1.50 per bbl.

Plaster has proved most effectual on dry land, which contains a per centage of sand or gravel. The use of plaster benefits corn more than any other crop—next to corn, all kinds of grasses—but most of all, clover. One bushel per acre is considered a fair dressing, sown broadcast, when the grass is three or four inches high. It is applied to corn when six or eight inches high, at the rate of a heaping table-spoonful to each

hill. We have no knowledge of the effects of plaster on our dry black prairie soil.

Plaster contains no fertility within itself, but it serves to fix the ammonia of the atmosphere and all decaying substances. It should always be used in the horse stable—especially when it is an object to save the manure. One bushel is worth four times its cost, in fixing the gasses which would otherwise escape from the liquid portions of the manure, besides rendering the atmosphere of the stable pure and healthy. It is a valuable agent for deodorising night soils and for absorbing the gasses of all manures. Its action is just the reverse of lime, the one retaining the gasses and the other assisting them to pass off.

We are of the opinion, that wool of all grades, will bear a higher price this season than it did last. If we had wool to sell we should not contract it at present prices.

EFFECTS OF PLASTER.—We have had two cases presented to us recently in reference to the effect of plaster in a dry season, which stand in direct contrariety to each other. The one is that of D. C. Johnson, Esq., of Fentonville, Genesee Co., who sowed last season one barrel of plaster on eleven acres of meadow, and harvested two tons of hay to the acre, while the grass on another portion of the same meadow, on which barn manure was liberally spread, was scarcely worth harvesting.

The other was the case of Mr. E. N. Mallet, of Huron, Wayne Co., who sowed plaster upon a field of clover, the soil being a light and sandy upland, but the crop all dried up, and was a failure, while upon a patch of the same kind of soil, he sowed unleached ashes three or four times in the course of the season, five bushels at each time, and had quite a large crop.

We cannot stop now to reconcile these seeming contrarieties, but simply remark, that in the first case, plaster might have supplied the very elements which were wanting in the soil, while in the other, these elements might have existed in sufficient quantity; but, as plaster must have a certain amount of moisture to make it available at all, the probability is, that the

one section was a little dryer than the other, just at the particular time the moisture was needed. That barn yard manure should fail of its effect, and even be worse than nothing, in a very dry season, is nothing new, and that ashes should be highly efficacious upon a grass crop of any kind, is rather a matter of course, especially upon such a soil, but why it should be so much more efficacious than plaster in a very dry season, or should be particularly efficacious at all, in such a season, is a question which still remains to be answered.

[Michigan Farmer.]

Deterioration of Soils.

In a state of nature, soils do not deteriorate, but are maintained in a state of uniform or increasing richness.

The trees and plants of spontaneous growth, are of various kinds. Each takes certain elements from the soil, and from the air, the rain and dew; but the decay of the various parts of the trees and plants and the reliquies of the various animated beings that subsist on animal life, restore to the soil those elements that had been taken from it, except the small quantity removed by the washing action of water—and even this is compensated on the hills by the washing away of the surface soil, and exposing fresh mineral matter to decomposition—and on the low grounds by their receiving the exhausted materials washed from the higher.

Trees draw their mineral elements from greater depth than the roots of smaller plants, and by their decaying leaves, furnish both organic and inorganic food to themselves, as well as to the smaller plants beneath them.

The excrementitious parts of one plant serve as food to others, so that associations of plants and trees are always found, in a state of nature, to characterize certain kinds of soil.

There is a natural rotation of timber growth, so that as soils become more or less loaded with excrementitious matter, so as to be no longer capable of producing a vigorous growth of the same trees and plants, another growth of different plants and trees succeeds.

This order of succession has been partially traced by Rev. C. Springer, but ma-

ny and long continued observations will be necessary to trace out the natural rotations of the different kinds of soils. The kind of rotation best for some of the animal plants raised for the food of man and animals, on some kinds of soils have been ascertained, but little is known of the general laws that may and ought to be ascertained.

Under culture, soils deteriorate unless they are regularly manured. The removal of any crop, natural or artificial, removes elements that must be restored, in order that its fertility should not be impaired.—Mineral acids, alkaline earths, silica in a soluble state, chlorine, iron, &c., are removed, equal in weight to the ash that would be obtained by burning the plants removed. Most of these elements exist in a very minute proportion in the soil in a state to enable the roots to absorb, and plants to assimilate them, so that continued cropping, without returning anything, will soon exhaust one or more of these elements, and the land becomes poor, and must be manured with something to supply the lacking elements—or it must be left at rest in fallow, as it is called, to give time for more of the mineral elements to be liberated, by the gradual decomposition of the particles of minerals in the soil.

Crops removed from the ground carry away not only a large amount of vegetable matter, but also those mineral materials taken up by plants, small in amount it is true, but indispensable to the perfection of the plants raised.

The straw, stalks and leaves of the plants, if returned, restore in part the waste; but still, the phosphates which enter in large proportion in the mineral elements in the seeds, are found in small proportions in the other parts of the plants, and the soil becomes gradually impoverished of the elements which are small in amount in all soils, but which are indispensable to the growth and perfection of the seeds of plants. Soils may be and frequently are capable of producing a rank growth of straw, which produce a small yield of grain. Plants will not produce more seeds than they can perfect.

Of the exact composition of the soils of Ohio, little is known, as few analyses have been made. Of the exact composition of the various grains, plants, and their dif-

ferent parts, as well as vegetables, comparatively little is known; but the relations of the plants and the soil on which they grow, and what and how much is taken from the soil by these plants in each stage of their growth, and how much is removed by our mode of culture, are important facts to be known to the farmer.

It is not mere cropping alone with grain, that causes a deterioration in our soils.—The flesh, wool, hair, horns, bones, butter, cheese, produced by grazing and marketing our farm products, carry away large quantities of elements from the soil that impoverish it, and diminish its productiveness. The results of this system are now beginning to be felt as much in the dairying, grazing, and sheep farms of Ohio, as where grain has long been raised. The mineral elements removed in the numerous agricultural products are more or less concentrated in cities and villages, where they are permitted to be lost, or they are sent to far distant markets, where they are lost forever.

[Ohio Transactions.]

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 was squeezed flat under a hydraulic press, $7\frac{1}{2}$ stones of water would run out, and only $2\frac{1}{2}$ stones of dry residue would remain. A man is, therefore, chemically speaking, 45 lbs. of carbon and nitrogen diffused through $5\frac{1}{2}$ 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 stripules 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 one and a quarter pails 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 weight. At this rate an acre of 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 iridescent 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 1200 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, 46 lbs. in the second, and a variable quantity, sometimes amounting to $73\frac{1}{2}$ 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 rarified water no more wets the air, than the solidified water wets the solid material on which it is absorbed.

[Daguerrean Journal.]

Susceptibility of Animals to Atmospheric Changes.

In the common sensations of life, we perceive a distinction, according as the exciting cause is agreeable or otherwise, whether it presents itself as pleasure or dislike, bodily strength or weakness, activity or fatigue, warm or cold—by pressure or tension of the atmosphere, &c. By these combinations of sensations, all animals in which they are strongly developed are enabled to anticipate atmospherical changes before the most delicate instruments give any indication of them; and, in a minor degree, the same is traceable in persons of great nervous susceptibility. In the animal world it extends not only to creatures of the land and of the air, but also to those which inhabit the water.

The actinæ throw out their feelers and expand themselves when a continuance of fine weather is to be expected, but withdraw and contract themselves, even in a room, when a change is impending. The muscles, before the approach of a storm, spin several new threads to secure their hold on the rocks; and leeches rise to the surface of the water before rain. Spiders enlarge their webs during fine weather, but spin only short threads, work seldom, or hide themselves in corners, during rain.—Many beetles, by their active flight and humming sounds, give tokens of the morrow's brightness. Before rain, bees remain either in their hives or in the neighborhood of them; and ants convey deep into their hills the pupæ which they expose to the sun in fine weather.

The leeches rise anxiously to the surface of the water before a storm, and hence in Germany they are called weather-fish, and are kept in glasses, where, by their uneasy movements, they denote change twenty-four hours in advance, and, from the same cause, many fish forsake the sea for the rivers; the groundling is roused into activity, the silurus leaves the deep waters, and the eels become lively. If the lightning strikes the water, the perch sickens and dies; the snake and the slow-worm are restless before a storm; toads leave their concealment before a rain; ducks are busily active, and swallows fly lower.

Before a storm breaks forth, many birds, such as the cross-bill and plover, are uneasy, and show themselves less; and while

many species of water-fowl hurry for shelter to the shore, the petrel, as if rejoicing in the coming conflict of the elements, dashes forth and defies its power. If the atmosphere be lowering in the morning, pigeons feed rapidly, and return to their cots; and the hare hides itself; but the mole comes to the surface of the ground, and the squirrel seeks its nest, and shuts its entrance. This susceptibility of atmospherical changes, influences, also, materially, the natural economy of some animals; the wild rabbit for instance, which feeds chiefly in the evening or at night, comes forth at noon-day if the weather portends rain, and loses its natural timidity in its eagerness to procure food.

Before the occurrence of an earthquake, animals become uneasy. In that which took place in Calabria in 1783, it was noticed by Bartel, that the sea-fish were disturbed, and were taken in vast numbers; many birds fluttered about disturbed in the air; dogs ran about howling; the horses and oxen trembled, pawing the ground and snorting as if in agony, and the cats slunk about with their hair bristled up.

[Thompson on Animals.

AN IMPROVEMENT FOR HOUSEKEEPERS.

—Patent *Self-Rising Flour* is an article entered into very general consumption, 1000 bbls. being now manufactured at the Croton Mills per month. Its peculiar properties are imparted by incorporating with the flour during its manufacture, super-carbonate of soda and tartaric acid, in suitable proportions. Not less than 100,000 lbs. of the former, and 70,000 of the latter have been imported during the past six months, to be used in the preparation of self-rising flour. By the new process, the usual waste in raising bread by the partial decomposition of the dough, (which is said to cause a deterioration of the qualities of the flour, and a loss equal to 16 per cent. in weight, compared with bread raised without yeast,) is avoided. The proprietors of the Croton Mills are preparing to give a collation at their establishment, during the next week, for the benefit of housekeepers, at which they propose to serve up bread, biscuit, &c. from the self-rising flour, produced within 45 minutes from the dry flour.

[N. Y. Jour. of Com.

Numerous—Bogus half dollars.

Silica in Vegetables.

BY PROF. DEWEY.

Rock Crystals of Little Falls—Formation—Water, a solvent of silica—Difficulty removed as ignorance is removed—Silica in land plants—Solution.

The diamonds of Little Falls, those beautiful crystals of silex or silica; who has not seen them, or perhaps bought of the boys as the cars rested for a few minutes.—They are found abundantly a few miles north of that romantic village. They occur in a quartz or flinty rock—as my informant, a very pleasant and intelligent companion in the cars, who lives on the line of that rock, stated to me—or are dug up from the earth which that rock, by disintegration, has formed. They are indeed a common mineral, sometimes of large size, often small, but always beautiful and attractive, found over the world in very different associations from this, as in gredes in limestone, greenstone, granite, &c. Splendid gredes of them, many inches in diameter, are often brought from the regions near Lake Superior, and have doubtless been loosened from the rocks in the cavities of which they had been formed, as we often see quartz, cornelian, chalcedony, and agates, in the cavities of greenstone.

As my intelligent companion gave the account of these crystals, I thought over the difficulties which naturalists had found in accounting for their crystallization, and the explanation given by chemists of the process.

To crystallize, or assume a regular form, matter must be in a state for its particles to move so easily that attraction may lead them to take the form, that is, the matter must be in solution. The solution is effected by heat, or by some solvent.

Pulverized limestone, melted under great pressure, becomes, on cooling slowly, regular crystals, and is also crystallized from its solution in water and carbonic acid. In these two ways the crystals of lime are accounted for.

Silica is melted at a very high heat, and under great pressure many of the crystals of it may have been formed. The diamonds of Little Falls may have been thus formed, for the rock lies near the great masses of gneiss which appear to have suffered great heat.

But there are crystals of silica, or quartz crystals, which seem not to be formed from melted matter. Though it was formerly held that silica is insoluble in water, and required potash and water for its solution, it is now fully proved by chemists that silex is soluble in water alone. With even a small quantity in solution, and the influence of pressure and time, all the gredes of quartz crystals may easily have been produced, without the presence of any other solvent. Supposing the action of potash on the silex, the facility of the crystallization of silex is only increased. In this case the potash must be removed for new operations. Such crystals have been formed by the chemist.

Ignorance has led to many absurdities and induced many difficulties in the active minded. It has long been known that silica as well as potash is contained in land vegetables. The advantage of ashes as a manure has been seen from the remotest ages. The ashes yielded potash to the plants which ascended by the roots into the plant. Ashes often contain gypsum, and hence another reason for their fertilizing power as long as gypsum and silex were held to be insoluble in water—there was no way to account for their ascent into plants. But, as soon as the ignorance was removed—as soon as it was learned that both are soluble in water, the ascent of even silica into vegetables had no difficulty. So phosphate of lime, so essential to animal life, was once held insoluble in water, while it is found in every kernel of perfect wheat, and in the leaves and culms of all grasses. Indeed some plants, as the raton, contain more silica than the potash in them can make soluble in water; so that it is not necessary to suppose the existence of any other solvent of silica than water to account for its existence in plants or as crystals.

The probability is that much of the crystallization of silica, and the silica of vegetables, depends on one great fact, its solubility in water. [Rural New Yorker.

OATS AND CARROTS.—Why is it that our farmers do not pay more attention to the cultivation of the carrot? It has been demonstrated again and again that it is a highly nutritious vegetable,—that stock of all kinds, particularly milch cows, do well on it,—that it increases the quantity and

quality of the milk, adds to the flesh, and in a given bulk, contains much more nutriment, and is therefore, bushel for bushel, worth more than oats. In the Transactions of the Worcester (Mass.) Agricultural Society, recently published, we find an estimate, showing the relative value of oats and carrots, from which it appears that the cost of raising an acre of carrots is about \$25 more than for an acre of oats. It is estimated that 500 bushels of carrots may be raised on an acre, and 40 bushels of oats. This is the basis of calculation.—Now as a matter of *profit* see the result. Calling the oats worth 35 cents per bushel, we realize for the acre, \$14. Estimating the carrots at half that, or 17½ cents per bushels, we have \$87.50 worth of carrots per acre against \$14 worth of oats.

The calculation may possibly be extravagant, as to the yield of carrots—but if half the quantity can be raised, (and we have no warrant for fixing so low a figure) there is still no comparison in the relative value of the profit.

Think of this farmers! Do more,—try it, and our word for it you will have no cause to regret the experiment.

[Ohio Farmer.]

THE SUGAR MANUFACTURE.—The following interesting account of the first attempt to make sugar in Louisiana is from the report of the United States Patent Office for 1847.

Judge Ross, in his address before the Mechanical and Agricultural Association of Louisiana, gives an interesting description of the first attempt to make sugar in Louisiana, which shows from how small beginnings the great crop now raised of this article has proceeded. He says:

"How is it with the sugar-cane in Louisiana? It was introduced at an early day from the West Indies, and cultivated to a small extent at Terre aux Boeufs and in the neighborhood of New Orleans. Nobody at first imagined that sugar could be made of it. The juice was boiled into syrup, which sold at extravagant prices. In 1796 Mr. Bore, residing a few miles above New Orleans—a man reputed for his daring and his energy—formed the desperate resolve of making sugar. He increased his cultivation, put up the machinery, and procured a sugar-maker from the West Indies. The day appointed for the experiment had

come and the operation was under way.—The inhabitants of New Orleans and the coast had assembled there in great numbers; but they remained outside of the building, at a respectable distance from the sugar-maker, whom they looked upon as a sort of magician. The first *strike* came and he said nothing; this they thought fatal, but still they remained fixed to the spot. The second strike was out; the sugar-maker carefully stirred the first, and then, advancing towards the assembled crowd, told them with all the gravity of his craft, 'Gentlemen, it grains!' 'It grains!' was repeated by all. They all rushed in to see the wonder; and when convinced of the fact, scattered in all directions, greeting everybody they met with "It grains!" And from the Balize to the Dubuque, from the Wabash to the Yellow Stone, the great, the all-absorbing news of the Colony was, that the juice of the cane had grained in lower Louisiana. It did grain; it has continued to grain; it grained last season at the rate of 215,000,000 pounds; and, if no untoward action of the Government prevents it, in ten years it will grain to the extent of more than double that quantity."

IMPROVED AUGER.—Measures to secure a patent for an improvement in augurs and bits have been taken by Charles P. Crossman and Levi T. Richardson of Fitchburg, Mass. The chief difficulty attending the use of the ordinary augurs, is their liability to choke with shavings as they work out of the spiral recess, and consequently to wedge as the augur is turned between the edges of the spiral thread and the sides of the hole. The above improved tool is completely free from this defect, in addition to its great merit as a cutting instrument, as will be perceived by a short description. The cutting part projects at right angles from the center screw, and is formed with curved edges, so that the augur cuts rapidly, and yet requires but little power, because the curved form gives it a drawing cut. The shavings are compelled to keep within the spiral recess, as there is a lip projection at the end of one of the cutting edges.

Perhaps it is not generally known, as it should be, that salt put in the mouth will instantly relieve the convulsive movements in fits, either of children or animals.

HORTICULTURE.

MR MILLER:—The time for planting orchards is now at hand. Trees should be planted this month if possible. The right time is when the frost has left the ground—at least to procure trees from the Nursery. Time can better be spared then than later, and the roots may be heeled in for a week or two if the ground is not ready when arrived at the place of destination.

Twenty feet each way is a good distance to plant apart. If the places are not already prepared, that must now be done by removing the subsoil to the depth of eighteen inches, and two feet each way from the point where the tree is to stand. The surface soil removed should be returned to the bottom of the hole, filling sufficiently to allow the tree to stand just as deep below the general surface as it stood in the Nursery. The tree is now to be set, filling among the roots with rich surface soil—dash in a pail of water, which will settle the earth among them, then immediately fill up the space left, with the surrounding surface. Now press down the soil gently with the feet; raise a mound three or four inches above the general level and finish up with a thick coat of straw or other mulching and the work is done and well done. If the soil is tenacious or clayey, well rotted manure may be advantageously mixed with the earth to be filled in among the roots. For sandy soils, a half a peck of lime, and ashes if unleached, a peck will be found beneficial with any light soil.

Corn, potatoes, vines, or some hoe crop, should be planted in the young orchard—oats, wheat, or grass should never be permitted.—Buckwheat is recommended by some.

The ground around orchard trees should receive a top dressing of leached ashes and well rotted manure this month if it has not been previously done.

Mulching will be generally found beneficial even for trees that are well established or in bearing condition. Attend to it early, before the pressure of summer work comes on.

Grape vines should have been pruned in March, but if neglected, must be done now. Cut back all the last year's shoots to three buds, except those intended for the permanent extension of the vine, which should be neatly spread out and tied to the trellis. The grape must be severely pruned or barrenness and mildew will be the inevitable result. Late pru-

ning, although the vine bleeds freely, is far preferable to none at all. Currant bushes should be pruned early and pretty severely if fine, large fruit is desired. Take out the older and decaying branches and finish up with the suckers of last year's growth, leaving a few of the most promising for next year's crop.

Strawberry beds should receive a top dressing of fine stable manure, or partially decayed leaves. The weaker plants, and all weeds which escaped notice or were neglected last year, should be pulled out. New beds should also be made this month. The soil should be deeply worked and highly manured for the strawberry, unless new or very rich land.—Planting the vines in virgin prairie soil has been successfully practised in Illinois. Prairie, broken last year in the usual season is used, the plants are set in the joints of the furrows, ten inches apart in the rows, and the rows three or four feet asunder. Very few weeds will come up the first summer, enabling the vines to take easy possession of the whole surface and produce a full crop the second season.

Grafting the plum should be done early, about the middle of this month. If wild stocks are used, they must be small and thrifty, two or three years old from the seed. Work at the surface of the ground by the whip method.—When transplanted set the place of union about four inches below the surface. The European stock may be worked at any convenient height. But the wild stock is considered by many as preferable, being entirely hardy.—The principal objection we have to them is their tendency to produce an overgrowth of the graft the first year, while the European stock is less ambitious, and consequently more certain to produce a healthy tree. If taken up after the first summer's growth, and buried the first winter, the objection is avoided.

Apple scions should be cut early this month, if not previously attended to, and laid in a cool cellar. The grafting may be done the latter days of the month or later.

Those who have tested their fruit, and found it inferior, should lose no time in changing it. We have scions of some choice kinds which we will give to such of our tree customers as require them for the above purpose.

In the last number of the Farmer we attempted to show up the erroneous practice of buying imported trees. Now to make void the apology which some have for doing so, we make the following offer. To any one residing more

than thirty miles from our Nursery, who will make up a club for 1000 apple trees, among his neighbors, and come to the Nursery and get the trees at our usual prices, we will give 100 trees. This will pay well for the trouble of coming. Our Nurserymen "generally have more trees than money," and would like to restore an equilibrium,—try us and see if it is not so.

Dahlia bulbs should be planted the last of this month under glass or within doors, in boxes of fine moist sand, about an inch beneath the surface, in the flower garden, after the danger of frost is passed. In separating the sprouts a small portion of the bulb should be taken off with them.

Sweet potatoes should also be planted in a hot bed under glass, about the 20th of the month. The same care should be taken in separating the sprouts as with the dahlia.—They will not bear any frost after planting out.

J. C. BRAYTON.

Pruning—Benefit of Low Heads—Grafting.

There is perhaps no Horticultural operation wherein our people are more generally at fault than the very common one of training—especially in the west—the climate and soil of which are so different from that of the east to which they have been accustomed, and therefore will not admit the same routine of practice that is pursued there. Who has not noticed the great difference existing in the appearance of exposed or scattering trees, whether fruit or forest trees in the same sections? those at the west being uniformly of a shorter growth.—Why then not imitate nature? The nearer we can get to her perfect management in adapting means to ends, the better for us, and the more we cross her track the greater our risk of loss. Hence the perfect folly of using the knife so freely on our growing trees—especially the more tender ones, as the peach, quince, English cherry, &c. Had we time and space we might give the reasons for this, or at least many of them—but it must suffice to say that the question is all on one side, in every respect—first and last such severe pruning, such long bodies and high tops are unprofitable, out of place among us—whether with fruit or forest trees—tender or hardy, deciduous or evergreen with both the nurseryman and his customers. *Leaves and branches and bodies are first wanted and how can we get them in this system of ev-*

erlasting clipping and trimming? Why it's worse than tight lacing around the bodies!!

But our Nurserymen must take the lead in this reform or it will be hard to bring it about—and in this section where everything conducive to the hardihood of young trees is so vitally important to them we feel confident that they will not be slow to take hold of it when once understood and its great advantages appreciated. We would then most earnestly recommend to let our trees fork within two or three feet of the ground both for nurseries and orchards, especially in this section and further north. Indeed we doubt if root-grafted orchards can ever be got up to advantage in Northern Wisconsin, on any other principles.

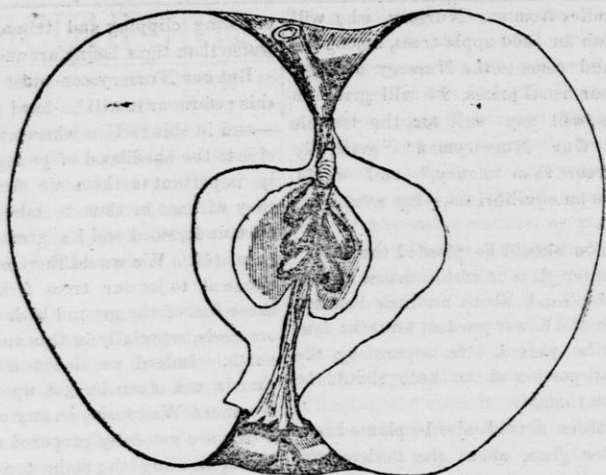
We are not fully prepared to urge the practice of heading the main tops of our orchard trees so near the ground—this may be of more questionable utility, requiring further investigation, but in regard to letting the trees fork out near the ground we are clear. We are clear that it would be of immense advantage to all parties. These forks can of course be afterwards pruned up to the common height if desired. To induce these low compact heads—heading back or shortening in, the leading shoots will often times be found necessary, particularly in our nurseries and with pear, plum, and English cherries, which throw up such long, straggling shoots. From one-third to one-half should in such cases be cut off.

Judicious pruning is of great importance in regulating the growth and appearance of trees—as every body knows. Where your trees get top heavy or leaning in any direction, as with prevailing winds, for instance, the main shoots on the leaning side should be headed back which if followed a few years will restore the equilibrium of the tops.

When the tops of trees are very severely cut as in grafting them or for scions, we have noticed that the growth the next season will sometimes be quite feeble—as much so as if the roots were cut off—there seeming to be a strong mutual dependence between the roots and the top, or more particularly the last year's shoots and the roots. This peculiarity we have seen quite strongly manifested in cutting back to the ground large seedlings for grafting, which often times have been almost killed by the operation. We would therefore avoid as far as possible very heavy pruning in any one season—*always grafting large seedlings in the top.* If obliged to cut—prune trees severely for grafting or scions, a good dose of manure would be advisable on a light soil.

Delevan Nursery.

F. K. PHENIX.



PERRY RUSSET.

PERRY RUSSET (Syn. Golden Russet—Boston Russet, &c.)—Size, medium, or large, roundish—somewhat conical. Skin, lemon yellow, nearly sprinkled over with russet dots, with a few blotches of the same. Stalk, thick, short—from $\frac{2}{3}$ to $\frac{5}{8}$ of an inch long. Cavity, acute, of moderate depth. Basin, narrow, rather deep, uneven. Flesh, yellowish white, fine grained, with an excellent sub-acid, spicy flavor. In outline, resembles somewhat the Roxbury. Now, middle of March, in excellent condition—will probably keep till May, in use all winter. Tree, spreading with many branches, a rapid grower, and very hardy roots.

FRIEND MILLER:—The specimen from which the above outline and description were taken, was picked from a root-grafted tree of about two years growth—standing in the grounds of Mr. Baker, Nurseryman, one mile east of St. Charles Village, Illinois, who regards the variety as very productive.

The tree is much cultivated in Nurseries, in Northern Illinois and Wisconsin. It has been received from Western New York, and Northern Ohio, under various names. The name here adopted was giv-

en by Mr. F. K. Phenix, of Delevan, who was first acquainted with the fruit in Perry, Wyoming County, N. Y.

The variety, though not an early bearer, promises to be an excellent one for the Northwest, where the Roxbury Russet is quite unpromising.

It is, in my estimation, superior in flavor to that much esteemed sort, and promises to keep about as well. I have specimens raised in Chautauque Co., N. Y., which were carted from Milwaukee here, perfectly sound and fully retaining their juices and flavor.

J. C. BRAYTON.

Aztalan, March, 1853.

Cutting Grafts.

A correspondent writing from Shelby County, Ky., to that excellent Journal, the *WESTERN HORTICULTURAL REVIEW*, in a desultory article upon Horticultural matters, makes some practical remarks, concerning the time for cutting and treatment of grafts—training the grape vine in such a manner as to preserve the fruit from the rot or mildew, &c. If it be a fact, as it would seem—as the writer has drawn his conclusions from actual experiment—that by special training, not only the rot can be

avoided, but the fruit improved in quality, a serious drawback for some years past upon the cultivation of the grape, may be overcome. The writer says:

"CUTTING GRAFTS AND CUTTINGS.—As to the time for making cuttings, I can say that I have had absolute proof that the fall is the best time for cutting pear, plum, cherry, and grape; nor would I except the apple. And for this simple reason: when they remain on the trees until February or March, as is the common practice, many of them become either winter killed, or are so much weakened is not to have vigor or force in them to form a union with the stock; whereas if the cuttings are made in the fall and buried in the earth, they come out in the spring with all the freshness they ever possessed, and when grafted will grow with absolute certainty, if the operation is properly performed upon a healthy stock. According to my experience, grape cuttings are almost worthless, if not taken in the fall and kept in the earth until the time of planting.

Is the mode of training the grape vine, as practiced about Cincinnati, the very best that can be adopted? It may be the most simple and convenient; but some facts that have come under my own observation, have almost brought me to the conclusion that the vines are too much crowded and kept too low. I have a small vineyard that produced some fruit last year. Nearly all the bunches near the ground were destroyed by the rot or mildew. Those that grew four or six feet from the ground were less affected by the disease. A German near Evansville, observing the same fact, trained some of his vines twelve or fifteen feet high, and they produced fruit of the best quality and entirely free from disease, while that on stakes of the ordinary height was much inferior in quantity and quality. A friend of mine had some vines in his garden trained upon a trellis about eight feet high; the fruit varied in quality from the bottom to the top—that at the top being the best. A vine trained on the walls of the house to the height of sixteen or eighteen feet, bore fruit in great abundance and without a blemish."

CLOVER.—One bushel of plaster of Paris per acre, sown broadcast over clover, will always pay for its cost.

Dwarfing Fruit Trees.

The French have a method of cultivating fruit trees, or trees which have been stultified, by a certain process, which their writers describe as follows:—

"Young trees are to be treated in the following manner. If there are more than three shoots on the plant, reduce them to that number, and shorten each to three, four and six eyes, according to their strength. The following season, reduce the number of leading shoots to six, and shorten them to three-fourths of their length, and spur in the remaining shoots.—The tree should be managed in every respect in this manner, until it has attained the required size, which of course depends upon the fancy or convenience of the owner, or conductor of the garden. I make a point of letting the trees take their natural form of growth, as far as the system described will admit; for I consider it of little consequence what shape is given to the tree, providing my end is obtained; that is, to make every branch, as it were, a long spur, with bearing buds from the extremity to the base."

It is asserted by both French and English writers, that trees so stultified are not so much exposed to injury from high winds,—that they produce better fruit, bear earlier and more abundantly, and occupy less space. Dwarfs are also produced by inoculating on stocks of small growth. The apple is often inoculated on the Paradise or *Doucin* stock, the peach on a slow growing plum, and the pear on the quince. We have seen large pears on trees not more than five feet high, the tops of which were not possessed of sufficient strength to sustain their weight of fruit without the assistance of props. This is a common result where some varieties of the pear are set in quince stocks. The writer above quoted says:—

"Two or three years' trial of this method only, might possibly deter many from a continuance of it, in consequence of the young wood which will be produced yearly at first and from the apparent difficulty of getting rid of the superfluity. But that inconvenience will be utterly surmounted if the foregoing instructions are attended to, and thy continuance will be the possession of both healthy and fruitful trees."

The Garden.

This is the month for commencing operations in the garden, and a few suggestions in regard to it may serve to remind our friends, of the value of a well conducted vegetable garden, and perhaps prompt some, to cultivate this spot of the farm with more care than heretofore.—The garden, properly managed, yields more of the real necessities and comforts of life than ten times the same area of any other part of the farmer's premises. Remember that there are other and nobler profits than those which find their way into the pocket—that whatever is most conducive to man's health and rational enjoyment is of most real and genuine profit to him. True, it requires much care and patient toil, to cultivate, successfully, a desirable variety of garden vegetables—so as to have them early in the season when most needed. This is the reason why so few farmers have good gardens. They think the requisite time and labor poorly invested, and without reflecting upon the value of the great amount of wholesome and luxurious food the garden affords to the family—they neglect it, to give to their broad acres of wheat and corn, all their attention and thought.

The females of the family may find some profitable employment in the garden. While laboring to provide luxuries for the table, the constitution will be invigorated by exercise and inhaling the exhalations of the freshly stirred earth. Try it, ye who are languishing, and our word for it, you will find it better for the system than compounded medicines or patent nostrums, and more elevating to the mind than the whole round of fashionable amusements. Go into the garden and while you labor with your hands, study the silent, beautiful, workings of nature—the springing blade—the swelling bud—the expanding leaf—the opening flower.

To raise the best of vegetables, which should be the aim of every gardener, the ground should be of deep tilth so as to allow the delicate rootlets of the plant to strike deep for nourishment. It must also be finely pulverized, else many small hard shelled seeds as the carrot, onion, beet, parsnip, &c., will fail to vegetate for want of close contact with the soil. A garden roller is a very useful implement to press the earth compactly about the seeds. The beds after being sown should be pressed down with a heavy roller or by some other means.—

This not only packs the soil about the seeds, but protects them from the effects of drouth.

GOOD SEED.—It is of the highest importance that you get good seed, for on this depends much of the gardener's success, in this latitude where the seasons are too short to mature the growth of a second sowing, after waiting a reasonable time for the first to come up. The plumpest and heaviest seed should be selected. Such will not only be most sure to vegetate but will produce the most vigorous growth in the plant.

ASPARAGUS BEDS.—The asparagus bed should have a dressing of rotted manure and ashes, well worked in with a fork between the rows—taking care not to injure the crowns of the roots—then rake the bed smooth and strew a sprinkling of salt over it. To make a new asparagus bed, dig a trench from three to four feet deep and fill it up with the richest sandy loam that can be obtained, mixing in liberal quantities of rotted manure and ashes—in the proportion of six bushels of manure to one bushel of ashes. *Unrotted* manure should never be used—better to have none than to use it.

PIE PLANT.—To make a bed for this, trench from two to three feet deep and observe the same directions in filling up, as given above for the asparagus bed. The bed should be prepared and the roots planted as soon as possible after the frost is out of the ground. After the roots are planted, mulch with coarse litter from the horse stable. The pie plant bed may be prepared in the fall and the roots planted just as well as in the spring; and better, for the ground is in a better condition to work than early in the spring and the plant is fixed in the ground ready to start when the spring opens.

APRIL WORK.—Sow onions as soon after the frost is out, as the ground can be prepared.—Sow in drills one foot apart and one inch deep, in a light rich soil. If the soil be clayey or tenacious, it is well to cover the onion and all other delicate seeds in the drill with fine loam.

Ground for onions, should receive annually, a dressing of well rotted manure, spaded in and well incorporated with the soil—in fact, this is the only kind of manure that should ever be used on any part of the garden. And don't fail to apply the roller to the onion bed. If the soil be a light loam you cannot roll it too compactly. Early peas should be sown, as they bear a heavy frost—for a succession—sow once in ten days until the middle of June. Pie

plant and asparagus seeds should be sown early, as they too, stand the frost well. Cabbages, turnips, beets, spinach, celery, peppergrass, vegetable oysters, and tomatoes, should next be got in.

EARLY VEGETABLES.—Those who have no hot beds can raise a supply of cucumbers, melons, squashes, peppers, tomatoes, &c., much earlier than they can be grown in the usual way, by placing an inverted sod in a shallow box,—then, with a knife draw lines two inches apart both ways, thus cutting the sod into squares.—It should be cut quite through to facilitate the transplanting successfully. In each of the squares thus formed, plant two seeds and set the box in a warm room opposite a window where it will be exposed to the sun, or, when the weather is mild out doors. When the plants are two or three inches high, the squares should be carefully lifted from the box and placed in holes prepared for them in the open ground.

CAUTION.—Recollect that seeds of the same genus should not be sown very near each other as this often causes them to degenerate. This remark applies to the gourd tribe—as melons, squashes, pumpkins, &c., also to different varieties of corn and various other seeds.

The Osage Orange.

We have upon our table six letters, inquiring about the *Osage Orange* as a hedge plant. The principal information sought, seems to be, whether this hedge plant has the ability to stand the winters of this and more northern latitudes. We confess, that we are as ignorant as our correspondents are upon the subject of their inquiry, so far as any observations of our own are concerned. We have never grown a stalk of it, nor have we ever seen but few stalks growing any where. Our faith in its success so far north as this has never been very strong.

In a recent conversation with Mr. A. Dann, who lives eight miles west of this place, we have gathered some facts concerning the *Osage Orange*, and which we will give in reply to the inquiries of our several correspondents.

Mr. Dann informed us that four years ago, he purchased in St. Louis, one quart of *Osage Orange* seed which he planted in drills, on the farm where he now resides. About one-half of the seed came up the first season and the remainder the next spring, after laying in the ground one year. The first season, the plants

grew about one foot high, about one-half of which killed down the following winter to within three inches of the ground, while the remainder were killed out root and branch.—Those which survived the first winter, grew the second season about three feet in height and killed down the succeeding winter to within one foot of the ground—none of any account being killed out entirely. The third season they grew from four to five feet high and killed down two. The next spring (1852) they were headed down to within one foot of the ground and transplanted, which they survived, and made eight or ten inches of new wood during the season. At the present time of writing (15th of March) they appear to be alive.

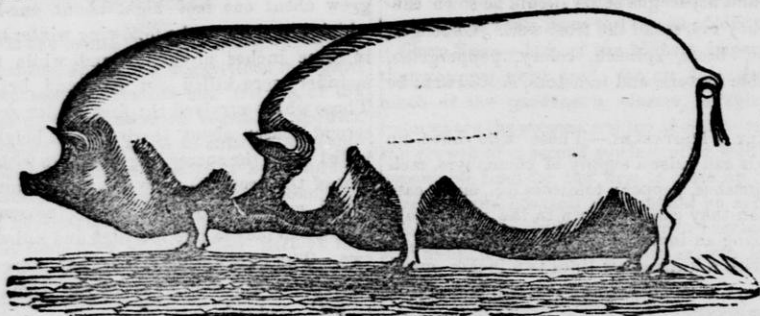
The experience of Mr. D., does not present a very flattering aspect of this matter, yet we think it affords sufficient encouragement to warrant further trial. Our advice would be, to try a few rods of it at first; but begin with the seed rather than the plants raised in a more southern climate.

RESTORING DRY GRAFTS.—Thomas, in his *Fruit Culturist*, says "Grafts which have become dry, may be restored if the moisture is applied so gradually that its absorption may require several weeks. In one instance shoots cut early in autumn, and subjected to thorough drying, were restored to perfect freshness by the next spring, by wrapping them well in moss and burying them in a dry spot of ground; and being set they all grew."

"Scions may be sent by mail by wrapping them with oil-silk or thin oil-cloth, drawing it closely round them by means of small threads."

CATALOGUE OF SEEDS, PLANTS, ROOTS, TREES, &c.—Messrs. Hovey & Co., of Boston, have favored us with full descriptive catalogues of their very extensive assortment of Garden, Fruit, Field Seeds, and Bulbous Flower Roots, Garden Implements—Books on Horticulture, Flower Seeds, Green House Plants, Ornamental Plants, &c. From an examination of the catalogues of Messrs. H. & Co., we should think their assortment in every department of their business very full and complete—those of their Flower Seeds and Bulbous Flower Roots—especially so. The catalogues may be seen at our office.

BONES AS A MANURE.—A single pound of bones contains as much phosphoric acid, (one of the essential ingredients of wheat,) as 100 lbs. of wheat.



The Right Kind of Hogs.

We have often presented to those interested, the important advantage to be gained by an improvement in our Western Swine, with a view to their ultimate extinction, and the substitution in their stead of a more profitable race. Within the last six months a *few* hogs of the right kind, have been brought into this State, but like angel's visits, they are *few* and far between,—we need more. The introduction of one full blood Suffolk boar into each neighborhood of twenty farmers at an expense, not to exceed three dollars each, would enhance the value of their stock of hogs more than one hundred per cent the first twelve months. We can adduce, nor do we want any stronger evidence of the truthfulness of this assertion, than the accompanying engraving and description of two hogs, given in a late number of the *GRANITE FARMER*, published in the City of *Manchester, N. H.*, where the hogs were reared and fattened.

The most striking characteristics of the Suffolks, are, early maturity, and the small amount of food comparatively, which they consume, to make a given amount of pork, while they are quite equal in weight to our chance made racers. What more is wanting to make a perfect hog—a “whole hog?”

“The above engraving is a correct representation, even to the twist in the tail, of two superior hogs reared and fattened by

James A. Stearns, Esq., of this city. The sow that brought them was purchased from a drove, and was called a Berkshire, though from the description, we should judge, not a pure blood. The boar was a full blood Suffolk, or as near a full blood as any in this vicinity. These two were in all probability a mixed breed, of the Suffolk, Berkshire and native, partaking pretty largely of the former.

They were slaughtered when fifteen months old and weighed exactly 1100 lbs., there being only five pounds difference in their weight. They were exceedingly small in their limbs, and one would scarcely believe that so small bones would support so great a weight. The middlings filled three barrels, leaving one or two small pieces over. While in the pen they were the admiration of hundreds of visitors, and now having gone through the ordeal of salt and hot water will be admired by all who like good pork and are so fortunate as to get a taste of this.”

Advantage of a Change of Seed.

A recent number of the *North British Agricultural*, contains an article on this subject, from which we gather the following statements. Experience has proved that a change from an inferior to a richer district is seldom beneficial, but that a change from a warmer to a colder district, is always followed by a beneficial result, in somewhat shortening the period of growth, an increase of weight, appearance of sample and very generally in the produce, the difference in straw being equally observable. It has also been found that new and improved varieties of grain in a few years generally lose their distinctive characters.

This has been imputed to a falling off of the vitality of the new, and consequently hybrid plant, showing the necessity of systematically selecting and propagating agricultural seeds of all kinds. A change of seed wheat from one district to another has frequently resulted in an increase of about two bolls (two bushels) an acre. On a farm possessing a great variety of soil, the change of seeds from one part to another has always been beneficial. The introduction of seed wheat from a region where the crop is not affected by the smut, is said to prevent this disease, even better than any preparation of the seed. The more recently the grain has been removed from the straw the better, as it is liable to become musty when lying in store.

The same deterioration in quantity and quality is noticeable in seed oats, when the same seed is continued. The following advice of the Editor will be equally applicable to farmers in this country:

"We hope gentlemen will continue to direct their attention to the subject of change of seed, and they will favor the public with the results of their experiments. As agriculture is emerging from the rule of thumb practice, it will prove highly advantageous for its speedy advancement, that experiments on this, as well as other subjects, be only undertaken with care, and upon correct principles; that not only the land, with produce, be measured, but also every care exercised in noticing the varieties of the grain, the nature of the soil on which it is grown, the climate as regards elevation, moisture, &c., the period of sowing, coming into ear, and when ready for cutting, with the result of the after produce. Nothing should be regarded as unimportant in conducting agricultural experiments. We would suggest the importance of undertaking experiments, not only with grain, the growth of a different climate, but that these experiments, should embrace the question of steeping seeds in liquids containing a solution of different substances, such as dissolved nitrate of soda, potash, sulphate of ammonia, etc., and also how far the plan of coating the seed with such a substance as guano, for instance, affects the future produce. We make these suggestions with greater confidence, as we have experimentally found that the produce was sensibly increased of wheat, oats and

barley, by steeping in such solutions, and that steeping the two latter grains checked, if not wholly prevented, black heads."

[Alb. Cul.]

BUTTER FROM COWS FED ON HAY.—The price of butter is so high this winter that our farmers will make all they possibly can for sale. It has been customary in former years to sell the milk to milkmen, after the cows were fed on hay, from the long time it took to bring the butter, and the want of rich color in the butter after it had turned. We have often known the patience of the whole family exhausted, by churning four or five hours, when at last the cream turned to butter, it was about the color of lard, and as tasteless as it was colorless. All this difficulty may be avoided by scalding the milk as it comes from the cows. It should be strained from the pail directly into a boiler placed over the fire, and should be brought nearly to a boiling heat, although not allowed to boil. Then put it in the pans in the cellar as usual, and no more difficulty will be experienced in churning than would be in June. The butter will come solid and yellow, and would hardly be known from the best butter of the season. This we have from one who has tried it. We would recommend to all who make butter at this season, to make a trial and see if it is not so.

[Spindle City.]

COOKED FOOD FOR COWS.—Mr. James S. Huber, lately stated before the Philadelphia County Farmers' Club, that he had proved by actual experiment in feeding 12 cows, 180 days upon cooked food, that he made a net gain of \$32. In place of 20 lbs. of hay per day, formerly fed raw, he now feeds 12 lbs. cut and steamed. With this he mixes $4\frac{1}{2}$ quarts of shipstuff, Indian corn meal and oil cake meal, in about equal portions. This with the hay, weighs about 31 lbs. by that process. He says that it is not only more economical, but more palatable to the cattle; they eat it without waste and keep in better condition. His steaming apparatus cost \$25, which he more than saved in six months' feeding.—He considers, however, the greatest gain is the health of the animals.

[N. Y. Agricultor.]

She that is born a beauty is half married.

EDITOR'S TABLE.

DEFERRED ARTICLES.—We had prepared an abstract of the proceedings of the first annual meeting of the U. S. AGRICULTURAL SOCIETY, for this number, but are obliged to defer it until next month, with some other matter. An unusual space has been allotted this month, to Horticulture and Gardening.

CISTERNS.—We prepared an article on the construction of cement cisterns intending it for the March number, but it was crowded out to make room for matter which could not very well be laid over. We are also in the same plight in reference to the April No. We will give it in the May No., which will be as soon as the ground will be in a proper condition to build after the manner we propose, as the ground must be free from frost—settled and so dry that water will not accumulate in the hole.

SEEDS.—We would tender our thanks to D. Redman, Esq., Editor of the Southern Cultivator, published at Augusta, Ga., for packages of *Stowell's Evergreen Sweet Corn—Black Barley—Patagonian Rye, and Mammoth Yellow Corn.* This corn is said to be a new variety, and to our mind rightly christened. It is indeed a mammoth corn,—for we have never seen any corn before, that would bear any comparison in size with this specimen.

TRANSACTIONS OF THE WISCONSIN S. AG. SOCIETY.—We are indebted to Albert C. Ingham, Cor. Secretary of the State Agricultural Society, for a copy of its Transactions for 1851—2. In preparing this volume for the press—the first of the Society's Transactions—Mr. Ingham has labored assiduously, and considering the material he had to work with, we think he has been eminently successful. The work is alike creditable to himself and the Society.—It was printed by Beriah Brown, State Printer, and is the best specimen of book printing that we have seen from the Wisconsin Press—it is well done.

Our thanks are due Hon. J. Skianer, of Palmyra, for a copy of the same work. This acknowledgement should have been made long ago.

Why don't the Legislature provide every School District Library in the State, with a copy of this work, instead of appropriating so large a number as it has, to its own members? The whole expense of publishing it has been

drawn from the public Treasury—the object of its publication is the dissemination of knowledge, hence it should be made accessible to every inhabitant of the State, which can be done in no way more effectual than the one proposed.

Mr. Ingham has also laid us under obligations for a copy of the first Annual Report of the Indiana State Board of Agriculture. This Volume embodies a large amount of valuable matter.

ADVERTISING DEPARTMENT.—As the season for transplanting trees is at hand, we call attention to the several Nursery advertisements to be found in this paper. Heretofore the citizens of this village and of the neighboring towns have felt the want of a good Nursery in their midst—that want is now supplied by the Messrs. Drakes, who commenced their Nursery here, six years ago. They now have an extensive stock of every kind of Nursery products for sale. We would also remind the public, that Messrs. Bell, of Gardner's Prairie, Phoenix of Delevan, Brayton, of Aztalan, Van Kirk & Co., of Waukesha, and Dr. Kennicott, of Illinois, are all prepared to serve you with every thing in the Nursery line. Mr. Cahoon, of Kenosha, and the Messrs. Kelloggs, of this Village, are also on hand, with any quantity of Cahoon's Celebrated Pie Plant, and other nice fixings for the garden and orchard.

We would also refer the reader to the cards of Messrs. Drury & Dodge, of Fond du Lac, D. B. Travis, of Onalaska,—the Messrs. Kelleys, of Northwood, Minnesota, and to the advertisement of Stowell's Evergreen Sweet Corn.

VALUE OF THE FARMER.—One of our subscribers at Prospect Hill, thinks he has got the worth of his money, paid for the current volume, in the first number. We hope he may find each succeeding number equally as valuable. We do not intend they shall be less so.

Last autumn, one of our readers remarked to us, that "he attributed to the reading of the Farmer, the saving of a number of thrifty and valuable fruit trees from total destruction by insects." When the value of agricultural periodicals and books shall be generally understood and appreciated, by those who may be engaged in rural arts, less will be heard about the failure in, and unprofitableness of agricultural pursuits.

How many fine hats serve as a cover for worthless heads, and how many plaited shirt bosoms cover a hollow cavern where a heart should be lodged.

WHAT THE FARMER MOST NEEDS.—It is not a college, endowed by the State; it is primary schools, to prepare farmers' sons and daughters for the higher walks in science as applied to agriculture. They need an organization. They want farmers' clubs and neighborhood libraries of agricultural books.

FARMING PROPERTY.—We learn that property is rising in value in the south part of Grant County, on account of the prospects of soon being in proximity with the Railroad.

ARKANSAS LEAD ORE.—A piece of ore composed of lead and silver, weighing about 1500 pounds, has been received at New Orleans. It is stated that this ore produces 120 ounces to the ton. The vein from which it was taken is very rich, and promises to be a source of great profit to the miner.

MACHINE SHOPS.—Budd's Foundry & Machine Shop in this village, has been greatly enlarged and is now capable of turning out anything desired in the line of machinery or castings. Mr. B. has made a great outlay in buildings, tools, and machinery, and we have no doubt will find it a profitable investment.

COL. A. P. DICKEY, of Racine, has purchased the extensive Machine Shop of Cox & Co., where he is prepared to answer any orders in the line of Horse Powers, Threshing Machines, Fanning Mills, or any other kinds of machinery. Mr. D. has connected with this establishment a *Planing* Machine for dressing lumber to order.

MECHANICS MAGAZINE.—No. 1 of Vol. 3 of this valuable Monthly is on our table. It is a useful work for Mechanics and Engineers, and should be patronized. The subjects of which it treats are illustrated with fine engravings.—\$3 per year. Appleton & Co., N. Y.

THE SOIL OF THE SOUTH, published at Columbus, Ga., has been changed from quarto to octavo in form,—a much more convenient shape for binding. The Soil is an able organ of Southern Agriculture.

THE SOUTHERN CULTIVATOR, is another excellent Agricultural Journal, published at Augusta, Georgia.

BROOM CORN FOR SHEEP.—Albert Hibbard Esq., of N. Hadley, Mass., makes use of all the seed of his broom corn to fatten sheep—they are fond of it and will fatten better on this than on Indian corn. Broom corn is raised in

great quantities in the river towns, where the brooms are made up and sent to all quarters of the country.

We have often raised the corn for the brush, but we have never made much account of the seed, though hens are always fond of it. Hogs too will eat it, though we seldom think it has been converted into meal for hogs. Mr. Hibbard thinks the broom corn seed more valuable for sheep than oats or corn. Ex.

PITTS'

CORN AND COB MILL.

This celebrated Mill is now made and sold by H. A. Pitts, the inventor, at his shop, West Randolph Street, Chicago, better known as H. Witbeck's Wagon and Plow Manufactory.

This Mill reduces the corn and cob to a proper degree of fineness by a different mode from any other mill in use, and is undoubtedly the best in existence. It will grind the cob and corn, if it is wet or dry, better and more of it, with less power, than any other. It is more durable and more easily kept in condition to grind than any mill ever before offered to the farmer.

H. A. PITTS.

March, 1853.

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LIVE STOCK AND AGRICULTURAL DEPOT.

CHARLES W. KELLEY & BRO., NORTHWOOD,
MINNESOTA.

DEALERS in Live Stock, Farming Implements, Fruit Trees, Farm and Garden Seeds.

Live Stock consigned to us will be pastured on fertile bottom lands in inclosures watered by the Mississippi, from the 15th of June to the 10th of September, without charge.

Red River Spring Wheat, and other choice grains raised in this latitude, 46° north, for sale in quantities to answer all orders.

200 GOOD HEALTHY SHEEP,

wanted. Address, C. W. KELLEY & BRO.,
Northwood, via. Itasca,
April, 1853. Minnesota.

THE STOWELL EVERGREEN SWEET CORN.—A few bushels of this new and valuable variety, from seed raised by Professor J. J. Mapes, L. L. D., for sale. Per bushel, \$10; peck, \$5; half peck, \$3; quart, \$1; sent by express to any part of the country, on the receipt of the money by mail. This is beyond all doubt the most prolific kind of Sweet Corn ever grown. No Farmer should be without it.—One of the advantages claimed for this corn by Prof. Mapes, is that it may be kept green and fresh all the year round. The subscriber's limited experience, however, does not enable him to endorse this. Address, post-paid, Alfred E. Beach, White Plains, Westchester Co., N. Y. [From the "Working Farmer," September, 1851. By Professor Mapes.]

"We have long been convinced that Sweet Corn would prove superior as green fodder to any other; and the only objection urged against its use, has been the smaller yield per acre compared with other kinds. We are now prepared to recommend the use of Stowell's Evergreen corn for this purpose. The stalks are nearly as sweet as those of sugar-cane, and double the quantity can be grown to the acre, to that resulting from ordinary sweet corn."

[Prof. Mapes, in the "Working Farmer," December, 1851, gives the following directions for preserving the Stowell Evergreen Sweet Corn:—

"The ears should be gathered when fully ripe, and the husk should be tied at the nose (silk end), to prevent drying; then the corn will keep soft, white and plump for more than a year, if in a dry and cool place. At the dinner of the Managers of the Fair of the American Institute, last year, we presented them with the corn of two successive year's growth, boiled, and there was no perceivable difference between the two. This year we sent to the Fair one stalk containing eight full and fair ears, and could have sent many hundred stalks of six ears each."

PIE PLANT FOR SALE.

CAHOON'S well known Seedling, superior in quality and size to any of the varieties of Mammoth, Colossal, or Victoria, continues to produce new leaf stalks until November, not being affected by the early frosts. This variety was raised by the subscriber 13 years ago from seed, and after being under cultivation that length of time holds good in size, having this year produced stalks weighing four pounds fourteen oz. each.

I will securely pack in boxes, and forward according to directions, ten Roots for \$5, five Roots for \$3, or one for \$1, Cash to be sent with the order. A severe frost does not injure the Roots. They can be sent with safety to any part of the Union. Also,

DWARF PEAR TREES

Of superior varieties, many of them bearing sizes. Gooseberry Bushes of best varieties. Quinces and Raspberries in variety. Grapes in four varieties. Red and White Currants. Flowering

Shrubs and Ornamental Trees.

Bulbous, Flowering Roots, and Dahlias that could not be beat at the State Fair. 1500 Balsam Firs, Spruce, Hemlock, and Arbor Vitae, from one and a half to five feet high.

B. P. CAHOON.

Kenosha, March 8th, 1853.

Law and General Collecting Office, Fond du Lac, Wis.

DRURY & DODGE,

ATTORNEYS AND COUNSELLORS AT LAW,

AND

Solicitors in Chancery.

Messrs D. & D. will practice in all the courts in this State, and give special attention to collecting and securing debts. Being two of the oldest settlers, and well acquainted in this region of country, they possess advantages for the transaction of business, known to but few, if any other firms. They have business connections formed throughout the State of Wisconsin, Northern Illinois, and Eastern Iowa.—They will also attend to the purchase and sale of lands, the payment of taxes, the location of Land Warrants, the examination of Land Titles, &c. The most satisfactory references will be given to correspondents in New York, Boston, Baltimore, Philadelphia, Washington, and most of the principal cities; and all business entrusted to them, will be promptly attended to.

ERASTUS W. DRURY.
WILLIAM C. DODGE.



**Wisconsin Wholesale Drug
WARE HOUSE.**

ESTABLISHED IN 1844.

S. JOHNSON, JR.,

Wholesale Dealer in Drugs, Medicines, Paints, Oils, Dye Stuffs, &c. General Agent for most of the popular Patent Medicines sold in Wisconsin.

Proprietor of Johnson's Chemical Hair Invigorator, Johnson's Cherry & Liverwort, and the famed Bone & Nerve Liniment.

151, East Water St., Milwaukee.

T. LITTELL,
WHOLESALE AND RETAIL DEALER

IN

Agricultural Implements, Seeds, &c.,

**109, East Water-st.,
MILWAUKEE,**

Is prepared to supply Dealers and Farmers with any kind of **PLOWS**, manufactured by *Ruggles, Nourse, Mason & Co.*, at manufacturers prices,

adding only cost of Transportation. Their new Series of Plows, comprises the most desirable patterns that have ever been introduced.

Their **EAGLE PLOWS**, are already too well known to need one word said in their favor.

And is also prepared to furnish Extra Points, Mould Boards, Land Sides, or any part of the Plow that may be wanted. Wherever their Plows have been introduced, they have received the highest commendation.

I am prepared at all times to supply Hay Cutters, Harrows, Cultivators, Corn Shellers, Road Scrapers, Thermometer Churns, (and all other desirable patterns,) Fan Mills, Seed Sowers, Corn Planters, Meat Cutters, Field and Garden Seeds. Also Wholesale Dealer in

GROCERIES AND PROVISIONS,

Agent for the sale of **Dupont's Celebrated Powder.** 5n3

HORTICULTURAL!!

Rock County and the State can now be supplied with *Cahoon's* far-famed *Mammoth Seeding Pie Plant*,—unequaled by any other kind from *Maine* to *Texas*. Also a large assortment of the choicest varieties of Gooseberries, Currants, Grape, Strawberries, Quince, &c. Any orders for Fruit Trees of any kinds, and Ornamental Shrubbery, will meet with prompt attention on most reasonable terms. Arrangements are being made to supply this market with *Cahoon's* entire stock from *Kenosha*.

Yard near Monterey, Janesville, Jan. 25 '53.
n2tf

Geo. J. & S. H. KELLOGG.

AZTALAN NURSERY.

THIS Nursery is now well stocked with choice Fruit Trees, Shrubs and Vines.

The stock of Apple Trees of choice varieties, is large and complete.

The stock of Pear and Plum Trees small; comprising only the most hardy of the choice varieties.

Persons ordering trees can rely upon being fairly dealt by, and will get no trees but those which have proved good in the West, if the selection is left to the proprietor.

J. C. BRAYTON.

Astalan, Jefferson Co., Wis., }
March 1st, 1853. }

D. B. TRAVIS,
**GENERAL LAND AGENT, SURVEY-
OR AND NOTARY PUBLIC,**

ONALASKA, LA CROSSE COUNTY, WISCONSIN

Will attend to locating Lands, Purchase, Sale and location of Land Warrants, locating State Lands at Madison, securing Pre-emption Claims, Payment of Taxes, &c., &c.

References.—Gov. L. J. Farwell, Madison Washburn & Woodman, M. Point; Hon. T. T. Whittlesey, Pheasant Branch; R. C. Van Ransseler, Waukegan, Ill; Col. G. H. Slaught, U. S. Land Office, M. P.; Van Ransseler & Rowe, Onalaska.

Post Office address, La Crosse, Wisconsin



WAUKESHA COMMERCIAL NURSERY.

THE Subscribers offer for sale, this season, a fine assortment of Fruit Trees, comprising the best now cultivated. They are very thrifty and will be sold at wholesale or retail, for cash or approved credit, at reasonable prices.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruit, to merit the confidence of his friends and the public in general.

All orders accompanied with cash or satisfactory references will be promptly attended to, and trees will be packed and forwarded without delay. We will give cheerful and prompt attention to all post-paid communications requiring information, &c.

D. VAN KIRK, & CO.

Waukesha, January 1, 1853.

NURSERY BUSINESS.

FRUIT & ORNAMENTAL TREES

FOR sale at Janesville, Racine and Koskonong Nurseries, Wis. The proprietors are now enabled to offer to the public, a stock of trees heretofore unequalled in the West. Remarkable for their hardiness, vigorous growth, and adapted to our western climate; embracing fruit trees of every description. Apples, Dwarf Pears, Plums, Cherries, Flowering Shrubs, Bulbous Roots, &c.—comprising all the most popular sorts now in cultivation—and having devoted their personal attention to their propagation and rearing, feel warranted in recommending them to the confidence of the public. Nurserymen, Dealers and Planters are respectfully invited to call and examine for themselves. All *pre-paid* orders containing a remittance or proper reference will receive prompt attention addressed to,

E. B. & J. F. DRAKE, Janesville.

F. DRAKE, Racine.

Janesville, January, 1853.

WISCONSIN GARDEN AND NURSERY,

On Gardner's Prairie, town of Spring Prairie, Walworth Co.

THE Subscriber takes this method to inform his patrons and the public, that he may still be found at the old and well known establishment, at which he offers for sale the coming spring, over Forty Thousand Apple Trees of a fine size and from five to seven years from the graft. Sound, healthy and stocky trees at 18 cents each. Also Pears, Plums, Peaches, Cherries, Quinces, Grapes, Currants, Gooseberries, Strawberries, Raspberries, &c., at prices to correspond to the times. Of the ornamental, a large assortment of Shade Trees, Shrubs, Flowering Plants, Hardy Roses, Bulbous Roots, Dahlias, a choice assortment. Green House Plants, any quantity. Ever Greens; Spruces, Firs, Pines, Cedars and in fact almost every thing usually to be found in such an establishment. The fruits have been selected with great care as regards quality of Fruit and hardness of trees. The Nursery is located on the open prairie with a northern exposure. The land has never been manured and consequently the trees are perfectly hardy. Trees taken from this Nursery seldom fail to grow in transplanting. All are invited to call and examine for themselves as the Subscriber hopes from long experience and strict personal attention to merit a continuance of public patronage.

N. B. All letters of inquiry sent to Burlington Post-office will receive prompt attention.

Catalogues Gratis at the Nursery, and by mail post-paid. JOHN BELL.

Wisconsin Nursery, January 1853.

THE GROVE NURSERY AND GARDEN.

LARGE Budded and Engrafted Apple Trees, with fine heads, at 15 to 25 cents each, or \$15 per 100—Average sizes, by the thousand, \$100 to 140. Plums and Quinces—a good supply, at 25 to 37½ cents each. Pears and Cherries—a small stock at old rates. Ornamental Trees, Flowering Shrubs and Plants, in great variety, and the lowest prices, in lots, principally of our selection. These last furnished to dealers on commission. Address,

J. A. KENNICOTT,

Northfield, Cook Co., Ill.

The New Edition of

LAPHAM'S POCKET MAP

OF WISCONSIN, showing the surveys of the Menomonee Lands, &c., may now be had at the bookstores, or by application (accompanied by the cash) to the undersigned. It will be sent by mail to any address upon the receipt of one dollar. A liberal discount made to dealers.

I. A. LAPHAM.

Milwaukee, January, 1853.

WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V.

JANESVILLE, WIS., MAY, 1853.

NO. 5.

PUBLISHED ON THE FIRST OF EACH MONTH, BY

MARK MILLER.

TERMS:

50 Cents a Year in Advance;

Five copies for \$2, if directed to one Post Office, and at the same rate for a larger number. All subscriptions to commence with the volume. Back numbers supplied to new subscribers.

ADVERTISING;

One page per year, \$30. Half page, \$30. Quarter page, \$18. Eighth page, \$10. One square, (twelve lines or less,) 1 year, \$6.30. (Less than one year,) for first insertion, \$2.00. For each subsequent insertion, 50 cts. And at the same rate for a larger amount.

These terms will be strictly adhered to. The circulation of the FARMER is large, and the amount of advertising limited; which renders it a more valuable medium for advertising than if a larger space was appropriated to this department.

The Fowl Fever.

The fowl excitement, *alias* "hen fever," as it has not inaptly been termed—which appeared in the city of notions some five years since—has been gradually tending westward until we find it prevailing to quite an extent in this region; and although it has lost much of the intensity, which marked its progress amongst the more excitable New Englanders—at least so we judge, if price is any criterion—it will most likely have a *run* which it is to be hoped will finally result in an increased attention to this source of profit.

It has already awakened an interest in regard to the most profitable varieties of domestic fowls for eggs and poultry. To our mind no branch of domestic economy, of equal importance, has been more shamefully neglected by the farmer than the raising of eggs and poultry; yet, we believe "no part of his premises can be made to contribute, according to amount of capital invested, more effectually to the comfort and luxury of the family than the poultry yard."

The way in which fowls are generally managed is not the best either for them or their keepers. They are allowed to run wherever they please—lay and sit wherever they can find a place—(the more secret the better it suits them) no suitable accommodations provided for roosting—scattered at night about the

buildings, on the vehicles, harnesses and utensils—no attention to feeding them—their eggs and themselves exposed to vermin. Under such circumstances it is not to be wondered at, that comparatively few eggs are obtained—few chickens are raised, and fowls are considered of but little convenience and no profit. Another serious drawback, and one which is far more destructive to fowls, than want of proper feeding and quarters—is too little attention to a change of stock—continual breeding in and in, the result of which is degeneracy—inferiority in size, hardiness and laying qualities.

There are great differences in domestic fowls as well as among the various species of domestic animals. It has been well ascertained, by fairly tested experiments, that there are certain varieties of fowls that are more prolific than others,—that produce in a given time a much larger number of eggs than others will. Certain varieties will furnish for the table, with the same outlay of expense and care, twice the amount of food that can be obtained from others. These qualities are so combined in some varieties as to give great size, hardiness, good laying qualities and beauty of plumage, rendering them well worthy the attention and consideration of every farmer and villager.

DEFERRED ARTICLES.

United States Agricultural Society.

The United States Agricultural Society held its first annual meeting at the Smithsonian Institute, in the City of Washington, on the 2d of February. Nineteen States and Territories were represented.—The proceedings of this meeting augurs better for the future permanency and prosperity of the Society than those of the meeting held on the 24th of June last, when the Society was organized.

The President, Hon. Marshall P. Wilder, delivered before the Society a concise ad-

dress—a business-like document—recounting the past operations of the Society and suggesting plans for its future consideration.

Professor Mapes, of New Jersey, delivered a lecture before the Society, on *fertilizers*.

It was Resolved, That Congress be memorialized to establish a Department of Agriculture—the head of which Department, when established, shall be a Cabinet Officer.

The Treasurer's Report showed a balance in the Treasury of \$1,920,61.

Hon. Samuel Appleton, of Boston, has donated \$1000, to the Society. Other gentlemen have donated large sums to aid in the accomplishment of its purposes.

From the tenor of the whole proceedings of this meeting we regard the Society as established on a permanent footing.—We most sincerely hope that it may be so, and that its watchword hereafter will be—*Onward*.

We should be pleased to give in this connection, the President's address—to whom our thanks are due for a copy—also a full report of the proceedings of the meeting, did our limited space admit. The whole will be published in the quarterly Journal of the Society.

The following gentlemen were elected officers of the Society for the ensuing year.

President.—Marshall P. Wilder, of Massachusetts.

Vice Presidents.—Ezekiel Holmes, of Maine; G. W. Nesmith, N. H.; Frederick Holbrook, Vermont; B. V. French, Mass.; Josiah Chapin, R. Island; S. D. Hubbard, Conn.; Henry Wager, N. Y.; James J. Mapes, N. J.; Frederick Watts, Penn.; C. P. Holcomb, Delaware; W. D. Bowie, Maryland; G. W. P. Custis, Virginia; Henry K. Burgwin, N. Carolina; John Witherpoon, S. Carolina; P. M. Nightingale, Ga.; Richard Jones, Alabama; Alex. H. Beques, Mississippi; A. B. Roman, Louisiana; Samuel Medary, Ohio; Robert Mallory, Kentucky; M. P. Gentry, Tenn.; Jos. H. Wright, Indiana; S. A. Douglass, Illinois; R. Atchinson, Missouri; T. B. Flournoy,

Ark.; J. C. Holmes, Mich.; — Baker, Florida; T. J. Rusk, Texas; W. F. Coolbaugh, Io.; A. C. Ingham, Wis.; — Homer, California; J. B. Bradley, District of Columbia; S. M. Baird, New Mexico; H. H. Sibley, Minnesota; Joseph Lane, Oregon; Joseph L. Hayes, Utah.

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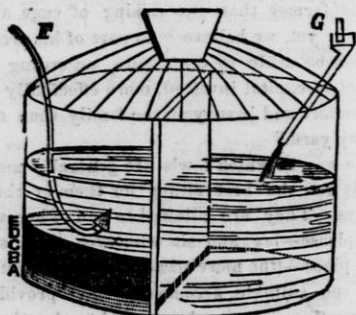
Treasurer.—William Selden.

"After the adjournment of the meeting the Executive Committee met and prepared a memorial to Congress asking "a portion of money now annually appropriated to the Patent Office for the preparation of the Agricultural report, and the collection and distribution of seeds," with a view to the performance of that service themselves, and we understand that it will be presented in a few days. This was thought to be all that it was expedient to solicit from Congress at the present Session. At another, the establishment of an Agricultural Department, with a Cabinet officer at its head, will be urged."

Cisterns.

In answer to the inquiry in the Feb. No. about building cisterns so as to filter rain water for family purposes, we copy the following plan, Fig. 1, from the American Farm Book.—We know of no better plan than the one here given, if we except the form, when constructed of stone or brick, or by plastering directly on to the ground.

Fig. 1.

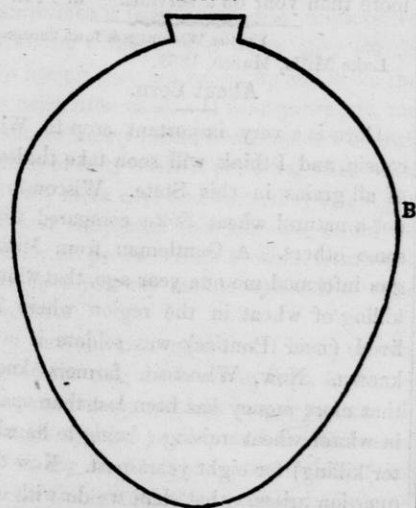


An egg shape, Fig. 2, is a much better form than a flat bottom and perpendicular sides as shown in Fig. 1. Built in this form, the sides are less liable to cave in or to crack, and the water more easily dipped out when there is but a small quantity in the cistern.

There are several cisterns about here, with-in our knowledge, built after the plan, Fig. 2, and plastered on to the ground, some of which have stood well while others have failed.—We think the better way is to wall up the sides either with brick or stone (the latter is the best) to the base of the arch—using common lime mortar, and finish with a coat of water lime,—say half an inch thick. If the wall be made of stone it need not be over four inches thick—if of brick they may be put in edgewise.

If you have not a mason at hand who can throw an arch over the top and form a snout as represented in Fig. 2,—finish up to B, then cover with plank, which should be covered over with earth so as to be out of the reach of frost.

FIG. 2.



EXPLANATION OF FIG. 1.—G, is the pipe for conducting the water into the cistern; F, pump pipe, for drawing the filtered water; A, B, C, D, E, layers of charcoal, gravel and sand. The black square dots seen at the bottom of the partition are to admit the passage of the water from one part of the cistern to the other. The Farm Book remarks:

"They may be formed in various ways, and of different materials—stone, brick, or even wood; though the two former are preferable.—

They should be permanently divided into two apartments, one to receive the water, and another for a reservoir to contain such as is ready for use. Alternate layers of gravel, sand, and charcoal at the bottom of the first, and sand and gravel in the last, are sufficient; the water being allowed to pass through the several layers mentioned, will be rendered perfectly free from all impurities. Occasional cleaning may be necessary, and the substitution of new filtering materials will at all times keep them sweet."

For the Wisconsin & Iowa Farmer.

Milwaukee, March 19th, 1853.

Raising Stock—The Blackleg.

ED. FARMER:—Scarcely an Agricultural periodical, or even a weekly newspaper that contains any articles on agriculture, comes to hand, but advises farmers to turn their attention more to "raising stock" and less to tillage; undoubtedly good advice, but rather too general,—in fact it is rather behind the times now, for with pork and beef at \$6 per 100 lbs., and wool from 40 to 50 cents per lb., there are few who need more convincing arguments to prove that "raising stock" is more profitable than raising grain, even at present fair prices. Consequently there is an increasing desire among farmers to "raise more stock," but the experience of many, proves that we are lamentably deficient in a knowledge of the business, or else how is it, that often the best cow on a farm is the oldest, and that her offspring have so degenerated as to bear no comparison with "the old cow?" Why, but that the owner is ignorant of the true principles of breeding. How is it that A's calves get lousy and he loses several of them in the winter? or that half of B's calves die of the blackleg the next spring? How, but that both A and B are ignorant of "stock raising?"—These and numberless other instances that might be cited show the necessity of particularizing more in giving advice.

In common with many others, I have endeavored to "raise more stock," and have partly succeeded, (i. e.) I have raised some good calves, but with the certainty of

losing the rest of them the next Spring with blackleg. The winter of '51 I had thirteen calves, fed them good tame hay and two quarts of oats each, per day, stabled them at night and kept salt constantly by them; before spring I was offered, and refused \$8 each for them. In April the fattest heifer showed symptoms of blackleg, I bled and physicked her, but she died next day—gave the others sulphur mixed in equal parts with their salt; the latter end of May two more heifers died of blackleg, quite fat. I then bled seven of those living, one of which died in August.

Presuming from the foregoing experience, (viz: losing those that were the fattest,) that high feeding was a predisposing cause of blackleg, I determined to guard against that evil this year. Commenced the last winter with thirteen calves, in very good condition when I took them from grass,—stabled them by night as usual and kept them the first month on oat straw; when perceiving them slightly to lose flesh, fed them clover hay once a day, and in a few weeks fed them wholly on clover hay and timothy, in good growing condition but no better than they ought to be, until the 9th of this month, (March) when I was surprised to find a heifer (the most fleshy one in the lot) dead of the old disease. As I have not before lost any so early as this, I had used no preventatives, considering them safe in consequence of moderate feed, until the spring opened, when I intended to bleed on turning to grass and mix sulphur with their salt—though I believe bleeding nor sulphur can be relied upon as a sure preventative.—Now, Mr. Editor, allow me to ask you, and through your valuable publication, your numerous readers, what is the predisposing cause of blackleg? "High feeding," says Mr. A., "I winter mine on marsh hay and have no blackleg." Well, mine were nearly half wintered on oat straw. "Bad

water," says Dr. B. It may be, but a neighbor of mine who has the purest of spring water for his stock, and accessible at all times, lost nine calves out of twenty, by blackleg, at a year old, some four years ago. In answer to this question, will not Dr. H., who has contributed to your pages, give his opinion to the readers of the Farmer, as free from scientific technicalities as a physician can.

Question 2d. What can be done to prevent this disease? If bleeding, in winter or early spring? If physic, what kind, when to commence, how much for a dose, and how often to be repeated?

If practical farmers will take this matter in hand, and through your columns give their experience to us who are aiming to 'raise more stock,' they will, I believe, confer a benefit upon many, and upon none more than your ob't servant. J. P. R.

For the Wisconsin & Iowa Farmer.

Lake Mills, March, 1853.

About Corn.

Corn is a very important crop to Wisconsin, and I think will soon take the lead of all grains in this State. Wisconsin is not a natural wheat State compared with some others. A Gentleman from Michigan informed me one year ago, that winter killing of wheat in the region where he lived (near Pontiac) was seldom if ever known. Now, Wisconsin farmers know that more money has been lost than made in winter wheat raising (owing to its winter killing) for eight years past. Now the question arises, what shall we do with our land? it is fenced and improved, taxes to be paid, we must get a living. Now I say diversify your crops—raise some wheat, oats, barley, rye, wool, flax, hops, butter and cheese, beef and pork, and many other things that can be raised to advantage in this State. But above all things raise some corn, yes, "some corn," not those little shrubs sticking out of innumerable

weeds with scattering nubbins a finger in length, but such corn as Wisconsin is capable of producing, from fifty to seventy-five bushels per acre, and that too with comparatively little labor. One great loss in corn raising, is poor seed, and I have not seen such negligence in any other branch of farming as in this. Now my advice is this, to save your own seed corn, which should be done in the month of September, by selecting the fairest and best ears and trace it up and hang in a dry place. But before planting, try it and see if it will grow by putting a handful, from a dozen different ears, in warm moist earth. There is an immense sum lost yearly by planting bad seed, and this difficulty could usually be obviated by following the directions above.

Many farmers depend upon buying their seed, and seldom think anything about it until about planting time, and perhaps take it from some crib unprotected from the weather; and when they should be hoeing they are racing up and down the country after seed. It is surprising to me that so many farmers are contented with thirty or forty bushels per acre, when with a trifle more care and labor, they might get fifty or sixty, and this increase would be nearly all profit. Now brother farmers, I will give you my *modus operandi* of raising corn.

I save the best seed that I have, or can get in the neighborhood in Sept. or October, and put up carefully in a dry place. I plough my land as deep as I can with one team, say from eight to ten inches, (the deeper the better,) this smothers innumerable seeds and weeds and gives the ground life and depth for the corn roots and keeps the corn in good growing condition in dry weather. I have never known my corn affected by drouth since I have ploughed deep, while on land ploughed three or four inches deep the corn suffered severely. I drag the ground fine and mark both ways four feet apart, (perhaps four and a half

feet would do better on prairie,) and plant four kernels in a hill in "*fine moist earth*," not under lumps and sods. In short, I give my corn a chance to grow. I have seen corn put in dry earth, two to four weeks in coming up, when corn put in moist earth was large enough to hoe. We can't depend upon rains to bring up corn every year, and farmers understand very well that weeds will grow whether corn does or not. Next I hoe thoroughly, using the cultivator both ways and hill up a little—not more than two inches. The shovel plough can be used to advantage if made right, but I never use a common plough to plow down deep between the rows. I think that the nearer level the ground is kept, the better.

S. B.

For the Wisconsin & Iowa Farmer.

Delevan Nursery, March, 1853.

Emigration—Our Duty.

The whole unquiet world seems on the move—the old towards the new, the new towards the still newer and unknown.

After Australia, remains Africa alone, whose hidden mines and mysteries tempt a speedy, thorough, exploration. Every motive means seems in request at a premium—and thus what a mingling of modes and ideas, religions and races; effected unquestionably by the Anglo Saxon race, under the inspiration and guidance of Liberty! Such another impulse, such another tribute to liberty, such another hope and opportunity and struggle for liberty, the world never knew. True, the world has known (and suffered) many liberties, but yet not the true kind of liberty—which is not the liberty to get drunk, or waste our time, or injure our fellows—in short, it is not the liberty to do wrong in any shape, *but simply to do right*, which of course requires opposition to wrong every where. *Truth and right are our only true friends, error and wrong our only true enemies.* Would that all men realized it—would that our own

people and the foreigners among us realized it! Shall we enlighten them or they endarken us—the great subject of my inquiry. Having thus by our precept or example, stimulated them—having, humanly speaking, sent forth this glorious, mighty current of hope and change, shall we now suffer it to be poisoned at the fountain head—or shall we not rather prove equal to the task of leading them on through all the “upward, toilsome road?” If we would, there is much to be done. We may not, because of “good times,” idly fold our hands, striving to eat or drink, or even hoard up the increase. Let us rather multiply the sinews of everlasting war against our own adversaries—Ignorance and Prejudice, Intemperance and Oppression. The majesty of the law must be arrayed against them—and hence honest, capable men, chosen to make and administer the laws.—The hands of all our friends must be strengthened—every good man, every good cause sustained. Then let us “stand by” the printer, the teacher, the preacher of that which is good—let us deny ourselves to help on the great work of Improvement and Reform. So shall not only this nation but the whole world be renovated.

F. K. PHOENIX.

For the Wisconsin & Iowa Farmer.

Waukesha, March, 1853.

MR. EDITOR:—Thinking perhaps that our wool growing friends would like to know the fact, that there is some fine Bucks growing for them in our State which will be already acclimated, I wish you to say to them that I have some very *nice ones*.—The particular object of this note is to say to you that one of my yearling ewes, one-quarter French and three-quarters Spanish Merino, has two Buck lambs, which at thirty-six hours old weighed sixteen lbs. and two ounces. Who can beat that?

The lambs were sired by an imported French Buck.

G. C. PLATT.

Management of Sandy Soils.

The principal cause why sandy soils are not so fertile as loamy soils, that is, soils which have a fair proportion of clay in them, are two, viz:—They are too porous, and they do not contain, and will not retain organic matter enough. Of course the remedies must be twofold, viz:—add something that will bind them together, something of an adhesive nature that will make the particles *stick* to each other—2d, when this is done, add the common organic manures.

A neighbor of ours once planted some corn on a dry gravelly knoll. After he had prepared his land, by plowing and furrowing, he sent his team two miles, and hauled clay from a brick yard, with which he *manured* his corn in the hill. The corn thus *manured* produced double the amount that the parts on the same land, not manured, did. Ashes make an excellent dressing for sandy lands. They act not only as an adhesive ingredient, rendering it retentive, but they also supply mineral matter useful to crops, such as phosphate of lime, and potash. Some may think that it is not worth the labor, when land is so cheap as it is in this State, to go to much expense to fertilize sandy soil—better let them go and move on to better. All men, however, do not possess this *moveable* disposition. They cannot pull up their tent stakes as easily as the Tartar or Arab can, and travel on till they find spots all ready fertilized for their use, and so it becomes them to put their powers, both of body and mind, to the work of improving the barren sands where they may happen to be located.

This has often been done—it can be done again. The editor of the Country Gentleman, writing upon this subject, quotes from an essay of W. C. Watson, of Port Kent, N. Y., and condenses his remarks as follows:—First, burn over the fallow, so as to destroy weeds—this, if there should be any considerable growth upon the ground, would leave a deposit of ashes; next, seed heavily with clover, which will afford some pasturage—repeatedly plowing under the rank growth of natural herbage that will in a year or two overtop the clover—assisting this enriching process of turning under the green crops, by harrow-

ing in a seeding of buckwheat after each plowing, and turning this under in its turn, when in blossom; the application of gypsum, when this vegetable matter becomes well incorporated with the soil, but not before; the application of ashes, lime and salt, and dressings of well fermented stable manure, avoiding the use of strawy or unfermented products of the yard; the use of muck or peat is highly recommended for such soils; and great advantages have been derived from the application of clay, pulverized by exposure to the weather. The experiment is an interesting one:—

"A few years since I broke up and planted to corn a clover lay upon sandy soil, embracing an area of about ten acres of land. Upon an acre of this ground, more than twenty years before, thirty loads of clay had been deposited, and had been thoroughly incorporated with the sand.—The ground in every other respect possessed the same character and qualities. It was plowed at the same time and subjected to the same tillage in every detail. Immediately on the appearance of the young sprouts, the crop growing upon the mixture of sand and clay, exhibited a more vigorous growth, with a deeper and healthier color. As the crop advanced, the difference increased, and the boundary of the area became as distinctly marked by the appearance of the crop as if it had been separated by a hedge from the residue of the lot. This appearance was so remarkable as to attract the constant observation of strangers as to the cause of the marked and peculiar distinction. The part of the lot containing the clay was little injured by the grub and worms, although the remainder suffered severely from their ravages. The crop of the entire field was excellent, but that grown upon the acre of clayey sand, yielded almost twice the harvest, in both grain and stalks, of any other acre."

The following crops are particularly recommended:—Rye and buckwheat, before any plowing; peas immediately after the first plowing; next corn, beans and potatoes, and after the soil has acquired vigor and fruitfulness, wheat. A good and enriching system of rotation, will at all times be of great importance. [Maine Farmer.]

Happiness is promised not to the learned, but to the good.

CARROTS.—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 quantity of carrots may be increased.

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 hundred bushels of white Belgian carrots, may be easily raised per acre, while the same land will not produce one-tenth the quantity of oats.

[Working Farmer.]

POULTRY AND POULTRY SHOWS.—The London correspondent of the National Intelligencer, noticing the late great poultry exhibition in that city, says:

"Soberly speaking, the late poultry show has given ideas respecting the capabilities of turkeys, geese, ducks and fowls, and also pigeons, that were not previously entertained. There were three geese, which weighed together 48lbs. Gigantic pigeons from India, with magnificent plumes; beautiful Australian pigeons of most delicate plumage; Turkeys of prodigious size; and four Cochins fowls, for which £63 was required. There was a single hen for which thirty guineas was refused. At the sale which took place at the close of the exhibition, 110 birds, of the Cochins China breed, the majority of them being young ones of three or four months old, realized £260. The highest price paid for a single bird was £21. For the eggs 5s to 10s was readily obtained. One pair Cochins China fowls fetched £49 7s. A number of agriculturists attended the sale, who appeared to receive the impression that the breeding of poultry was becoming more profitable than the breeding of cattle.

Take good care of your corn.

Carrots.—Two bushels of carrots and one of turnips is better food for a horse than three bushels of oats; and when used for this purpose, the quantity of carrots may be increased to four bushels.

It will be found to be a good plan to feed a horse with a mixture of carrots and turnips.

The carrots should be cut into small pieces, and the turnips into quarters.

They should be fed in the morning and evening, and a small quantity of hay should be given between the two feedings.

When a horse is fed with carrots and turnips, he will eat less hay, and his manure will be less.

It is also a good plan to feed a horse with a mixture of carrots and turnips, and a small quantity of hay.

This will keep him in good health, and he will do more work.

The farmer who feeds his horses in this way will find that they will do more work, and that they will be in better health.

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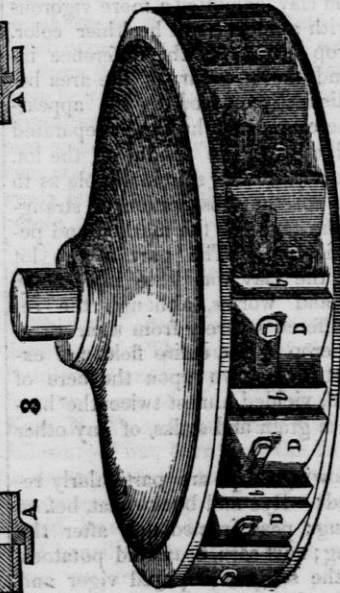
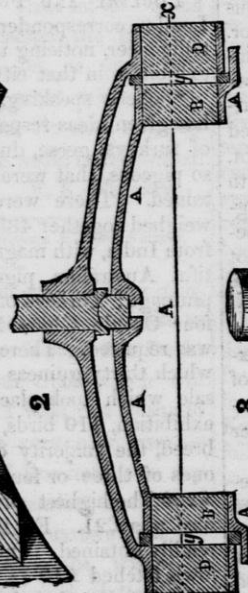
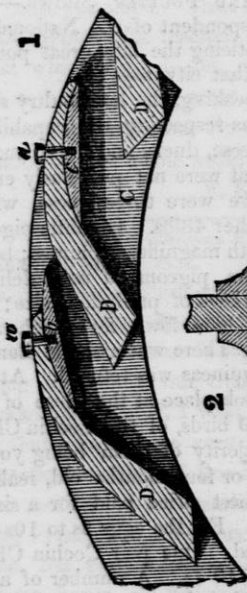
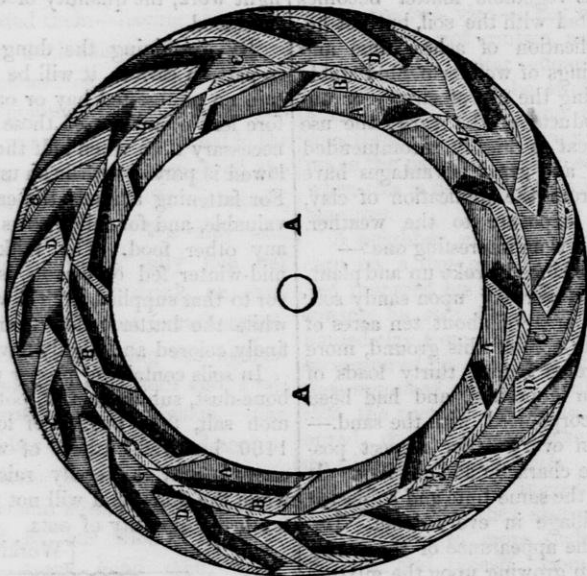
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JAGGER'S IMPROVED WATER WHEEL.

around among our friends, and they have invariably been pronounced *excellent*, some preferring them to the imported article.—Mr. McKay informs us that they keep well, and they certainly appear as though they would. Why may not this become an important branch of fruit culture? A very large amount of money is annually sent abroad for raisins. The matter demands attention.

Besides those used by the family, fifty dollars have been received by the owner this year, from the surplus produce of this one grape vine, at \$3 per bushel.

TRICKS OF ANIMALS.—A horse accustomed to starting and running away may be effectually cured by putting him to the top of his speed on such occasions, and running till pretty thoroughly exhausted.

A horse that had a trick of pulling his bridle and breaking it, was at last reduced to better habits by tying him to a post driven on the bank of a deep stream, with his tail pointing to the water. He commenced pulling at the halter, which suddenly parted; over the bank he tumbled, and after a somerset or two, and floundering a while in the water, he was satisfied to remain at his post in future, and break no more bridles.

A ram has been cured of butting at every thing and every body, by placing an unresisting effigy in a similar position.—The sudden assault on a wintry day, then resulted in tumbling his ramship into a cold bath, which his improved manners took care to avoid in future.

A sheep-killing dog has been made too much ashamed ever to look a sheep in the face, by tying his leg to a stout ram on the brow of a hill, while the flock were quietly feeding at the bottom. The ram, being free and in haste to rejoin his friends, tumbled and thumped Master Tray so sadly over the stones and gullies, that he was quite satisfied to confine himself to cooked mutton thereafter.

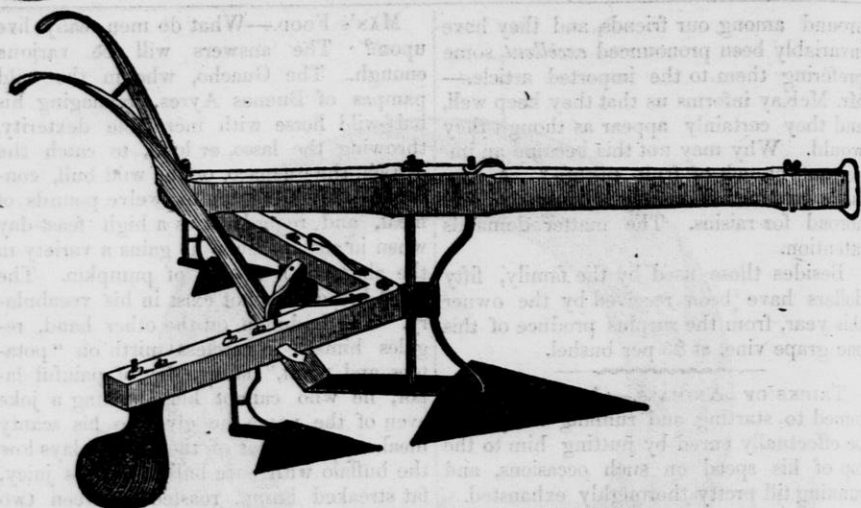
Man's reason was given him to control the beasts of the field and birds of the air," by other means than by force. If he will bring this into play, he will have no difficulty in meeting and overcoming every emergency of perverse instinct or bad habits in the dumb things, by his superior cunning.

[Ex.]

MAN'S FOOD.—What do men really live upon? The answers will be various enough. The Guacho, who in the wild pampas of Buenos Ayres, managing his half-wild horse with incredible dexterity, throwing the lasso, or lolas, to catch the ostarich, the guanaco, or the wild bull, consumes daily from ten to twelve pounds of meat, and regards it as a high feast-day when in any hacienda he gains a variety in the shape of a morsel of pumpkin. The word bread does not exist in his vocabulary. The Irishman, on the other hand, regales himself in careless mirth on "potatoes and point," after a day of painful labor, he who cannot help making a joke even of the name he gives to his scanty meal. The hunter of the prairies lays low the buffalo with sure bullet; and its juicy, fat streaked hump, roasted between two hot stones, is to him the greatest of delicacies. Meanwhile, the industrious Chinese carries to market his carefully fattened rats delicately arranged upon white sticks, certain to find a good customer among the epicures of Pekin; and his hot, smoky hut, fast buried beneath the snow and ice, the Greenlander consumes his fat, which he has just carved, rejoicing over the costly prize, from a stranded whale. Here the black Slave eats the sugar cane, and eats his banana; there the African merchant fills his wallet with sweet dates, his sole subsistence in the long desert journey; and there the Siamese crams himself with a quantity of rice from which a European would shrink appalled. And wheresoever over the whole inhabited earth we approach and demand hospitality, in almost every little spot a different kind of food is set before us, and the "daily bread" offered in another form. [Scientific American.]

A LARGE PORKER.—Mr. Lewis Swett, of the firm of Swett & Bayer, of this City, killed a pig on the 10th of January which was 207 days old, and which weighed when dressed and dried 311 lbs. On the first of October last, he weighed 174 lbs., being then 105 days old. At the time he was killed, he weighed alive 388 lbs. He therefore gained from the first of October to the 10th of January, 102 days, 214 lbs. Beat this who can! [Cambridge Chron.]

WOOD IN SOUTHERN EUROPE.—We see that it is stated that wood costs \$65 a cord in Rome, and \$85 in Naples.



COATES' IMPROVED CULTIVATOR.

Above we give a representation of Coates' Improved Cultivator. This is an improvement upon the one Mr. Coates brought out four years ago, and which was published in the first volume of the Farmer. It is for cultivating among corn and all other crops grown in rows. It may be gauged so as to work between rows of different distances apart. The first Premium on Cultivators was awarded to this implement at the last State Fair.

Mr. Stephen Coates of Lafayette, Walworth Co., is the Patentee, who will answer any inquiries that may be made in regard to it.

From the Journal of Agriculture.

Plants Selecting their Food—Rotation of Crops, &c.

BY LEVI BARTLETT, WARNER, N. H.

MR. EDITOR:—The roots of plants absorb the rain water, which falls upon the surface of the soil. The water entering the roots carries with it a variety of substances in solution, which the plant seems to use or not, as it may require; and thus appears to exercise a choice; apparently rejecting in the tissues, such as may not be useful, and retaining such as are necessary for building up the perfect structure. The

water in the soil is alike saturated with the same amount of potash, silica, and other soluble salts, required by the plants. Different species of plants require a special supply of different kinds of organic food or of the same kinds, in different proportions.

As an illustration of this; in one thousand pounds of dry bean straw, there are about $2\frac{1}{2}$ lb. silica, or sand. In the same amount of red clover, there are a little over $4\frac{1}{2}$ lb.; while in an equal weight of white clover, there is found in the ash $14\frac{1}{2}$ lbs. of silica. The bean, the red and white clover plants, we know, will all grow on the same soil.—Different kinds of plants require in their composition, very unequal amounts of the other necessary inorganic basis, besides silica. This is so much the fact, that some scientific writers on agriculture, have classed some species as *lime-plants*, others as *silica*, or *soda*, or *potash-plants*;—this classification being founded upon the greater preponderance of one or another of the mineral substances found in the ash of the different kinds of plants.

From the almost uniform relative proportions of the inorganic constituents of the ash of the same variety of natural plants, when reared upon a soil adapted to their growth,—and such plants will only flourish *naturally* on congenial soils,—we must come to the conclusion that the different species of plants are guided in their selection of just the necessary kinds, and rela-

that when lime is applied in small quantities, as a manure, it is necessary to repeat the application frequently; it is probable that the soil loses its absorbent property, communicated by the lime; for experience proves, that if lime be frequently used, it must be applied as a manure, and not simply as a stimulant; and to this end, it must be compounded with earth, clay, and other matter, to which it communicates its stimulating qualities, whilst its fertilizing effects are thereby augmented. In this state, it will act powerfully as a manure, and be a valuable auxiliary in the hands of the farmer.

Most varieties of subsoil strata make good compounds with lime. Sand and lime, with peat or turf, if it can be obtained, should be mixed for a clay soil; and subsoil clay and lime, for sands, gravels, loams, and peaty lands. No farmer need complain of want of materials to make fertilizing compounds, since every sort of soil may be used for this purpose; and not only is immediate fertility produced thereby, but there are few districts in the country, however barren, that may not be improved or brought into a fertile state, by dressing with a well proportioned mixture of earth, clay, sand, and lime. Care should be taken, however, to proportion the quantity of lime according as the land is light or heavy, cold or warm. Light soils have been hurt by too abundant applications of lime; and while one part of lime to form 6 to 10 parts of earth may do for light soils, one part of lime to 2, 3, or more parts of earth, will be required for heavy soils.

The application of lime, alone, to land long under tillage, is often found not to be beneficial; but if the same quantity of lime had been applied in a compound state, with sand, turf, earth, clay, or vegetable mould, good effects would have resulted. On deep loams, lime may be applied in a caustic state, more frequently than to most other soils; but the testimony of experience is in favor of its being used in a compound state."

Bob's Notion of Book Farming.

Bob, the farmer's son, thus expresses his notion of an improved system of farming, in the Indiana Farmer:

EDITORS FARMER:—I have only to say

to you, that I wish you would keep your agricultural paper to yourself, and away from our house. Since the old man has been taking it there is no "rest for the wicked," certain. He keeps us hauling *muck*, (as he calls it,) manure—old astles, and even makes us clean out the pig pen and put the filth on the fields. Formerly there was some mercy shown the horses, for we plowed only three or four inches deep, but now, nothing less than ten inches will do, and the corn ground is to be plowed below that, with a new plow he has just bought.

The next thing, I presume, will be to take the bottom out of the well! We used to take the Palladium, and he would suck down the politics contained in it as gospel truths, and had plenty of time to spend a half day any time to talk about who should be elected, and who should not. But he don't read that paper now, and he is as anxious to get the Farmer, as he was formerly to have election day come round. He is all the time talking about new "fertilizers," new varieties of seeds, who will get premiums, &c. He don't only talk either, but he makes us boys hoe to it from morning till night. We have had to tear down all the fences, and reset them, and he has got the old lady in the notion of white-washing the garden fence. What foolishness! and the plague of it is, we boys will have it to do—just wasting the time we might spend in fishing. So keep your paper to yourselves, and we will have some rest again.

BOB.

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 makes it tenacious and also imparts a sweetish taste. All grain 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 the 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 fire.

[American Agriculturist.

HORTICULTURE.

The Core-Worm.

Among other pests of the orchard may be enumerated the core-worm—an insect or worm which confines its operations principally to the core of the apple. We have never heard but little said about this worm, and we believe not much has been known of its origin and habits in this country. It does not injure the tree at all, nor does it destroy but a small portion of the the fruit—hence it has not attracted much attention as yet. A writer in the N. E. Farmer, gives the result of some years of observation both in this and other countries, on the habits of this worm, and which we subjoin. If it can be avoided by the simple remedy proposed by the writer it is not a very formidable enemy to control or much to be feared.

“So far as I have investigated the matter, the *core-worms* of the apples in this country are in no particular different from the piratical apple depredators of France, England, Portugal and South America, and are the offspring of a brown miller, somewhat larger than the mother of our common moths, which deposits her eggs at night in the dried blow of the apple, when about half grown.

In the island of Jersey, a place famous for its fruit, the depredations of the “*pip-pin-worm*”—as they are there called—is entirely avoided by the farmers placing among the branches of their apple trees, sometime in April, tufts of pea straw, or what is better still, bean stalks, which have been kept through the winter for that purpose. In the cavities of these, the miller deposits her eggs, which in due time becomes a grub, of an altogether different character apparently, from the apple-bred offspring of the same miller.

These grubs never enter an apple, and what few of them escape the keen observation of the black hornet and the speckled girdler, find their way to the ground, in which they burrow, lying dormant for about ten months, when they become changed to millers in time for the next crop of apples.

I have seen in the island of Jersey, the apples from a tree unprotected by the simple precaution mentioned, literally alive with worms, while those of all the other trees in the same orchard were entirely free from the plague.

I have tried the experiment in South America frequently, with the most complete success; and as I believe the North American worm is identical with the apple-worm of other countries, I would advise that farmers generally try the experiment. It does not cost much, and if successful, is just as good as a more expensive remedy.”

GEO. S. LAYMOND.

Hallowell, Me, Feb., 1853.

Peach Tree Borers.

Some recommend careful examination about the roots, and clearing away all gum, grubs and dead bark with a sharp knife, cutting along the track till the enemy be discovered. Others advise thrusting a wire along his track; then wash with soap and soot, and return the earth in a little hillock about the tree. The Massachusetts Plowman advises prevention, as follows:

[Western Hor. Review.

“We object to using a sharp knife about the roots of the peach tree. Knives do more hurt than good. Place something around the tree to exclude the borer and you save it, but cutting and hacking the bark of the tree to find the borer is worse than scratching after a flea bite.

Peach trees will not bear wounds on the limbs. Small twigs may be cut, such as will heal in one summer, but larger wounds should never be made.

Wood ashes placed around the trunk in May, annually, will keep the borers away. It is said that herbs of various kinds offensive to the fly that deposits the borer, will answer the same purpose. Tansy is said to be effectual when placed about the trunks.

We recommend preventives in preference to cures.

THE BORER.—A newspaper or wrapping paper wound around the tree and fastened there, is a perfect security. I have tried it for twelve years and never have had a tree infested that was thus secured—and it is only through my neglect, since I have first tried it, that I have been

troubled. When they are in or under the bark, a sharp-pointed knife is the only sure instrument—remove them the first autumn or next early spring, if possible. This can be done by close observation. After they have struck into the wood and are working upward, I destroy them by introducing a sharp wire, or a very small sponge fastened to the end of a small wire dipped in spirits of turpentine, which, if it touches them, is certain death, and I believe it is if the hole is wet with it. In looking for borers in the month of October, which is perhaps the best month, I advise, that when one is found, be careful to look for more in the same tree. I have usually, when I neglected to paper my young trees, found borers in perhaps one in six, and from those taken out, from four to twelve, showing that a quantity of eggs is usually deposited on one tree. [Cor. N. E. Farmer.]

FRENCH MODE OF PLANTING CUTTINGS TESTED.—Last winter we read an account of the new French plan of putting out grape cuttings by bending them into an arch and inserting both ends into the earth. We immediately rode to a friend's house and procured ten cuttings from a Lenoir vine, each of which was two feet long. Five of these ten we planted in a properly prepared trench by the ordinary method of covering all but the top bud, the remaining five we planted by the new method, side by side with the others. To-day we examined them, and find only two of the five planted on the old plan alive, having matured wood about three inches in length. Their growth has been several inches more, but it has not ripened. All of these planted on the French plan have lived, and a remarkable difference is presented by their appearance, having ripened fully two feet of strong, stout wood. We find that the cuttings have only rooted at the butt end, and three new shoots invariably spring from the last eye which is exposed—that portion of the vine above this has decayed, and in two instances has entirely disappeared. The *rationale* of this plan is, that it prevents evaporation through the pores of the vine cutting and thus secures an abundance of nutrition to the young shoots, which, in our experience, has been abundantly evidenced by their superior growth. The Lenoir is a long jointed, na-

tive grape, and one of the most difficult to strike from cuttings. All the native grapes are more difficult to strike than foreign varieties, which root readily, we are of the opinion this plan would prove most successful with them, and intend to prosecute our experiments still farther. We may add interest by saying that we struck cuttings by the same plan, from the *Reine Claude de Bavay* and *General Hand* Plums. Upon examination they were abundantly rooted, and made a growth of from fifteen to twenty inches. Might not many of our fruits be propagated in the same way? [Southern Agriculturist.]

From the Western Horticulturist.

Maclura Hedge.

My object in this article is to meet some objections to the Osage Orange Plant itself, inasmuch as my experience tells me that there is no known plant so peculiarly adapted to the purpose, and so valuable to our Agricultural interests. Its surprising properties are no longer a problem. Some writers are disposed to class it among the "humbugs," and many doubt its utility, but amongst them all you will not probably find much, if any experience. If rightly managed it makes the best and cheapest fence in the world without any objection whatever.

Believing then, as I do in the extraordinary properties of the Osage Orange (*Maclura*) for making Live Fences, I will state what I believe the best mode of cultivation and management, in as few and plain words as practicable, so as to be understood by the inexperienced—with the hope that all interested persons may practice, and enjoy its benefits.

In order then to make the seed vegetate surely and quickly, they require to be soaked a long time in warm water—usually three, four or five days, but always until they are very much swollen, and partially sprouted. The water should be kept warm all the time.

The nursery should be located with care. It should be a rich sandy loam. If you have none such—prepare the best spot you have, by deep and thorough cultivation, mixed with well rotted manure, if not otherwise rich enough—make the drills about a foot apart and before dropping the seed send to the woods and get some of the

richest and sandiest mould you can procure,—drop the seed, and cover with the woods mould an inch or an inch and a half deep. If the seeds are well soaked—the ground clear and strong, they will all make their appearance before the weeds and grass will interfere with them. So soon as they are well up, the greatest care will be necessary to avoid the labor of hoeing and weeding, which can only be done by mulching well with leaves, cut straw, saw dust, or tan bark. I name the mulching material in the rotation I think they answer best.—The whole nursery should be covered, except only the plants; and put on thick enough to prevent the grass and weeds from appearing; by doing so all further labor will be avoided.

They are better not to be planted too early in the spring—the middle of May is soon enough.

The next spring they are ready for setting in the Hedge—the ground for which should have been well prepared the previous fall, by subsoiling, and manuring if necessary, and again in the *very early* spring plowed and harrowed and rolled repeatedly till completely pulverized—then drive the stakes,—lay the line and spade the trenches. More care is necessary in *taking up* the plants to insure their growth than is usually observed; and more with this, as it is desirable that every one should grow. The tops may be cut off to six inches and the roots pruned proportionally. Set the plants in a double row, six inches apart, diagonally—thus * * * *—1 foot apart in each row making them equal to six inches in a row. As soon as planted mulch *deeply* with leaves, straw, saw dust, or tan bark, and they will want no further attention till the next spring, at which time the pruning commences, and you begin by cutting all off within an inch of the ground—in the middle of June cut all the tops again to within four inches of the former cutting—the next spring cut to within five inches of the preceding, and again the middle of June to within six inches, and so continue cutting each spring and June, increasing the distance an inch each time, till the Hedge is high enough. By this means you thicken the Hedge perfectly all the way up, and when grown it will require the less pruning from there being no large stalks. By pruning the tops only while

growing, the side branches become the stronger, they can afterwards be pruned and thickened, till they may be impenetrable to a bird. The mulching may require some renewing the second year, but afterwards the shade of the Hedge will prevent the interference of the grass and weeds.

The plants should never be set further apart than I have recommended above—particularly in strong soil, as the farther apart they are set the stronger they will grow, and create so much more pruning after the Hedge is grown, or otherwise be objectionably high. Neither will the roots extend so far when closely set.

The Hedge should be fully protected from stock for the two first years. Mole often burrow under the Hedge, destroying the roots—to remedy this, make the ground “dishing” where the plants are set, two or three inches lower than the sides, which is found effectual and the plants flourish better.

The pruning may be made a comparatively small job, by using a strong knife for the purpose about two feet long. A common grass-hook answers pretty well; and some labor may be avoided by pruning in the fall, before the wood becomes hard, in place of the spring. The plant bears it so well, that there is no danger.

The “plashing,” “plaiting,” or “interlacing,” when rightly done, may make a perfect fence, and quite ornamental—particularly while young—but it is expensive; and for common purposes, I would not recommend it further than to stop a gap.

I am persuaded that the plant may be used farther north than has been admitted. For the first two or three years the limbs will be severely nipped by the frost, but not to the injury of the fence. Respectfully,

WILLIAM NEFF.

RAISINS.—Everybody is fond of raisins, especially if they are of the finest quality, but everybody we suspect does not know that they are successfully prepared in this State, and we believe also in other parts of this country. The Horticulturist says:

“**DOMESTIC RAISINS.**—We have just received a box of nice raisins prepared from the *Isabella* grape, by Mr. E. A. McKay, of Naples, Ontario Co. who has one of the most complete little vineyards in Western New York. We have passed these raisins

The engravings on the preceding page are views of an improvement in the French turbine water wheel, invented by Ira Jagger, of the city of Albany, N. Y., and for which a patent was granted on the 19th of last October (1852.) Figure 1 is an enlarged view of the periphery of the wheel with some buckets; fig. 2 is a profile section through the centre; fig. 3 is a prospective view of the wheel as set in its proper position, and fig. 4 is a plan or horizontal section taken through xz .—A, being the fixed part or shute chamber, with the shutes B B, and C the wheel with its adjustable buckets, the same letters refer to like parts. The improvement consists in a sliding guage or lip secured to the extremity of each bucket, as shown at $a b c$, in the figures, for the extension of the bucket, and fitted to the concave surface of it, by means of which the orifice of discharge, and its direction is regulated according to the head, under which the wheel works, and the amount of work to be done, and thus obtain the maximum effect with every varying head of water, also adapting the wheel to the work to be done, which in many cases varies a great deal. The lip is a rectangular plate of iron reaching from the top to the bottom of the bucket; its back surface next the bucket is curved so as to fit the curved surface of the bucket, its front surface being flat, and a chord to the curve of the back surface. This lip is secured in its place by a screw bolt, a , sliding through a slot in the bucket, and tapped into a lip and is regulated by sliding the sail lip to or from the bucket directly in front of it, so as to diminish or increase the space between it and that bucket as shown in figures 1 and 3, where the lip, b is shown as nearly closing the exit passage, and the lip, c , as leaving the space between the buckets entirely open. A gate is placed between the shute chamber and the wheel, by which to regulate the supply of water to the wheel, so that there may be a due proportion between the quantity of water pressing into the wheel and that flowing out. There is also a movable cylindrical metal ring fitting accurately and occupying the centre space between the outside of the shute chamber and the inner periphery of the wheel as shown in figures 2 and 4, at y . It is pierced with slots equal in size and corresponding in form to the external openings of the

shutes, and has the edges of the slots beveled so as to deliver the water with as little interruption as possible, in whatever situation they may be in reference to the openings in the shutes. The ring is moved or shifted round horizontally, so as to close to a greater or less degree, the opening of the shutes, by any mechanical device.

A very important object is claimed and obtained in this patent, viz: the adjustable lip sliding on the inner face of the buckets to regulate the openings between the outer edges of the buckets, and thereby the flow of water from the wheel, thus adapting the lines of this turbine to the head of water and amount of work to be done, however varying these may be. The water is taken in at the bottom of the wheel and every inch of head is made available. In some situations at different times of the year, the head and quantity of water vary greatly; this wheel is specially adapted for such places. The wheel is simple, strong and durable, and not liable to be obstructed by ice. The inventor is a practical mill-wright whose skill and experience have enabled him to devise and construct a wheel which has received the highest commendations from those who are using them in the different States where they have been introduced, and one whose superior advantages will no doubt cause it to be extensively used. Further information may be obtained by calling at the office of S. S. Barry and Co., Cleveland, Ohio, or by letter addressed to the patentee.

MANAGEMENT OF POULTRY.—See that their houses are kept clean; sprinkle plaster over the floor of their houses; scrape the floors once a week, and put the manure away in a dry place, covering each layer so put away with a few inches of mould of some kind. If you manage thus you will be surprised in the Spring at the quantity of manure you have thus made, and as it is among the most fertilizing kinds susceptible of being made on the farm, you should make it a part of your system to save it all.
[American Farmer.]

A PROFITABLE VINE.—There is in the City of Dayton a grape vine, which is standing beside a wall, over which it is trained on an arbor; well trained, no doubt, well trimmed too, and in every way well cared for, by its excellent owner, Mr. A. M. Clark.

Large Fowls.

Last spring I procured from Dr. Freeman, of Schoolcraft, Mich., several fowls of mixed breeds. The cock sent with this lot, was Cochins and Chittagong (Malay) half-and-half. He is now 18 months old, and I am told by the gentleman who now has him, that he weighs about 12 lbs. Owing to his rapid growth, and extreme clumsiness, only about one-third of the eggs set for hatching brought forth chicks. A cock chick six months old, from this cock and a Shanghae pullet, were weighed a few days since, and drew 8 lbs. strong.—He had lived by his own industry through the winter, with sometimes the help of one feed a day. Some half bloods from large common hens, weighed from four to five lbs. at the same age.

A half blood Shanghae pullet, was cooked and served up at five months old, yielding the best chicken flesh that we ever had the pleasure of eating, and in quantity of meat exceeded the common largest hen at two years old.

Last fall, having a friend ill, who was in the habit of eating an egg in the morning, we sent him three or four eggs from a Shanghae pullet. He declared that there was as much difference between the flavor of these, and the common eggs, as between the choicest and rankest varieties of fish.—We afterwards indulged in a soft boiled Shanghae egg, and we did not draw upon our imagination in coming to the same conclusion.

Last spring, we obtained of Dr. Freeman, one dozen Shanghae eggs, from which four chicks were obtained. The eggs having travelled 250 miles, left but 7 whole eggs, owing to the scarcity of bran, in which they were packed. These four chicks (two of each sex) were far more hardy than any common or half bloods in the same yard. The cocks I parted with, exchanging one for a cock of different importation, to breed to these, and other pullets. The pullets at nine months old, weigh, one seven and three-quarters, and the other eight pounds.

Last spring a friend of mine in an adjoining County, procured a very fine pair of Royal Cochins from the principal breeder near Cincinnati. These were chicks at the time of the April chicken show in that

city, and for size were considered large among the largest. These were obtained at a cost of \$18. Last October I procured a pair of chicks bred from the above pair, which are now six and a half months old, the cock chick weighs four and a half lbs. and the pullet four and a half lbs. They have run with and had the same feed of the Shanghaes first named.

We state these facts for the benefit of our friends of the "Ohio Farmer," to put them on their guard. We advise them to be cautious in sending off for chicks or eggs, and be sure that they get from a stock that has been *well kept up by crossing*. A stock that breeds "in a line," producing uniformity in size, color, &c.

[Ohio Farmer.]

Gleanings from the American Muck Book.

Gypsum or Plaster—Lime.

"The soils upon which gypsum operates most beneficially are those that are light, dry, and sandy, or open, as they soonest admit the rain water which dissolves and conveys it to the roots of the plants; whereas, clayey soils, which are stiff and impervious to the rains, retain the plaster for a greater length of time. In some cases, gypsum will not produce any effect, on account of the soil already containing sufficient sulphate of lime, or being deficient in one or more substances required for the growth of plants; for, in order that such a simple substance as gypsum may act beneficially, the soil must possess all the other substances requisite for the crop. Thus, in a plant like red clover, which requires fourteen or fifteen substances to perfect its growth, if only one of these simple substances is deficient, potash for instance, it is clear that the remaining thirteen or fourteen would be of little or no avail, however abundant any of the others may be; for plants require only a determinate quantity of food, and an excess may be detrimental and do no good."

LIME—HOW TO USE IT.

"Some persons think, from witnessing its first effects, that they can always have recourse to lime with the same success; but in this, they will assuredly be disappointed; once in five, six, or seven years, according to the nature of the land, is as often as lime can be applied with advantage.

It may be proper to observe, likewise,

tive proportions of the several inorganic bases, required for their full development, by what we metaphorically term, the Laws of Nature:—these laws, emanating directly from Him who said, “let the earth bring forth grass, the herb seed, and the fruit tree, yielding fruit after his kind.”

From the unequal amount of inorganic matter required by the different species of plants, is founded the necessity and economy, on most soils, of growing a rotation of crops. As already stated, the bean plant requires but a small amount of silica in its composition, while the straw of wheat and some of the grasses require a large percentage of silica. So in regard to the other mineral constituents of plants. For these reasons it has been found more profitable, generally, to grow a rotation of crops, requiring in their composition different amounts of organic matters, than to grow the same kind or species of plants year after year on the same land. If a growth of field beans precede the wheat crop, the bean takes from the soil but a trifling amount of soluble silica, a substance so necessary in the soil to give stiffness to the straw of wheat and other cereals; and thus far, the bean but slightly injures the land for the grain crop. The same principle applies to nearly all our cultivated soils and crops. But before our farmers, generally, can act understandingly in these matters, they must be aided by some analysis of their soils, crops, manures, &c.

The natural fertility, or the barrenness of soil, greatly modifies the necessity of a rotation of crops. Thus, the rich bottom lands of the Sciota and Miami valleys of Ohio, “have been cultivated forty-five years, or more, in corn, without rotation or rest,” with scarcely any diminution of the crop from first to last; the yield being from fifty to seventy five bushels per acre. So in middle Illinois, from the natural fertility of the soil, and the ease with which it can be worked, the actual cost of raising corn, from the time of starting the plow till the crop is cribbed, is estimated by the farmers there, at only from four to six cents per bu.

These soils contain, and in the right proportions, all those substances, (with what are derived from the atmosphere and water,) that are necessary for the production of heavy crops of Indian corn, for a long series of years; and the plants have within

their reach, an abundant supply of all the necessary raw material; as it were, in obedience to the laws of vegetable physiology, select from the soil such kinds and quantities, as are requisite for the building up of each and every part of the perfect plant, root, stalk, leaf, tassel, silk, cob and kernel; with its due proportions of starch, gluten, oil, phosphates, &c., &c.

We may for ever remain ignorant of many of the precise chemical changes that are continually going on in the interior of living plants; as well also, of many others of the phenomena that takes place in organized bodies. But some progress has been made in revealing to us a portion of the once hidden mysteries of vegetable and animal physiology. Enough is now known to prove clearly; that if a soil is entirely destitute of some two or three of the important bases required by the plant; on such a soil the plant may obtain a tolerable growth, but it cannot yield seed capable of reproducing its kind. While, on the other hand, it is equally true, that a soil containing all the necessary requisites, may within its reach, have all the ingredients (in a sufficient soluble form) required by the particular plant, with the right physical conditions of the soil, &c., and the roots and leaves of the plant will discharge their appropriate functions.

This is a fixed “law of nature,” in proof of which we have facts piled upon facts, to a few of which I will allude. The white pine will grow well on a soil composed of ninety or more per cent. of silica (quartz, sand,) for the reason that it requires but very little inorganic matter in its composition. One hundred pounds of pine wood, when burned, leaves less than half a pound of ashes. The hop plant, to succeed well, requires a good soil and cultivation; as it takes from the soil about ten per cent. of inorganic matter, potash, lime, &c. The *mares-tail* (*requisetum*) will only flourish, when the soil contains a large per centage of soluble silica; one hundred pounds of the dried plant leaves when burned, eighteen or twenty pounds of ashes, mostly silica. The white clover plant will also spring up on such soil. By ten years’ cultivation, I have been unable to eradicate the *mare’s-tail* from a patch of deep loamy soil, lying at the base of a hill; plowing and hoeing only seem to increase its growth. The

trailing black-berry delights in a ferruginous soil. I was unable to eradicate this plant from an iron soil, with a hard iron-bound subsoil, by six season's plowing, manuring and hoeing. Then I gave it up in despair. A certain kind of flat, or hassock grass, indicates with certainty where the soil is saturated with sulphuretted hydrogen; derived from the decomposition of certain kinds of rock, containing sulphur and iron. The rush (junca,) always flourishes in a soil containing excess of magnesia. Soda plants will grow naturally only on soils containing common salt or soda.—The soil on which the hazlenut naturally grows, would doubtless be found, physically, mechanically and chemically, nearly identical, across the whole country from Eastport, Me., to the Rocky Mountains.

"These facts all point to the same natural law, that where other circumstances of climate, moisture, &c., are equal, *the natural vegetation—that which grows best on a given soil—is entirely dependent upon the chemical constitution of the soil.*" Mr. Editor, cannot our farmers derive much practical benefit from **THESE FACTS.**

SWEET CORN.—A correspondent of the New England Farmer, among other pertinent questions, asks, "How does sweet corn affect the soil on which it is raised? has it been tried as food for stock? and if so, with what success?" We have had some little experience, for the last five or six years, in raising sweet corn for the table, and for fodder; and that experience has taught us that sweet corn exhausts the soil just about in proportion as the stalk is larger and more nutritious than the northern yellow corn. The kind of sweet corn we have raised grows about eight feet high, the ear eight or ten inches long, large white and plump kernel, and ten rows to the ear, the pith of dark red color, and is called the Evergreen Sweet Corn. The seed was procured from Ohio some eight years since. For fodder we now sow it in drills, three feet apart, and drop the kernels from six to ten inches apart. The yield of fodder the last year was at the rate of seven tons to the acre. Our horses and cows leave the best of hay to luxuriate upon sweet corn stalks, well cured, and run through the straw cutter. The stalks of

the sweet corn are large and require much care in curing to prevent mould. They should stand erect in the barn, or wherever sheltered, and enjoy the benefit of the air. Cutting the stalks as near to the ground as possible, we leaned the tops of the two rows together, leaving here and there a stalk uncut, and placing from ten to twenty stalks together near the top, to prevent falling. In this manner the stalks dried rapidly, and gathering them before the heavy and late rains, we have not lost a pound of fodder. Sweet corn should be planted or sown in drills, or broad cast, (if any prefer,) at the same time that common corn is planted. The richer and deeper the soil, the more sure and abundant the crop. We have about a bushel of sweet corn for seed, and can accommodate a few early applicants with good seed, if it be wanted, at the rate of fifty cents per quart. [Vermont Watchman.]

EDITOR'S TABLE.

"THE PROGRESSIVE FARMER; A Scientific Treatise on Agricultural Chemistry. The Geology of Agriculture; on Plants, Animals, Manures and Soils, applied to Agriculture. By J. A. Nash, &c., &c."

We hail the advent of this small volume with more pleasure than any other similar Agricultural work since the appearance of Prof. Norton's "Elements of Scientific Agriculture." In many respects it is better suited to the wants of the farmer than that work. It is simple, concise and practical, yet truly scientific in all its teachings. A more condensed and still complete application of the principles of Chemistry, Geology and Physiology to the various processes of a well managed farm—to plowing, sowing and harvesting, to the raising of cattle and horses, to the fattening of beef and pork, to the feeding and working of animals, to the making of butter and cheese, &c., &c., has so far as we know, never been made. The quintessence of Stephens' Farmer's Guide—one of the most valuable as well as expensive of Agricultural works—is here offered at small cost to the farmer. We do not mean to say the author steeped the Farmer's Guide to obtain this *agricultural aroma*, but if he did we should not care—it would be none the less valuable. It is

the book for the farmer, or any other person who takes pleasure in seeing a thing well done.—The author is an old instructor and has learned well the art of telling the truth, and that *understandably*. It is just such a book as we would write if we could!

SALE OF SHORT HORNS.—We would call special attention to the advertisement of Col. Sherwood's sale of **SHORT HORNS**, which will be found in this number of the Farmer. The sale takes place on the 8th of June, at Auburn, N. Y. Col. Sherwood has long been engaged in the importation and breeding of stock; and we have no doubt, the animals which he now offers for sale, are fully equal to any that can be found in this country.

NEW YORK STATE AGRICULTURAL WORKS.—The advertisement of this establishment will be found in our advertising department. The **THRASHING MACHINES** manufactured by Messrs Wheeler, Melick & Co., are fast gaining favor with farmers throughout the country.

EDITOR'S TABLE.—A crowd of advertisements which came in after the cover had been made up, has nearly annihilated this department for the present month.

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SALE OF SHORT HORNED CATTLE.

I WILL SELL BY AUCTION, at my residence, on Wednesday, 8th June next, at 1 o'clock P. M., about Thirty Thorough bred Short Horned Cattle. About twenty of them are Cows and Heifers, the remainder young Bulls. Nearly every animal is the produce of the Imported Bull "YORK SHIREMAN" and 3d "DUKE OF CAMBRIDGE," bred by the late Thomas Bates, Esq., of Kirkleavington, England, and "EARL OF SEAHAM" and "VAM-TEMPEST," bred by John Stephenson, Esq., of Durham, England, and are of his famous Princes family.

The upset prices of these animals will be from \$150 to \$300, as to age, &c., &c.

I will also offer the above named Imported Bull, "Vam Tempest,"—his upset price is \$1000.

TERMS—Cash, or satisfactory notes at three months, payable at the Bank of Auburn, with interest.

I will also have for sale at that time a few South Down Rams and Suffolk Pigs.

Catalogues will be ready about 15th March next, and will be found with

A. B. Allen, Esq., 89 Water Street, N. Y.
Sanford Howard, Esq., Cultivator Office, Boston.

Luther Tucker, Esq., and } Albany.
B. P. Johnson, Esq., }
L. F. Allen, Esq., Black Rock.
M. P. Batcham, Esq., Columbus, Ohio.
W. T. Dennis, Esq., Richmond, Indiana, and
with the subscriber,

J. M. SHERWOOD.

Auburn, N. Y. Feb. 15, 1853. v5n5

CHICKENS FOR SALE.

THE Subscriber offers for sale early chickens of the following varieties bred from his premium stock, and other choice selections of the same varieties procured from noted breeders at the east, that pairs may be made not of the exact strain of blood to prevent deteriorating from in and in breeding. They probably will lay and hatch this fall, as was the case with my April Shanghae pullets last year: viz: Gray Chittagongs; Brown, White, and Pearly Shanghaes; Black and Red Cochins; Black Cochins and White Dorkings, half and half—retaining the Cochin size and brilliancy of plumage, beautifully mottled; a few Bramah Pootras at \$6 per pair, colored Dorkings just imported, and white Dorkings at \$5 per pair; Shanghaes and Dorkings, half and half, at \$4 per pair; Chittapratts, a variety that never set, and Sebright Bantams, (very small,) at \$3 per pair.

Persons may rely on such fowls as ordered, carefully cooped, and delivered at express office, or the money returned. Orders will be filled according to date.

Schoolcraft, Mich., April 14th, 1853.

M. FREEMAN.



NEW YORK STATE Agricultural Works

By WHEELER, MELICK & Co., ALBANY, N. Y.

In presenting our annual business card to the Farming Public, we take the occasion to express our thanks to former customers for an increased patronage, which has made a further extension of our manufacturing facilities necessary.

As the limits of an advertisement will not admit of an explanation of all the advantages of our Machines, and as most of them are so well known as to need no commendation, we will make this statement brief, and for more detailed information we refer to our printed Catalogue, which will be sent by mail, *postage free*, when requested.

WHEELER'S
Patent Railway Chain Horse Powers.
These powers (represented in the above cut) are unrivaled for driving all kinds of Farm-

ers', Planters' and other Machinery, which admit of being driven by Horse Power. They are made for either one or two horses, and their superior merits, in point of durability, strength, and ease of running are fully established; while their compactness and simplicity, lightness, and greater length and width of Treading Floor and Stall, give them advantages over other Powers, which are highly appreciated by those who have tried them. *Several thousand of them are in use, some of which (made twelve years ago) have threshed over 100,000 bushels, and though our present Powers are much improved over the old ones of the same kind, yet the latter are still good. About 950 of them were sold by us and our agents the past season, (a larger number than any previous year,) thus proving their increasing popularity.*

WHEELER'S Patent Combined Thresher & Winnow.

This Machine (also represented in the cut) is a new invention. It was got out two years ago, after a long series of experiments resulting in a machine which performs the *three operations of Threshing, Separating and Winnowing*, with as much dispatch and as few hands and horses as are required to thresh and separate only, with other machines, and although designed for so complicated work, it is yet a model of simplicity and compactness. The entire running parts are driven by the main belts, and one small band. We have no doubt it is the most perfect machine in use for Threshing and Winnowing. Driven by two horses, they thresh and clean from 150 to 200 bushels of wheat, or twice that quantity of oats per day. We give below letters from gentlemen who have the machines in use, showing the estimation in which they are held, premising that these two are about an average of over 100 similar letters, which we can show.

Letter from E. SWARTHOUT, Esq., Dated Eter, Lauzerne Co, Pa, March 22d, 1853.

Messrs. WHEELER, MELICK & Co.

Gentlemen.—I am happy to say your Thresher and Winnow far exceeds my expectations—it cannot be beat in this section. I have threshed 43 bushels of wheat in 60 minutes by the watch. It was good clean wheat and short straw, and taken to market from the machine as fast as threshed; and so it has been with most of the wheat I have threshed. All that is free from chaff and cockle I can make fit for market as it comes from the machine. I have threshed 90 bushels of oats in an hour. I think, on the average of Wheat 25 to 30, and Oats, 60 to 70 bushels per hour. I have threshed between 5,000 and 6,000 bushels in all since I got the machine, which was not till the middle of December, and so late I feared the horse powers and 8 horse cleaners had got all the work done, but I soon had plenty. The workmanship of the machine is the best I ever saw.

Yours, &c.,

E. SWARTHOUT.

Letter from W. C. NORTHRUP, Esq., Manlius
Onondaga County, N. Y.

Respected Gents:—Having tried your Win-
nower to our satisfaction, we are glad to say
we like it much. We first tried it on Soles
Wheat, and it worked to a charm; cleaned it
as well as any Fanning Mill the first time, and
threshing from 20 to 25 bushels per hour.—
We then set at up another barn for Oats, and
threshed from 50 to 60 bushels per hour. Oats
were good. It works to a charm in Barley;
threshes as fast as we can put it through the
Machine, but have not tried it *per hour*. It
works well in Buckwheat, when dry, and in
Timothy. Your machine is much liked in this
place, both for threshing and *saving* Grain. It
takes the preference of the 8 Horse Machines.

Yours, very respectfully,

W. C. NORTHRUP.

WHEELER'S

Overshot Thresher and Separator.

This Machine is also our own invention, and
has been in use 13 or 14 years: and its many
advantages are appreciated by other *Manufacturers*,
as well as the Farming Public. Driven
by our Double Power, it threshes and separates
from the straw from 150 to 200 bushels of
Wheat, or twice as much Oats per day. For
the Single or One Horse Power we make a
smaller Thresher and Separator, which threshes
from 75 to 100 bushels of Wheat per day. The
small Machine is adapted to moderate sized
farms, and as the single Power is sufficient for
sawing wood, churning, cutting stalks, straw,
&c., and driving almost every kind of Machine
used by Farmers, and is capable, by changing
Horses and elevating the Power, properly, of
threshing much faster than we stated above, it
is a very popular Machine in some sections.

¶ All our Machines are *Warranted* to give
entire satisfaction, or they may be returned at
the expiration of a reasonable time for trial.

PRICES:

For Double or Two Horse Power, Thresher and Separator, in- cluding belts, wrenches, oil- cans, complete	\$150 00
Double Power alone, including belt	115 00
do without belt,	110 00
Double Thresher and Separator, alone	37 50
Single or One Horse Power, Thresher, and Separators, in- cluding belts, oil can and wrenches, complete,	123 00
Single Power including belt,	88 00
do without belt,	83 00
Single Thresher and Separator, alone	35 00
Clover Hullers	30 00
Straw and Stalk Cutters, for horse Power	30 00
Circular Saw Mill, with 24 inch Saw	35 00
One Horse Power, without band wheel	78 00
Churn Gearing	12 00

Band Wheel	5 00
Band for Power	5 00
Double Power, with Combined Thresher and Winnow, in- cluding belts, wrenches &c.	235 00
Combined Thresher and Win- nower, alone,	120 00
Orders are solicited, and will be promptly filled. Address, WHEELER, MELICK & CO. May 1853. Albany, N. Y.	

1853.

1853.

WISCONSIN

Steam Foundry & Machine Shop.

RACINE,

FOURTH ST., WEST SIDE OF THE RIVER.

A. P. DICKEY,

ANNOUNCES to the people of Wisconsin
and the adjacent States, that he is pre-
pared to manufacture to order at the shortest
notice, all kinds of Castings, Horse Powers,
Threshing Machines, Separators, &c.

He has a large and well selected assortment
of patterns of the most approved and modern
style for Steam

FLOURING AND SAW MILLS:

also, of Water Mills of every description,—
He will get up at the shortest notice, and in
workmanlike manner, spindles, bales, drivers,
damsels, lighter screws, all the fixtures for
common gear or muley saws. He keeps con-
stantly on hand—

Road Scrapers,	Pile Drivers.
Clothes Driers,	Ploughs & Plough cast- ings, every variety,
Boo, Crimps,	Wagon axles, and cast boxes,
Fly wheels various sizes,	do. boxes,
Band do.	do.
Wheelbarrow	Pipe boxes,
Muleyrons.	Sleigh, Sled, and Cut- ter shoes,
Cranks,	Horse Power castings of every variety,
Noddle pins,	Millers' and Inspect- ors' brands,
Rag irons,	Cob and corn grinders,
Mill dogs,	Shovel planes,
Mill bars,	Wheelbarrows,
Corn shellers,	Tread Wheels for elevating wheat, Hoisting Gearing, &c.
Cultivators,	Columns for store fronts, fluted, plain, square and round. Caps and sills for windows and doors, dooryard and cemetery cast and wrought fences. Likewise always on hand a large as- sortment of
Joint Harrows,	Potash and Cauldron Kettles, Coolers,
Tread Wheels for elevating wheat, Hoisting Gearing, &c.	Stoves and Hollow Ware

of the latest and best construction, and in
great variety. Any kind of machinery will be
made to order, and turning and finishing of all
kinds done promptly and at low prices.

In addition to the foregoing, he manufactures

STEAM ENGINES,

in the most modern style, of various sizes and power, suitable for flour, grist, saw and oil mills, and the various other purposes, to which steam power is applied. Steamboats and other machinery repaired on the shortest notice.

The proprietor will give his constant personal attention to the various branches of his business, employ none but the best of workmen, use none but the best of material in the construction of his work, and trusts by prompt attention to his engagements with his customers, he will not fail to give satisfaction.

He would also say to the public, and to farmers and threshers in particular, that the utmost care will be taken that none but the very best iron be put in his Horse Powers and Separator gearing; that he has taken especial pains to get the "Hanging-rock" iron from Ohio, and the Rossie iron from New York, which iron has the reputation of being the best in use for gearing, and that his Powers will hereafter be fitted up with castings made from that iron, and warranted to stand with fair usage. He is manufacturing the Rochester Separator, and double-gear horse powers, which are conceded by all to be among the very best now in use, all of which he warrants to be made of the very best material and in the most workmanlike manner.

A. P. DICKEY.

Racine, January, 5, 1853.

v5n5

PLANING MACHINE,**CIRCULAR AND UPRIGHT SAWS, TURN-**

ING LATHES AND BORING MACHINES,

Running by Steam Power, which enables him to do all kinds of work, with either of the above machinery, with the greatest facility and on the most reasonable terms. As he keeps none but the best workmen, he feels assured that any work entrusted to him will be executed in a satisfactory manner. A proportion of patronage is solicited.

A. P. DICKEY.

Racine, January, 5, 1853.

v5n2

PIE PLANT FOR SALE.

CAHOON'S well known Seedling, superior in quality and size to any of the varieties of Mammoth, Colossal, or Victoria, continues to produce new leaf stalks until November, not being affected by the early frosts. This variety was raised by the subscriber 13 years ago from seed, and after being under cultivation that length of time holds good in size, having last year produced stalks weighing four pounds fourteen oz. each.

I will securely pack in Boxes, and forward according to directions, Ten Roots for \$5; Five Roots for \$3; or One for \$1; Cash to be sent with the order. A severe frost does not injure the Roots; they can be sent with safety to any part of the Union. Also, for sale,

DWARF PEAR TREES

Of superior varieties; most of them bearing size Apple, Plum and Cherry Trees, of the varieties recommended for general cultivation by the American Pomological Congress. Gooseberry Bushes of best varieties. Quinces and Raspberries, in variety. Grapes, four varieties. Red and White Dutch Currants. Flowering Shrubs and Ornamental Trees.

Bulbous, Flowering Roots, and Dahlias, that received all the Premiums awarded at the last Fall State Fair, over 70 varieties. 1500 Balsam Firs, Spruce, Hemlock, and Arbor Vitae, from one and a half to five feet high.

In the list of Gooseberries will be found the celebrated Houghton's Seedling, which now stands at the head of all known varieties, never mildews in any locality; a single Bush in my Garden, four years old, produced last year 16 quarts of fruit. It frequently makes a growth in one year from four to five feet. It requires training on a Trellis.

I wish it particularly understood that I have not for sale any Cheap Goods in my line of business bought at Auction at half price, but all I have for sale have either been grown on my own ground, or purchased from the BEST EASTERN NURSERIES only, having regard to BEST VARIETIES, vigor of growth, and form of Trees. Price being a secondary consideration, I shall sell for what a VERY GOOD Article is fairly worth.

B. P. CAHOON.

Kenosha, April, 1853.

v5n5tf

LIVE STOCK AND AGRICULTURAL DEPOT.

CHARLES W. KELLEY & BRO., NORTHWOOD,
MINNESOTA.

DEALERS in Live Stock, Farming Implements, Fruit Trees, Farm and Garden Seeds.

Live Stock consigned to us will be pastured on fertile bottom lands in inclosures watered by the Mississippi, from the 15th of June to the 10th of September, without charge.

Red River Spring Wheat, and other choice grains raised in this latitude, 46° north, for sale in quantities to answer all orders.

200 GOOD HEALTHY SHEEP,
wanted. Address, C. W. KELLEY & BRO.,
Northwood, via Itasca,
Minnesota.
April, 1853.

NOTICE To Farmers.

ANY one wishing to obtain the Suffolk Breed of Hogs, can obtain the same of C. S. BLANCHARD, M. D., of East Troy, Walworth County, Wisconsin.

Residence half mile West of East Troy.
Troy, March 28, 1853.

v5n5



**Wisconsin Wholesale Drug
WARE HOUSE.**

ESTABLISHED IN 1844.

S. JOHNSON, JR.,

Wholesale Dealer in Drugs, Medicines,
Paints, Oils, Dye Stuffs, &c. General Agent
for most of the popular Patent Medicines sold
in Wisconsin

Proprietor of Johnson's Chemical Hair In-
vigorator, Johnson's Cherry & Liverwort, and
the famed Bone & Nerve Liniment.

151, East Water St., Milwaukee.

T. LITTELL,

WHOLESALE AND RETAIL DEALER

IN

Agricultural Implements, Seeds, &c.,

**109, East Water-st.,
MILWAUKEE,**

Is prepared to supply Dealers and Farmers with
any kind of PLOWS, manufactured by Ruggles,
Nourse, Mason & Co., at manufacturers prices.

adding only cost of Transportation. Their
new Series of Plows, comprises the most desir-
able patterns that have ever been introduced.

Their **EAGLE PLOWS**, are already too
well known to need one word said in their favor.

And is also prepared to furnish Extra Points,
Mould Boards, Land Sides, or any part of the
Plow that may be wanted. Wherever their
Plows have been introduced, they have receiv-
ed the highest commendation.

I am prepared at all times to supply Hay
Cutters, Harrows, Cultivators, Corn Shellers,
Road Scrapers, Thermometer Churns, (and all
other desirable patterns,) Fan Mills, Seed
Sowers, Corn Planters, Meat Cutters, Field
and Garden Seeds. Also Wholesale Dealer in

GROCERIES AND PROVISIONS,

Agent for the sale of **Dupont's Cele-
brated Powder.**

5n3

HORTICULTURAL!!

Rock County and the State can now be sup-
plied with Cahoon's far-famed *Mammoth Seed-
ling Pie Plant*,—unequaled by any other kind
from Maine to Texas. Also a large assortment
of the choicest varieties of Gooseberries, Cur-
rants, Grape, Strawberries, Quince, &c. Any
orders for Fruit Trees of any kinds, and Orna-
mental Shrubbery, will meet with prompt at-
tention on most reasonable terms. Arrange-
ments are being made to supply this market
with Cahoon's entire stock from Kenosha.

Yard near Monterey, Janesville, Jan. 25 '53.
n2tf

GEO. J. & S. H. KELLOGG.

AZTALAN NURSERY.

THIS Nursery is now well stocked with
choice Fruit Trees, Shrubs and Vines.

The stock of Apple Trees of choice varie-
ties, is large and complete.

The stock of Pear and Plum Trees small;
comprising only the most hardy of the choice
varieties.

Persons ordering trees can rely upon being
fairly dealt by, and will get no trees but those
which have proved good in the West, if the se-
lection is left to the proprietor.

J. C. BRAYTON.

Aztalan, Jefferson Co., Wis., }

March 1st, 1853. }

EGGS FOR SALE.

THE SUBSCRIBER offers for sale,
Eggs which may be relied on as pure and fresh,
carefully packed, put on cars and directed as
desired of the following varieties, viz: Brown,
Perly or Diminico and White Shanghaes, Gray
Chittagongs and Black Cochins, Dorkings,
just imported from the town of Dorking, Surry
Co, England, at \$3 per dozen. White Dork-
ings Chitterpratty, a new variety that never sit.
Shanghae and Dorkings $\frac{1}{2}$ and $\frac{1}{2}$ and Seabright
Bantams, at \$2 per dozen.

M. FREEMAN.

Schoolcraft, Mich., March 15, 1853. 5n5



WAUKESHA COMMERCIAL NURSERY.

THE Subscribers offer for sale, this season, a fine assortment of Fruit Trees, comprising the best now cultivated. They are very thrifty and will be sold at wholesale or retail, for cash or approved credit, at reasonable prices.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruit, to merit the confidence of his friends and the public in general.

All orders accompanied with cash or satisfactory references will be promptly attended to, and trees will be packed and forwarded without delay. We will give cheerful and prompt attention to all post-paid communications requiring information, &c.

D. VAN KIRK, & CO.

Waukesha, January 1, 1853.

NURSERY BUSINESS.

FRUIT & ORNAMENTAL TREES

FOR sale at Janesville, Racine and Koskonong Nurseries, Wis. The proprietors are now enabled to offer to the public, a stock of trees heretofore unequaled in the West. Remarkable for their hardiness, vigorous growth, and adapted to our western climate; embracing fruit trees of every description. Apples, Dwarf Pears, Plums, Cherries, Flowering Shrubs, Bulbous Roots, &c.—comprising all the most popular sorts now in cultivation—and having devoted their personal attention to their propagation and rearing, feel warranted in recommending them to the confidence of the public. Nurserymen, Dealers and Planters are respectfully invited to call and examine for themselves. All *pre-paid* orders containing a remittance or proper reference will receive prompt attention addressed to,

E. B. & J. F. DRAKE, Janesville.

F. DRAKE, Racine.

Janesville, January, 1853.

WISCONSIN GARDEN AND NURSERY, On Gardner's Prairie, town of Spring Prairie, Walworth Co.

THE Subscriber takes this method to inform his patrons and the public, that he may still be found at the old and well known establishment, at which he offers for sale the coming spring, over Forty Thousand Apple Trees of a fine size and from five to seven years from the graft. Sound, healthy and stocky trees at 18 cents each. Also Pears, Plums, Peaches, Cherries, Quinces, Grapes, Currants, Gooseberries, Strawberries, Raspberries, &c., at prices to correspond to the times. Of the ornamental, a large assortment of Shade Trees, Shrubs, Flowering Plants, Hardy Roses, Bulbous Roots, Dahlias, a choice assortment. Green House Plants, any quantity. Ever Greens; Spruces, Firs, Pines, Cedars and in fact almost every thing usually to be found in such an establishment. The fruits have been selected with great care as regards quality of Fruit and hardiness of trees. The Nursery is located on the open prairie with a northern exposure. The land has never been manured and consequently the trees are perfectly hardy. Trees taken from this Nursery seldom fail to grow in transplanting. All are invited to call and examine for themselves as the Subscriber hopes from long experience and strict personal attention to merit a continuance of public patronage.

N. B. All letters of inquiry sent to Burlington Post-office will receive prompt attention.

Catalogues Gratis at the Nursery, and by mail post-paid. JOHN BELL
Wisconsin Nursery, January 1853.

THE GROVE NURSERY AND GARDEN.

LARGE Budded and Engrafted Apple Trees, with fine heads, at 15 to 25 cents each, or \$15 per 100—Average sizes, by the thousand, \$100 to 140. Plums and Quinces—a good supply, at 25 to 37½ cents each. Pears and Cherries—a small stock at old rates. Ornamental Trees, Flowering Shrubs and Plants, in great variety, and the lowest prices, in lots, principally of our selection. These last furnished to dealers on commission. Address,

J. A. KENNICOTT.

Northfield, Cook Co., Ill.

The New Edition of LAPHAM'S POCKET MAP

OF WISCONSIN, showing the surveys of the Menomonee Lands, &c., may now be had at the bookstores, or by application (accompanied by the cash) to the undersigned. It will be sent by mail to any address upon the receipt of one dollar. A liberal discount made to dealers.

I. A. LAPHAM.
Milwaukee, January, 1853.

WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V.

JANESVILLE, WIS., JUNE, 1953.

NO. 6.

PUBLISHED ON THE FIRST OF EACH MONTH, BY
MARK MILLER.

TERMS:

50 Cents a Year in Advance;

Five copies for \$2, if directed to one Post Office, and at the same rate for a larger number. All subscriptions to commence with the volume. Back numbers supplied to new subscribers.

ADVERTISING;

One page per year, \$50. Half page, \$30. Quarter page, \$18. Eighth page, \$10. One square, (twelve lines or less,) 1 year, \$6.50. (Less than one year,) for first insertion, \$2.00. For each subsequent insertion, 50 cts. And at the same rate for a larger amount.

These terms will be strictly adhered to. The circulation of the FARMER is large, and the amount of advertising limited; which renders it a more valuable medium for advertising than if a larger space was appropriated to this department.

Wisconsin State Agricultural Society.

PREMIUM LIST FOR 1953.

The premium list of the State Agricultural Society, together with the regulations for the State Fair next fall, at Watertown, has been published, and is being distributed among the farmers of the State. Few State Societies in their infancy, like ours, have ever offered a more liberal and judicious premium list. The regulations are those which are supposed to be just and requisite for the proper exhibition and examination of articles presented.

Our object, in this article, is to call the attention of our farmers, thus early, to this list of premiums, that they may examine it thoroughly, and make due calculations, both with respect to their stock and farm products, and decide upon the points to which they will direct their efforts, and thus to contribute as much as they can and ought, to the interest of that occasion. Let every one turn his attention to the crop, or crops, in the cultivation of which he may consider himself well skilled, or may take a particular interest; then at the fair present the results for the benefit of others interested in the same crop or crops. So with the stock-grower, the wool-grower, and the dairyman. The agricultural interests, and to a much greater degree than is generally supposed, the other interests of the State, demand this of the farmer.

Let it be remembered by all, that the farming interests are the great back lever of all other interests, and, if these are suffered to flag, or to diminish in importance, there is an end to the prosperity of the mercantile, mechanical and other interests of the State.

Therefore, just take the premium list in hand, on the first rainy day, and look it over thoroughly, and mark the several items in which, from your circumstances, it may seem proper and best for you to engage in competition. Try also, by an honorable ambition and enthusiasm, to provoke your neighbors to a like course of good works.

First on the list are the premiums for cattle. Now, who is the lover of good cattle—of choice beef—that will introduce into the State, and exhibit at the next Annual Fair, a pure blooded short-horned Durham bull, and some cows or heifers? The man who will do this, will do an honor to himself, and greatly benefit the community. Who is the lover of good oxen, and the admirer of a well formed, beautiful animal for service under the yoke? Who will bring into our State some fine specimens of the Devens? Who is the dairyman that will exhibit good specimens of the renowned Herefords or Ayrshires?

It is to be hoped that the next State Fair will not pass off without specimens of all these breeds being exhibited. Let us have some pure and thorough-bred animals whose pedigree is known, and not the mongrels. Nothing, in the form of cattle, is now more needed in Wisconsin than some pure specimens of the above breeds of animals.

Next on the list are the premiums for horses. Who is the lover of good horses, (and who is not,) that will introduce into our State a good specimen of that best of all breeds—the beautiful Morgan—in the shape, and, perhaps, color, of the splendid Black Hawk branch? A more promising business for realizing a pecuniary benefit, seldom offers itself to the farmers of Wisconsin, than does that of the breeding of fine horses, either for all work, or for fancy

Thus we might pass on through the whole list for sheep, swine, and poultry, which are destined to produce in our midst as *sheepish*, *hogish*, and as *fowl a mania* as they have produced, and even yet, are producing in the eastern States. We would say, "let it come"—memorable words!! And so on farther, to grain, seeds, and vegetables, domestic manufactures, needle, shell and wax-work for the women. There is no one who is so poor but that he can enter the list somewhere in the long ranks. No one who can find a place for a hill of potatoes or a head of cabbage, a bed of flowers, or a nest of eggs, but can enter the list of those, some of whom will certainly receive a premium. Even if any one is so unfortunate as not to get the premium for which he may have striven, let him remember that he will have been fortunate in that he has made an *effort*; for this effort will be of vastly more service to him than the premium alone, in its influence on his character, in the knowledge necessarily gained thereby, and in the improvement of his judgment of the business, and the manner of conducting it, whatever it may have been.

Again, his efforts will have stimulated his neighbor to similar ones, and he will have been profited in the same way, and the whole community about him will be benefitted, and knowledge will begin to run to and fro throughout the commonwealth, and all, perhaps, just because several farmers determined to compete for some or several of the premiums offered.

Now this is the very object aimed at by the managers of the Society, and this is the way our agricultural interests are to be promoted. Let no one, therefore, excuse himself in this matter—let no one be without interest in it. †

County Agricultural Societies.

PREMIUM LISTS.—The premium list of the Rock Co. Agricultural Fair to be holden at Janesville is also published, and thanks to the liberal and enlightened board of managers, it really surpasses any list of premiums which has yet fallen into our hands. Old Rock certainly seems intending, if possible, to be the banner county in agricultural matters. A noble enthusiasm has got hold of some of the farmers, and it is to be hoped that it will hold on to them till the Agriculture of the County is elevated to the high standard her position and capacities demand of her.

To the farmers of Rock we would say, look

at the Premium List for the next Fair, and if you are not tempted, *every one of you*, to strive for the premium in more than one branch, we have mistaken you. Then again do not forget the State Fair, and remember that Rock County must be the Banner County on that occasion.

We are also in possession of the Premium Lists of several other County Societies, showing not only a general, but an increased interest amongst the friends of Agriculture throughout the whole State. There is every reason to hope, that both our State and County Fairs this season, will greatly surpass any of their predecessors.

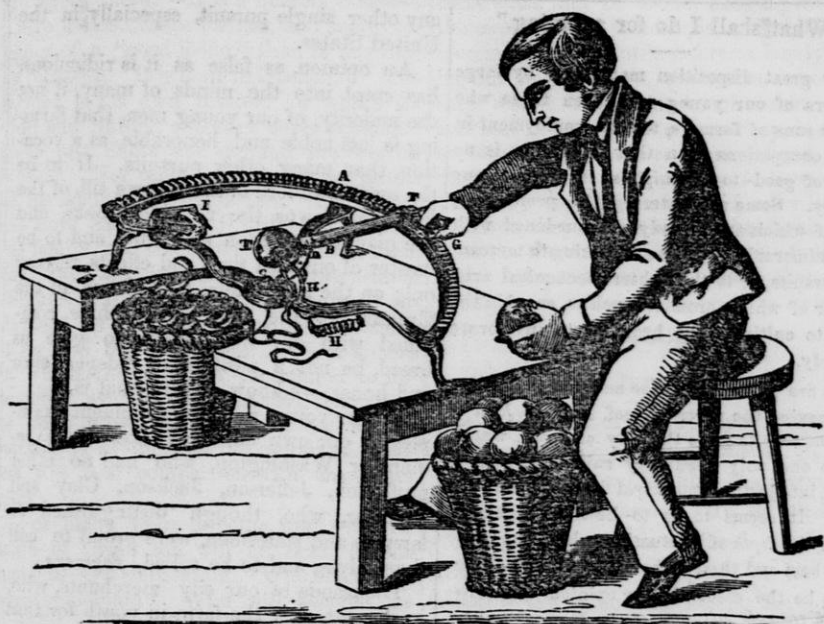
A more promising future to the agricultural interests of Wisconsin never before dawned upon her. Let not this bright sun of a glorious morning and a perfect day find the farmers all *snoosing*.

DOCTORING CATTLE.—The following remarks under the head of "Veterinary," in the Dec. No. of the *Prairie Farmer*, are so physiologically just, sensible, and worthy of the attention of every farmer, that we transfer them to our columns. These seem to bear the impress of the "Old Drs." (K) cerebral perturbations, whose waves when they run high and furrow deep, never fail to float something ashore worthy to be picked up and garnered among our choice things. Dr. Kennicott always, *generally* says good things:

"We have one piece of general advice to offer under this head. Treat all domestic animals upon the same principle that you would the animal *MAN*—making due allowances for the circumstances of the case.

The best general remedy is *CARE*; a comfortable shelter, and a kind and timely attention to natural wants; and the less medicine and the fewer medications the better. But if you will "doctor" your cattle, do not employ quacks, nor follow every floating recipe; but get a good veterinary practitioner, if to be had, who has read the books of his profession, and understand them; or better still, perhaps, read yourselves; and follow the indications, if you are right. And if not, better trust to nature, three times out of four. More cattle, as well as *MEN* are doctored to death than people in general suspect."

REASONS WHY COFFEE IS SO SELDOM WELL MADE.—1st. The berries are frequently too much and too rapidly roasted, their proper color being that of cinnamon. 2d. The coffee is ground too fine. 3d. Not enough coffee is used. 4th. It is usually over boiled; by which means the bitter principle is extracted from the berries, and little or no pains are taken to clarify it. Canadian Agriculturist.



APPLE PARING MACHINE.

The accompanying drawing represents a very ingenious and useful machine for paring, coring and quartering apples. It performs its work with precision—the paring which is taken off from the apple not being thicker than a wafer. The core is removed—the apple is sliced—and much better done and in less than one fourth the time required by hand.

The engraving exhibits a perspective view of the machine in operation. An apple is on the fork, partly pared and others shown pared, cored and quartered. The machine consists of a semi-circular rack A, in connection with a hollow traversing lever, B, which turns on the axis C, as it moves horizontally back and forth round the circular rack A, by means of the handle G, and pinion F, which pinion gears into the teeth of the rack A, and is made to revolve. The pinion F, being fixed fast, on the outer end of a hollow spindle, which turns freely inside the hollow lever B, and has at its other end a fork D, on which the fruit E is placed to be pared. H, is a stationary, yet swinging knife which is kept in contact with the apple by the spring H. To pare the apple it is only necessary to shove or push

the lever B, G, from one end of the rack to the other, and it will be done perfectly. The spring knife H, yielding and adjusting itself to apples of any shape or size.

To core and quarter the apples, the rod J, which passes through the spindle of the fork D, and has a single prong, which serves to hold the apple while being pared and also to guide it to the core I, is struck with the hand and its collar made to bear against the apple and force it off the prongs and up against the corer I, which consists of a hollow tube cutting out the core and four blades for slicing it. After the apple has been cored the rod J, springs back to its place; the apple and core falling into proper receivers.

A silver medal was awarded to the inventor at the last Fair of the American Institute. Smith & Tenwich, 14 Vandam St., N. Y., are the owners of the patent and will sell the right to manufacture and use it.

A sort of prepared linen is now used in Germany to print youngsters' books on; it is dearer than paper, but the youngsters cannot tear it.

"What shall I do for a Living."

The great disposition manifested by large numbers of our young men, even those who are the sons of farmers, to seek employment in other occupations than that of farming, is no token of good to the highest interests of our country. Some are entering the professions, most of which are already overburdened with supernumeraries; others are looking to mercantile pursuits, or to the lighter mechanical arts, neither of which promise much to ennoble the mind, to cultivate the heart, or to invigorate the body.

We are pained to see so many of our young men leaving the parental roof, and the land of their fathers to go to the city or town, where, ten to one, only pecuniary ruin, and, what is worse, intellectual and moral destruction awaits them. It seems to us to be the height, or, rather the *depth* of infatuation, which has seized both them and their fathers, that such is suffered to be the case. In our opinion this arises from a too low estimate of the farmer's calling—a want of a due appreciation of its honor and of its requisitions.

This error, or evil, must, in some way, be corrected. Our farmers must be enlightened on this point. When they come to be fully in the possession of the true idea, which they now need to embrace more than any other,—*that their occupation requires more real skill and knowledge, or science, to perform well its duties, than any other, and that a man cannot be too well educated to be a farmer*, then will this present forsaking of the noblest of arts, for that which is naught, cease, and that, we hope, forever. We long for that day. With these views, we can not deny ourselves the pleasure of making some extracts from an article bearing on this point, from the March No. of the Phrenological Journal, entitled, "WHAT SHALL I DO FOR A LIVING." They are full of truth and good sense, and should be read and pondered well by every young man in the land. It will not hurt the fathers, even.

"Agriculture is in civilized countries, the principal occupation of man, and as it is the primitive, so it is, also, the most important of all. As food is the first necessity of man, that employment which supplies this universal and oft-returning want, must rank first in importance. More persons are necessarily engaged in farming than in

any other single pursuit, especially in the United States.

An opinion, as false as it is ridiculous, has crept into the minds of many, if not the majority, of our young men, that farming is less noble and honorable, as a vocation, than many other pursuits. It to be the owner and lord of the soil we till, of the hills and lawns, the running brooks, and the giant trees, laden with fruit, and to be master of our own time and efforts, relying only on the immutable Providence of the Creator for the rain and sunshine, combined with our own efforts, to give us bread, be not a position of independence and honor, we know of none that is.

Do our young men want eminent examples in our own country? Let them remember Washington, who had no other profession, Jefferson, Jackson, Clay and Webster, who, though distinguished as lawyers and statesmen, were proud to call themselves, and to be called, *farmers*.

Thousands of our city merchants, who, in disgust, left the farm in youth for that which they then regarded as the more honorable occupation of the merchant, having learned in the school of experience a lesson of common sense, are shaking off the dust of their feet upon the city, and retiring to rural pursuits, happy in the fact, that they have escaped from the turmoil, the anxious uncertainty and selfishness of the trading world, to find agreeable recreation and repose, on the broad, generous bosoms of their own farms. They find that there is no envy in the soil they till, no malice in the honest oxen they rear. Nature's horn of plenty is emptied into their laps, without stint or grudging, and they find that whoever is honest and efficient in his dealings with the soil, is never cheated in return. Our good mother earth, whatever her sons may be, is neither a knave nor a bankrupt. She never fraudulently stops payment, nor has she any respect of persons. Whatever muscles bend over her generous bosom in well directed toil; whatever honest brow thinks and sweats to put her in right relation with sunshine and shower, is owned as a worthy son of her bounty, and she crowns him with her own green laurels, and rewards him with the richest of her treasures.

The reasons we would offer to our young friends in the country for being farmers,

are briefly these:—It is a healthy business. There is less chance for loss, and more certainty of a "good living," than in any other business. It is more independent. The farmer is his own master: he works for God and Nature, and they never repudiate their just debts nor defraud the worthy worker. Nor must he give all the profits of his labor to the employers. The farmer can have his meals and his evenings with his family, and thus, more than most men, can cultivate his social and intellectual faculties. If he will, he can be well informed; he has the means and the time, if he will but use them. It is a sphere in which there is less temptation to immorality, avarice, and meanness, than that of most other pursuits, and we hazard nothing in saying that the morals of farmers will bear comparison with any other class.

For many years to come, our wide domain of virgin soil will be open for the hand of new cultivators. Who shall possess the domain? Who will become the rightful princes of the soil? Shall it be the sons of those who made the Atlantic coast to smile like a garden?—or will they, in an overcrowded population, be content to act as "hewers of wood and drawers of water," or follow trades in cities, which, from foreign rivalry, barely yield a support, while hordes of foreigners swarm to the mighty West, and become proprietors of that vast domain.

Let the sons of those who have fought the battles of civilization and of freedom, on these shores, be not few among those who, with the symbols of health and rural happiness, shall soon dot our broad Savannas toward the setting sun.

It pains us to see bright, promising and healthy young men crowd into our cities and enter upon subservient occupations, calculated to dwarf their muscles and their manliness, not one in fifty of whom can ever rise to a post of independence in mind or in purse, while they turn their back upon our immense territories of new land on which, in this age of progress and improvement, they might, in ten years, be sturdy and independent citizens.

To the young men of our country, then, we say, BE FARMERS. We want tens of thousands more of them to-day than we have—and the persons who ought to be-

come such, may be found, hanging around the overcrowded professions, and the commercial and mercantile interests, barely eking out an inglorious subsistence, when, if they would employ as much brain-work and half the drudgery and anxiety, in connection with agriculture in our old and new States, as they now employ to keep soul and body together in ill paid subordinate positions, they might rise to the dignity of men, on the substantial platform of pecuniary independence. We say, then to young men, *follow farming for a living.*"

Life Insurance.

It is the duty of every paper designed for the Farmer's benefit, to speak on all subjects which concerns his—the Farmer's best good, as a farmer. To do this it should not always be confined merely to strictly agricultural subjects. It has appeared to the author that among the many things important to the Farmer, few are so lightly esteemed as that of life-insurance. Few, comparatively of the farmers, as well as of other classes, in community, have come fully to understand the operations of the matter, and consequently duly to appreciate its benign influence and design. Life Insurance is based upon the same principles in its proposals, as is fire insurance and the ends accomplished by each are allied in character. In neither case is it intended that the events, so much dreaded, shall not, under any circumstances, transpire. The house which is insured is none the less subject to fire than before insurance. So death may as readily occur in the case of the insured person, as in that of the uninsured. But the *pecuniary results* to those concerned most deeply in these events, is very greatly affected by the circumstances of being insured or of *not* being insured. With insurance, in the case of fire, your house may be destroyed, but you receive from the insurers a sum equal or nearly so, to its value, and thus, though the event is one to be deprecated, yet it is

not a *great* pecuniary damage to you. So in the case of life insurance, it is true you may die, and your family so dependent upon your existence for support, may deplore your death, yet they are not left destitute, and cast entirely upon the mercies and cold charities of an indifferent world; for they receive from your insurers the sum which will enable them to feed, cloth, educate and fit them for a comfortable position in life.

The design of insurance, in the case of what is termed "fire insurance" or in that of "life insurance," is not, as we have said in the former, to keep buildings from burning, or, in the latter, to keep individuals from dying, but it is the design of the insuree, in both cases, to provide against the pecuniary evils which result from the devastations of the devouring flame and the shafts of the destroying angel. "Among all the contrivances to protect the family circle from want, none can be found more simple in its character, noble in its features, or certain in its results than life insurance."—It is a safe, easy and complete method of accomplishing one of the just ends and aims of life,—namely, competence to our wives and children that they may be preserved from the most direful ills flesh is heir to.

But many of our agricultural friends do not suppose that this is a matter that concerns them, and, even if it does, they are not able to do anything about it. But hold, and if you are a husband or a father or have those who are dependent upon you for their daily bread, ask yourself, "if I was to die to night what would be the condition of those now so dear to me? would this wife be independent of the cold charities of the world? would these children have a comfortable home and the means of education?" In many cases, it is true, they might. But it is not to such that we now address ourselves. The poorer you are

the more need there is of your availing yourselves, or more especially your families of the benefits of life insurance. A few dollars yearly laid aside will furnish a sure competence to your wife and children at your death, if you will employ them in effecting an insurance on your life for their benefit.

It would take too much room and time here to go into detail and thus give the necessary information regarding life insurance. This can be better learned of insuring companies. Our object is to call your attention to the subject and urge its importance upon you. Perhaps more at another time. *

A New Bee Hive.

Those of our readers who feel interested in the bee business are referred to the following communication which we have received from Mr. John Dillingham, of Turner, in this State. We do not know what his plan or system is, and cannot therefore, give any opinion in regard to it. We know Mr. Dillingham to be an observing and ingenious man. Those who are desirous of further information, can readily obtain it by addressing him. [Maine Farmer.]

MR. EDITOR.—I have owned, and have had bees under my special care and observation for thirty-five years, and have been in one continued course of experiments. By the use of glass in my hives, and by the help of magnifying glasses, and the many hours spent in viewing and inspecting their operations, I have got a tolerable good acquaintance with them. I mention this that the reader may understand that I can give practical as well as theoretical information.

A very singular, but truly very interesting bee hive is now offered for the benefit of the public, and *without any Patent*. The author has had a great many difficulties to contend with, and a vast many experiments to test, before he could accomplish his wishes. He has devoted eighteen years of snug application, to learn the nature and habits of the bee, with hundreds and hundreds of dollars worth of labor in forming a vast variety of different kinds of

hives, before he could obtain one that combined all the qualities that he could desire.

This hive embraces all the advantages of all the hives that have been offered to the public. In fine it is all that can be reasonably asked for or expected. It is composed of twelve sections, and accommodates one hundred and twelve boxes or glass tumblers.

Some of its superiority consists—1st, in preserving the bees in a healthy and active state for thirty or forty years, or even a man's whole life time; 2nd, it saves the bees from heaping out, and wasting a part of the best of the season; 3d, it supersedes the necessity of the bees swarming, and gives an opportunity for collecting stores at the same time; 4th, the form of said hive admits of increasing swarms at pleasure by taking off sections; 5th, it is safe against melting in warm weather; 6th, it is peculiarly fitted to preserve bees in cold weather; 7th, it is almost a complete preventative against robbers, either boys or bees; 8th, it is peculiarly fitted for feeding even one swarm at a time if desired; 9th, you may add sections to any amount; 10, with this hive and fixture, bees can be kept from swarming, and a reasonable portion of honey of the finest quality, in boxes, may be taken from time to time, without the necessity of destroying a single bee.

In this way many valuable objects in the bee breeding are effected,—such as an increase of honey—no trouble about swarming or losing of swarms, and taking the honey without destroying the bees.

Any person wishing to avail himself of this valuable improvement, can do so by letter, *post paid*, to John Dillingham of Me., who will furnish a draft, (*i. e.*, plate, of the hive,) with a very minute description of all its parts, so that any common house joiner can make them. There will be no charge for anything but the draft. Every applicant, on the remittance of one dollar, will have immediately forwarded to him by mail a draft as above named.

JOHN DILLINGHAM.

Turner, Jan. 26, 1853.

REMARKS.—We have received from Mr. Dillingham, drawings of the bee hive described in the foregoing communication. This hive recommends itself to those who would keep bees but for the dread of their

swarming, and has strong claims upon all *bee keepers*, if, as Mr. D. says, it secures the swarm against the depredations of the *bee moth*, which is by far the greatest obstacle to success we have encountered in the four years experience we have had in the business. Mr. D. writes, "I have used these section bee hives for more than three years, and have not suffered in the slightest degree by the bee moth."

COOKED FOOD FOR COWS.—Mr. James S. Huber, lately stated before the Philadelphia County Farmers' Club, that he had proved by actual experiment in feeding twelve cows one hundred and eighty days upon cooked food that he made a net gain of \$32. In place of twenty pounds of hay per day, formerly fed raw, he now feeds twelve and a half pounds cut and steamed. With this he mixes four and a half quarts of shipstuff, Indian corn meal, in about equal portions. This with the hay, weighs about forty-six pounds when cooked, having gained about thirty-one lbs. by that process. He says it is not only more economical, but more palatable to the cattle; they eat it without waste and keep better condition. His steaming apparatus cost \$55, which he more than saved in six months' feeding. He considers, however that the greatest gain is in the health of the animals. N. Y. Agricultur.

SOUR FOOD.—Cattle fed on sour food, prepared by fermenting rye-flour and water, into a kind of paste, and then diluted with water, afterwards thickened with hay-chaff (that is, hay cut small,) are said to fatten quickly. This plan is adopted in France to a considerable extent, and has been introduced years ago in this country. Although not generally adopted, it is deserving of consideration by graziers. With respect to the efficacy of acid food for fattening animals, there is, as on most other subjects, a variety of opinions. It is well known that swine derive more benefit from sour milk than they do from milk in a fresh state; and there is no doubt but there are particles which promote digestion, and facilitate the consumption of a larger quantity of food, and consequently expedite the fattening of cattle. [Agricultur.

Raising Pigs.

Raising pork, if made a prominent portion of the farmer's business, will bring in as much ready money and produce as much nett profit as any one branch of his business. Breeding pigs for market is profitable, and those of the most approved kinds will always meet with a ready sale at fair prices. It was formerly thought that there was some risk in attempting to raise pigs, for it was frequently the case that a portion of the litter would die when a few days old, and sometimes the sow would eat a portion of them as soon as they were born. But since "book farming" has become so common, remedies have been found for both these evils, and now there is no more risk in raising pigs than in raising calves. The pigs, and sometimes the sow, dies from over feeding, and by the use of improper food immediately after her accouchment. No milk or greasy slop should be given for three or four days. The best food is a thin gruel of scalded Indian meal dealt out in rather small quantities. When the pigs are a week old you may feed on whatever you may wish to give them, and as abundantly as you please.

A hog requires both animal and vegetable food, and when her appetite is not gratified, she will satiate it on her own off-spring. A breeding sow should therefore be well supplied with meat or fish of some kind with her other food, especially for a week or so prior to the birth of the pigs. Regard these rules and all risk of losing young pigs vanishes.

REMARKS.—We take the above from the New Era, with the credit of an Exchange; a credit we *only* give under like circumstances. Instead of meat and fish being given to breeding sows that are in the habit of eating their offspring, we think kitchen slops and vegetables with salt given plentifully just before and after pigging, will act as a preventive.

[Southern Farmer and Planter,

How have the Chinese managed to keep their lands in a productive condition for so many centuries, with so few cattle, and without the usual facilities for producing manures, which are so common to all other highly cultivated regions?

A Remarkable Disease in the Horse.

A new disease has made its appearance in the City of Boston and its vicinity, among horses. It affects the foot of the horse, and often results in the death of the animal. Dr. C. M. Wood, Veterinary Surgeon, who has treated several cases, in describing the disease, remarks in the Boston Cultivator: "The symptoms usually observed are slight swellings, accompanied with intense pain and soreness upon the pasterns, or below the fetlock joints. The inflammation is acute, and goes on rapidly to supperation. In some subjects, the disease seems to be local in its character, while in others it is accompanied with loss of appetite, great thirst, restlessness, and extreme constitutional disturbance. These symptoms are quickly succeeded by a sloughing of the integument or skin about these parts, commencing at the coronet, and extending upwards, towards the fetlock, presenting an ulcer of the most formidable character, discharging an ichorous and very offensive matter. I have rarely seen the disease extend more than two or three inches above the coronet, or hoof, and it often affects but one side of the foot. Various causes are assigned for this disease, and various remedies are resorted to by the "horse doctors," such as poulticing with dressings of charcoal and sulphate of copper, but they are all ineffectual.

I would observe, this disease is unlike the foot-rot in sheep and cattle, inasmuch as it begins at the top of the foot, and not at the bottom. I have said that the integuments slough away, and then the tendons and ligaments are exposed; and at this stage of the disease, the pain and suffering of the animal is intense.

As to treatment I have not much to add; suffice to say, that poultices do more harm than good, from the fact that they cause the disease to spread, by promoting supperation. I find that the drier the parts are kept, the more apt is nature to restore them to their healthy condition; but be the treatment what it may, it requires all the skill of the veterinary surgeon to prevent disorganization of the parts above and within the hoof. Such are the results of several examinations that I have made of horses that have died of exhaustion under this dreadful malady.

Fattening Animals.

The Shakers of Lebanon, N. Y., say, after an experience of thirty years, that in fattening swine upon Indian corn, one-third is saved by grinding into meal, and that one-fourth is saved by cooking—boiling it. This, as we understand it, makes a saving of one-half—which is probably somewhat exaggerated, but the saving is no doubt considerable. There can be no doubt, that on all farms where there are considerable numbers of cattle and swine to be fed, a mill and boiling apparatus, though they may be a little costly at first, would ultimately, and soon indeed, reimburse all expenses. Grind and boil we say therefore, to all farmers. The apathy that prevails on this point in general is very strange. Farmers are generally slow in adopting improvements in agriculture and agricultural implements, and comparatively few feed their cattle on cooked food, while some kinds of it are almost as grateful to the quadruped as to the biped; his lord and master.

Globe.

AMOUNT OF FOOD REQUIRED BY ANIMALS.

—Of hay, an ox requires two per cent, a day of his live weight. That is, if the ox weighs 2000 lbs., he requires 40 lbs. of hay. If he is working, he will take two and a half per cent. A milch cow should have three per cent. of her weight, as she is proportionably lighter than the ox, and part of the substance of her food goes to form milk. A fattening ox may be fed five per cent. at first, four and a half per cent. when half fat, and afterwards four per cent. This is independent of other food. A grown sheep will take four and a third per cent. of its weight in hay, to keep it in good store condition. Animals in a growing state require most food, and it is very poor economy to stint them. [Plow.

A HINT TO THE FARMER.—We may send to England for Durham cows, and to Spain or Saxony for the choicest sheep; we may search the world over for cattle that please the eye; but unless they receive the best care and liberal feeding they will most assuredly deteriorate, and eventually become as worthless and unworthy of propagation as any of the skeleton breeds that now haunt our rich but neglected pasture-lands.

We remember an anecdote in point, and will relate it by way of illustration. A farmer having purchased a cow from a county abounding in the richest pasturage, upon taking her to his own inferior pastures found that she fell short of the yield which he was informed she had been accustomed to give. He complained to the gentleman of whom he had purchased, that the cow was not the one he bargained for, or in other words what she was "cracked up to be." "Why," said the seller, "I sold you my cow, but did not sell you my *pasture*, too."

The above, which we cut from an exchange, reminds us of the reply which a shrewd old farmer, whom we knew many years ago, made, to one of his neighbors. The latter had obtained some pigs of a man residing some miles off, and who, because intelligent, was always very successful in his farming operations, particularly surpassing his neighbors in raising pork.—Shortly after, meeting the old gentleman referred to, he says, "Well, Mr. Sweetsir, I'm going to beat you in raising hogs this year, I have got some of J— M—'s breed." "A-a-ah," drawled out the old man, "you'd be-etter get the breed of his ho-g-trough!"

SORE TEATS IN COWS.—As many of our farmers suffer severely annually, by swollen udders and teats in their milch cows, the following is a cheap, simple and most sure remedy.

Take the bark of the root of the shrub commonly called bitter-sweet, wash and simmer it with a quantity of lard, until it is very yellow, and when cool, apply it to the parts that are swollen, three times a day until the udder and teats are perfectly soft and free from kernels. It has been tried with great success in this vicinity.

[Ex.

A new Silkworm, as we learn by the N. Y. Times, has been discovered by the Rev. Mr. Fitch, according to whom all the caterpillars of California are silkworms. They feed on the foliage of the oak, which they prefer to any other food. Their cocoons are about one-third as large as those of the Chinese worm, and the silk is strong and of a yellow color, the thread being finer than that of our silkworm.

HIGH PRICE OF WOOL IN EUROPE.—Wool is rapidly rising in England and on the continent. The London Times says: At the late public sales nearly all the stock then in London was sold, and the warehouses are consequently beginning to look very empty. The advices from the continent represent light stocks and high prices. In Germany the old stock is nearly exhausted, and the consequence is that the next clip has already, in many cases, been contracted for at much higher prices than those of last year.

PORK IN BARRELS WHICH HAVE BEEN USED FOR LARD.—A friend informs us that several persons of his acquaintance packed pork in barrels which had been used for lard—using Turk's Island salt as has been their custom. On examination in the Spring the pork was found to be damaged, and could only be sold for soap grease—although the barrels then contained good quantity of undissolved salt. One individual put up eight or ten barrels—all the barrels except one or two, had been used for lard—and there were only two barrels saved. What occasioned the loss? is the question. Can any one give us the science on the subject. [Boston Cultivator.]

CHANGE OF TIMBER FROM CLEARING LAND.—There are few things connected with the natural history of trees and plants, more surprising, or that has occasioned more speculation, than the changes that not unfrequently take place in the growth of timber after clearing. So inexplicable is this change in many instances, on the commonly received principles of vegetation, that it had been adduced by the believers in the doctrine of spontaneous production as one of the strongest supports of their system. We think, however, that singular as the phenomena may be, its solution cannot require a supposition so unphilosophical.

In the Southern States where the timber is principally pine, when that is cleared off, a growth entirely different, and composed of such as was unknown to the place before it springs up; and this, when cut off not unfrequently succeeded by new varieties; or perhaps by a return to pine. Lands covered with oak and chestnut, or such timber as shoots up from the stumps of the cut trees, do not change the timber except in a

small degree, those lands covered with timber that requires to be propagated with seeds, that this change is most apparent. Everybody must have noticed in what numbers a species of wild cherry will spring up where the forests are cut down, or are prostrated by winds, though that particular kind is rarely or never found growing in the unbroken forest.

More than thirty years since a part of our farm was cleared of its timber, a dense growth of maple, baswood, and elm. A small piece of perhaps half an acre was separated from the rest by a narrow ravine, and after being cultivated three or four years, and part of it planted out as a nursery of fruit trees, it was left to itself. It was soon covered with young trees, which were suffered to grow unmolested; and there are now on this small spot, white oak, black oak, butternut, white poplar, common willow, walnut, hickory, and black cherry, all varieties of which not one was growing near at the time it was cleared, and most of them not within three fourths of a mile.—An explanation we leave to others.

KNOWLEDGE.—ITS EFFECTS IN AGRICULTURE.—Exclusive of a small portion of earthy matter all plants and all animals are nothing more than consolidated air.

Four simple æriform bodies; carbon, nitrogen, oxygen, and hydrogen—the two latter being water—make up the whole catalogue of organic life, including man himself. Thanks to Infinite benevolence, the air is full of bread, of meat, of clothing, and of fire! All gratitude is due to that Creator, who has made it impracticable for any selfish mortal to claim an exclusive title to any portion of the ever-moving atmosphere, or the rain and sunshine of Heaven. The whole earth, too, is full of silica, alumina, lime, potash, soda, magnesia, and the other minerals which enter into the composition of plants and of animals. With all these materials furnished to our hands, with mental powers that derive their highest pleasure and dignity from the investigation of the works of Providence, what is gold, what are deeded acres, to that knowledge which renders a rational being so nearly independent for physical and intellectual comfort, if it does not also give him a higher, stronger hope of something better beyond the grave!

Gruels for Improving Cattle, &c.

In the Edinburgh Journal of Natural History, we find the following suggestive paragraph about gruels for cattle, horses, &c.:

"We are assured by Mr. Youatt, that in Auvergne, fat soups are given to cattle, especially when sick or enfeebled, for the purpose of invigorating them. The same practice is observed in some parts of North America, where the country people mix, in winter, fat broth with the vegetables given to their cattle, in order to render them capable of resisting the severity of the weather. These broths have been long considered efficacious by the veterinary practitioners of our own country in restoring horses which have been enfeebled through long illness. It is said by Peall to be a common practice in some parts of India to mix animal substances with the grain given to feeble horses, and to boil the mixture into a sort of paste, which soon brings them into a good condition, and restores their vigor. Pallas tells us that the Russian boors make use of the dried flesh of the Hamster reduced to power, and mixed with oats; and that this occasions their horses to acquire a sudden and extraordinary degree of *embonpoint*. Anderson relates, in his History of Iceland, that the inhabitants feed their horses with dried fishes when the cold is very intense, and that these animals are extremely vigorous, though small. We also know that in the Faroe Islands, the Orkneys, the Western Island, and in Norway, where the climate is very cold, this practice is also adopted; and it is not uncommon in some very warm countries—as in the kingdom of Muscat, in Arabia Felix, near the Straits of Ormuz, one of the most fertile parts of Arabia, fish and other animal substances are there given to the horses in the cold season, as well as in times of scarcity."

IMPROVEMENT IN DAIRY STOCK.—The Report of the Executive Committee of the New York State Agricultural Society for 1852, gives an encouraging account of the average increase per cow in butter and cheese, in the dairies of the State. We quote the following passage on the subject:

"Our dairies have not only increased in the quantity of butter and cheese but in quality also; and what is most encouraging, while the increase in quantity of but-

ter has been 264,361 pounds, and of cheese 12,991,437 pounds, the number of milch cows since the last State census has decreased 68,066—showing most clearly that the efforts of the Society in elevating the standard of our dairy products and improving the character of our dairy animals, have been most gratifying. The average yield of cheese per cow, as estimated in 1845 was 110 lbs. each, and the yield in 1850, adopting the same standard of estimate, gives a fraction over 160 lbs. each, showing an increase per cow at the average prices at which cheese was probably sold by the farmers, six cents, of about \$37.50 each, amounting to \$1,162,962 for the whole number of cows in the State employed in the cheese dairies alone. From the statement of one of the competitors, Mr. A. G. Ford, a dairy farmer of Herkimer Co., which will be found in the Transactions of 1851, it will be seen that his yield of cheese per cow has averaged for the last three years, upwards of 600 lbs.

RAISING LOPPED HORNS.—In answer to the inquiries of N. W. Moore, of West Tustin, I would say that the horns of steers can be raised without the least damage to their growth, (the most convenient time to do it, is when they are kept in the stable,) by taking two small pulleys, place one of them directly over the front edge of the manger, high enough to be out of the way of the horns, the other at any place you may wish, the weight to hang out of the way; pass a cord over them with a loop at one end, to slip over a button on the end of the horns; at the other end attach a weight of from two to four pounds. This should be put on every night when the steers are put in the stable, and be taken off in the morning when turned out. I have never known that operation, when faithfully performed, to fail of raising one or both of the horns to any desired position, in from two to six weeks time. Our success has been such that we consider the lopping of one or even both of the horns as no serious objection, provided they are otherwise in good shape. [Albany Cul.

—Delicious oranges and lemons have been grown near Memphis, Tennessee; the Editor of the Eagle pronounces them equal to the best raised in Louisiana.

HORTICULTURE.

Insects Destructive to Fruit—The Curculio.

We have said a great deal from time to time about insects, and it would seem almost superfluous, at the present time, to say anything more. But there is often need of the repetition of old facts, plain and familiar though they may be, as from carelessness or inattention they are often forgotten and neglected altogether.

Now is the time to look after and destroy those insects, which may infest your trees. Some insects confine their operations entirely to the trees, while others only prey upon the fruit. Among the latter is the *Curculio*. This insect is very destructive to plums and sometimes attacks cherries and apples. We have gleaned from Cole's and Thomas' Fruit Books many facts touching the *Curculio*, which we present to the reader.



"CURCULIO. Plum Weevil, [*Rhynchus nenuphar*,] is here represented in its different stages.

1. Curculio in the perfect or beetle state, or 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 the plum are the crescent shaped marks, as made by this insect.

"About the time the young fruit attains the size of a pea, the curculio begins its work of destruction. It makes a small crescent-shaped incision in the young fruit, and lays its egg in the opening. The presence of the egg may be easily detected by these incisions on the surface. The egg soon hatches into a small white arva, which enters the body of the fruit and feeds upon it, causing, usually, its premature fall to the ground.

The period at which the young fruit falls, after being punctured, varies with its age at the time it receives the injury. The earliest

portions drop in about two weeks; but if the stone is hard when the egg is laid, the fruit remains till near the usual period of ripening, sometimes presenting a fair and smooth exterior, but spoiled by the worm within.

The insect, soon after the fall of fruit, makes its way into the earth, where it is supposed to remain till the following spring, when it is transformed into the perfect insect or beetle, to lay its eggs and perpetuate its race. Instances however, have occurred, where the transformation has taken place within twenty days of the fall of the fruit.

The curculio travels by flying, but only during quite warm weather, or at the heat of the day. The insects mostly confine themselves to certain trees, or to the same orchard. But the fact that newly bearing or isolated orchards are soon attacked, clearly shows that in occasional instances they travel considerable distances. Indeed, they have been known to be wafted on the wind for a half a mile or more. the windward side of the orchards being most infested, immediately after strong winds from a thickly planted plum neighborhood. In the cool of the morning, they are nearly torpid, and can scarcely fly, and crawl but slowly; hence, at this time of the day they are most easily destroyed.

It has been found that the effluvia from fermenting manure effectually repels the curculio. Trees standing near stable-cleanings usually bear full crops, and heaps of fermenting manure placed for this purpose beneath the trees, have yielded the same successful result. But other offensive substances, as strong tobacco water with whale-oil-soap, applied so abundantly as to coat thickly the young fruit, has not deterred them in their attacks. In addition to these means, the frequent passing near trees planted by door paths and other frequented places, and the presence of swine in orchards, doubtless contribute to some extent towards the same end by frightening the insects away.

Destruction of the insects while stinging the fruit is thoroughly effectual, if vigorously and unremittingly applied. The best and indeed the only practical mode, is to jar them from the tree, upon white sheets spread beneath. While lying on the sheet they may not at the first glance of an unpracticed eye be distinguished from the fallen withered blossoms; but a moments attention will quickly remove this difficulty.

A quick and sudden jar is important, and may be given by the stroke of a mallet, upon the short stump of one of the smaller limbs sawed off for the purpose, and which prevents bruising the bark. Or a mallet may be thickly covered with woolen cloth encased in India rubber, to prevent injury to the tree.

The best time for this work is in the cool of the morning, when the insects are partly torpid with cold, and drop quickly."



CATERPILLARS' NESTS, ONCE MORE.—Now is the time to look after and destroy the caterpillars' nests on fruit trees, and we again entreat our readers to attend to this business in time, so as not to have their trees injured and disfigured by these pests.

The nests can be easily detected by a practiced eye. They appear like a bandage or swelling around the young twigs, as represented above. Cut them off and burn them.

We have heard of a good many ways to destroy these depredators; such as shooting the nests from the branches on which they appear, with powder; smoking or burning them off &c. the first of which is of but little use, except to afford a pastime for boys, while the latter usually injures the tree.

The safest and most effectual way is, when it can be done without injuring the tree too much, to sever the branch on which they appear, from the tree, and burn it.

There are various kinds of caterpillars which make their appearance "about these days" which should be watched; After the web or nest is formed, which should not be at all if possible, the best way we have ever found to destroy them, is to take a pole of suitable length, with the top end roughened or splintered up a little—"thrust it into the nest and wind up the whole colony in their own web." A wet day is the best time for this operation, when they are not feeding. There are also *Apple Tree Borers* and *Bark Lice*, which should be looked after. Examine your trees closely—too much vigilance cannot be observed, if you

would protect your fruit trees from the ravages of insects.

CELERY.—A writer in the N. E. Farmer recommends Seymour's *Celery seed* as far superior to any other kind. He says it is white, solid and good flavored. Winter celery should be sown about the first of June.

THE PROSPECT FOR FRUIT in Southern Illinois.—The announcement made sometime since that the peach crop for next season was cut off or injured very materially, was premature. We learn that the prospect for peaches, as well as all other fruits, is good. A small portion of the buds on the peach trees are killed; but sufficient are left to constitute a good yield, should they be spared from further attacks.

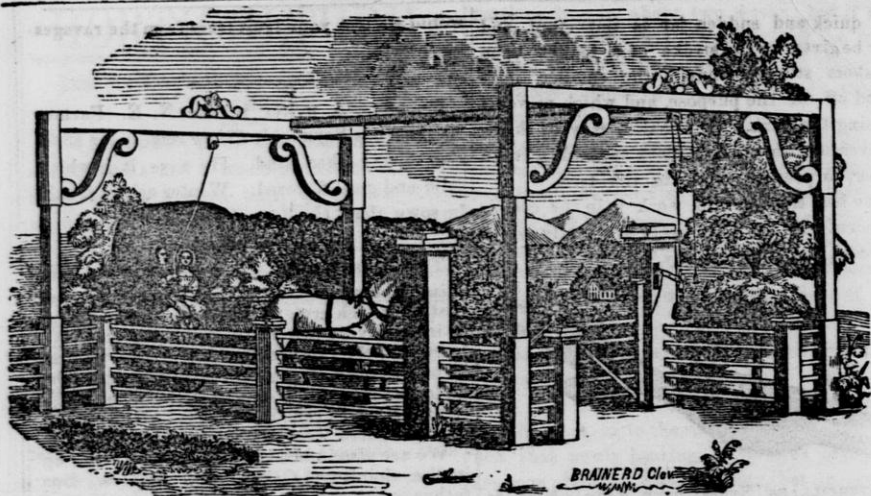
We are also informed that this is the case up in the vicinity of Carrolton, Green Co. But further to the east, in the northern portion of Maconpin county, the last sleet storm was more injurious to the fruit prospects—very many of the peach buds in certain localities.

Alton Courier

MINING AND AGRICULTURE.—It is generally supposed that these two pursuits cannot flourish together. Such is not the case. Humboldt describes the neighborhood of the Guanaset mines, in Mexico, as reminding him of the fruitful plains of Lombardy; and in Chili, the rivers which wash down gold, are described as flowing through the richest corn fields.

MARINE RAILWAY.—A project is on foot to build a marine Railway around the falls of the Ohio river for the purpose of passing boats of a larger capacity than the Portland Canal on the Kentucky side, can accommodate. The Scientific American says:

"It is simply to construct upon the Indiana bank of the river, a railway, the length of which will be about one and a quarter miles, and the width about 72 feet, with proper locks at each terminus; the whole to be of such magnitude as to be able, without discharging cargo, to pass steamboats of the largest class, or say about 350 feet in length, and 80 feet beam over the guards. The difference in level between the head and foot of the falls may be assumed at about 24 feet, and it is proposed to lift the boat a part of this height in the lock, and then by the grade of the railway. The power to be used will be one or more stationary steam engines, applied to the moving of the carriage upon which the boats will be transported, by means of a tow rope or chain."



IMPROVEMENTS IN FARM GATES.

The above engraving represents a valuable improvement in the construction of *Farm Gates*. These Gates can be constructed for a small sum over and above an ordinary Gate, and will effectually dispense with the necessity of getting out in the mud and storm, or of leaving the team for the purpose of opening and closing a Gate. S. S. Barry, of Cleveland, has tendered us a set of the castings for putting up one of these Gates, and from whom any information may be obtained about the sale of rights, &c. We are also indebted to Mr. B. for the following description:

"The principal improvement consists in its being so constructed that a person in a carriage or on horseback, can pass through it without alighting. On approaching from either way, the person takes hold of a rope which hangs over the centre of the road, and pulls gently for a short time, and the gate comes open and fastens itself; and then in driving a carriage or wagon thro' one of the wheels runs over a trigger fixed in the ground, which unfastens it, when it immediately shuts and fastens itself again. The only difference in passing a person on horseback is this:—In pulling the rope to open the gate, care must be taken not to pull it far enough to fasten itself; but by pulling it about two-thirds of the way open

the horseman can easily pass through before it shuts itself again. The machinery by which these movements are performed is simple, and not liable to get out of repair, and the whole structure is substantial and durable; and will, no doubt, commend itself to the favorable notice of those for whose convenience it is intended. A model of this gate was presented for examination at the World's Fair in London, and received from the committee a very favorable notice."

APPLICATION OF LIME TO THIN SANDY LAND.—Slake the lime with salt brine; when it falls into powder, mix with every 25 bushels of it, 10 loads of clay, layer and layer about; throw it into bulk, and let it remain two or three weeks. In the meantime, manure plow and harrow the land, then shovel over the compost, so as to intimately mix the lime with the clay. and broadcast eleven loads of the mixture evenly over the surface of each acre, and harrow and cross harrow, and then roll, when the land will be fit to receive the crop which you may intend it for. If lime be thus applied to thin sandy land, ten loads of putrescent manure will actually perform more positive good, than would twenty loads applied without the addition of the clay, provided a bushel of plaster per acre be sowed over the land.

[Farmer's Journal]

RECIPES.

TO MAKE COFFEE.—The best way of making coffee is to put the ground coffee into a wide-mouthed bottle over night, and pour rather more than half a pint of water upon each ounce and a half, and cork the bottle. In the morning loosen the cork, put the bottle into a pan of water, and bring the water to a boiling heat; the coffee is then to be poured off clear, and the latter portion strained; that which is not drank immediately is kept closely stopped, and heated as it is wanted.

[Scientific American.]

FOAM SAUCE.—One tea-cup of sugar, two-thirds do. of butter, and one tablespoonful of flour, beaten together till smooth, then place over the fire, and stir in rapidly three gills boiling water; season with nutmeg.

PAINT FOR BRICK HOUSES.—A correspondent of the Ohio Farmer has used a cheap and very durable paint for the exterior of brick dwellings, which has already stood several years, and is now quite as fresh as when first applied. It consists simply of limewash, with sulphate of zinc as a fixing ingredient. Any requisite shade is given by adding the colors used by house-painters. A clear and rich cream color may be obtained by applying yellow ochre to the common new brick; a livelier and warmer shade will be added by a little Venetian red. Burnt sienna may likewise be used. This paint is far cheaper than oil paint, costs but little more than common whitewash, and nothing will remove it but the severest friction.

TO BOIL FRESH PORK.—Take a fat bladebone of country pork, commonly called the oyster, take out the bone and put veal stuffing in its place, wrap it in a clean cloth, and put it in a saucepan of boiling water with a little salt; let it boil slowly for about an hour and a half, or an hour and three quarters, according to the size; it should, however, be well done. Serve it up with parsley and butter poured over it plentifully. This is a most rich, and at the same time a most delicate dish, equal to boiled fowl and pickled pork, which indeed it greatly resembles. [Ex.]

BAKED HAM.—Most persons boil ham. It is much better baked, if baked right.—Soak it for an hour in clean water and wipe it dry, and then spread it all over with thin batter, and then put into a deep dish, with sticks under it, to keep it out of the gravy. When it is fully done, take off the skin and batter crusted upon the flesh side, and set it away to cool. You will find it very delicious, but too rich for dyspeptics.

CURE OF FOOT ROT IN CATTLE.—B. Andrews, in the Ohio Farmer, says he cured three cows of foot rot by the application of three bottles of Dr. Dodd's Black Oil. He remarks: "I commenced pouring it between the hoofs and wetting the foot above the hoof with it. In two or three days I discovered something having the appearance of a large worm, the size of a man's finger, between the hoofs, that had apparently commenced growing under the skin between the hoofs, and it appeared to be loose, the skin having rotted away at the ends. I went to work with two sticks and pulled them out very easy, leaving the bones naked between the hoofs. I then washed the legs and feet with brine and put the black oil between the hoofs twice a day, and in three weeks from the time they were taken, they gave their usual amount of milk, and had resumed their place in the dairy."

ERYSIPELAS—CRANBERRIES.—We are able to record another case of the complete cure of erysipelas by the simple application of raw cranberries, pounded fine. The patient was a young lady, one side of whose face had become so much swollen and inflamed that the eye had become closed, and the pain excessive. A poultice of cranberries was applied, and after several changes the pain ceased, the inflammation subsided, and in the course of a couple of days every vestige of the disease had disappeared.—The case occurred in the family of one of the editors of the Palladium, and we can therefore vouch for its truth.

[New Haven Palladium.]

CURE FOR SORE TEATS ON COWS.—First wash them with warm water and castile soap, then lubricate with lime water and linseed oil, equal parts.

TO KILL LICE ON CATTLE.—Nothing is more simple, more effectual, or more easily obtained, than common lamp oil, one quart of which is sufficient to drive all and every species of vermin from an ox of the largest growth. Let a stream be poured along the back from head to tail; let another one encircle the body just back of the shoulders, and again fronting the hips round the flanks; all of which should be well rubbed, so as to spread it over the animal as much as possible. Particular attention should be given to such parts as the animal cannot reach. I have seen both cattle and hogs cleaned in this manner, by one or two applications, when they have been fairly alive with the vermin. Such treatment is of especial advantage to neglected mangy pigs in the spring of the year, whether infested with vermin or not, as the oil has a great tendency to remove the dry scurf with which the body is always covered in such cases, preventing their growth by closing the pores of the skin, and obstructing that healthy, though insensible perspiration, so natural to all creatures.

[Germantown Telegraph.]

HOW TO MAKE INK.—Take two quarts of rain water, one half lb. nut galls, three ounces gum Senegal (arabic,) three do. sulphate of iron; soak the nut galls in three quarters of the water; the gum arabic in one half the remaining water warmed; the sulphate in the other half; let them stand in the several vessels forty-eight hours, then mix them, and the ink is made.

PLASTER AT GRAND RAPIDS.—The Grand Rapid Eagle learns that a new discovery of plaster has been made by Mr. A. J. Hinds, on his premises, near those of R. Butterworth, on the west side of the river. It is supposed to be very extensive, and fully establishes the fact that our supply of this valuable fertilizer can never be exhausted.

PROPORTION OF NUTRIMENT IN FOOD.—Greens and Turnips, 1 in 612; Carrots, 1 in 347; Potatoes, 1 in 281; Wheat flour, 1 in 49. Meat contains about 26 per cent of nutritious matter, 74 per cent being water, and it is more nutritious than bread.

One cow well fed will be of more profit than two kept on the same fodder. This will also apply to other stock.

EDITOR'S TABLE.

CORRESPONDENTS.—The Communication of G. M. is too long for publication; besides, the subject is not exactly suited to the objects of our paper.

LOOKER ON, with several other communications must "stand at ease" until the next issue.

"OAK BUSHES," on the cultivation of hops, came too late for the season, we shall publish it when the proper time comes round again.

A REMARKABLE ANIMAL.—A California sheep has been exhibited in Providence, R. I. The animal is not large in bone and flesh, but enormous in fleece. The wool is in some parts *twenty-four inches in length*, and the fleece is estimated to weigh *forty pounds*. It is of very fine and valuable quality, apparently like the Merino.

KIDNEY POTATOES.—Our thanks are due J. Russell Esq., of Union Grove, Racine Co., for a box of *Kidney Potatoes*—the real simon pure Kidneys and nothing short—the only genuine article that we have received out of several specimens.

JOHNSON'S DRUG STORE, MILWAUKEE.—We take pleasure in calling attention to the advertisement of this establishment. It is the oldest in the State. Mr. Johnson is regarded as an excellent and honorable man. If you want to be dealt with fairly, and buy goods cheap, give him a call. You can't do better.

THE FARM AND THE SHOP.—A new Agricultural Journal, hailing from Indianapolis, Ia. By O. T. Mayhew. The number before us is well filled. If the farmers of Indiana do not give it their support universally, they will do themselves and the publisher great injustice. Semi Monthly: \$1.

THE WESTERN PLOW BOY.—Such is the title of another new Agricultural paper, of 16 pages monthly, 50 cents: by R. D. Turner & J. P. Jenks. Fort Wayne, Ia. It is well filled with selected and original matter. We extend to its proprietors the hand of fellowship and brotherly greeting.

THE WOOL GROWER & STOCK REGISTER.—This Journal, as its title would indicate, is specially devoted to the wool growing and stock raising interests. It should be made the text book of every one who is at all interested in stock raising. Monthly, at 50 cents a year: by D. D. T. Moore, Rochester, N. Y.

THE PRAIRIE FARMER.—We plead guilty for not before having noticed the advent of our neighbor in an entire new dress. This excellent Agricultural Journal now wears a fine appearance, and enjoys a large list of correspondents headed by a trio of most able editors and publishers. Our much esteemed friend, Dr. Kennicott, who has not inaptly been denominated the "back bone of the Agricultural Press of the Northwest," is at the head of the Horticultural Department. Wright & Wight, Chicago \$1 a year.

THE LADIES WREATH.—Published by Burdick, Reed & Brothers. N. Y., edited by Helen Irving: \$1 per year. We have often spoken in high praise of this work. The May No., the first of Vol. eight, is at hand. Among the illustrations is a steel plate engraving of the Editress.

NICHOL'S JOURNAL.—This is the title of a new eight page quarto, by T. L. Nichols, M D, Port Chester, N. Y. Monthly, 25 cents per year. The Editor promises to make it the best reform paper in the world. It is devoted to Medical Reform, Society, Science, Manners-Health &c. The number before us gives ample assurance that the Editor understands his theme.

LA CROSSE DEMOCRAT.—We are in receipt of the first number of this paper, published at *Prairie La Crosse*, by Stevens & Rogers. It is filled with valuable selected and original matter, and in all respects is deserving of an extensive circulation.

THE JEFFERSONIAN.—This is another new candidate for public favor, published by W. M. Watt, at Jefferson, Wis. It is Democratic, and the number before us proclaims the *Jeffersonian* entitled to rank among the best of its contemporaries.

THE WISCONSIN PINERY.—The teatman of the Wisconsin Press (*in point of size only*) for it looks well, reads well, is of course edited well and ably, and will surely grow larger if liberally patronized. A great mistake is often committed in the commencement of a weekly paper, in a new locality, and which proves ruinous to the publishers—we mean that of using too large a sheet to make it a paying business. The PINERY is published at Stevens' Point, Portage Co., by N. V. CHANDLER—"Devoted to the interest of Northern Wisconsin." Success to it.

GODET'S LADY'S BOOK for May is on our table with its usual promptness. We need not say to those acquainted with this work, that it is the very best monthly of the kind, that is published in this or any other country. To those who do not take it we would say subscribe for it, a new Vol. commences with July and now is the time to subscribe.

THE NEW YORK HORSE MARKET.—The weekly transactions of the New York horse market are estimated by the New York Agricultor to amount to \$60,000, or to upwards of \$3,000,000 for the year. In this calculation the sales are put at 300 horses per week, of the average value of \$200. The stables last week contained 950 horses, which is about the usual number. Horses are generally 10 per cent higher than they were last spring, and thirty per cent higher than three years ago. Very few compared with the whole number, are sold for less than \$100.

ADVERTISEMENTS.—The attention of farmers is directed to the advertisement of **YOUNG DEXFANCE**, here— is an opportunity to commence the improvement of your stock.

BOOK AGENTS.—1009 wanted. See advertisement.

POTATOES IN OREGON.—The Oregonian gives as the product of one hill of potatoes grown in a field of several acres, and without any extra culture, one hundred and ninety-nine potatoes, weighing fifty-three pounds. The product of several hills in the fields weighed over forty pounds to each hill.

Mr. Aubry, the great Rocky Mountain traveller, made a trip with a party from Santa Fe to California the past winter, with a flock of 5,000 sheep.

FRUIT IN THE WEST INDIES.—An extract from the Bermudian, of March 30, states that the peach trees throughout the country are literally covered with new fruit as large as nutmegs, and the orange trees abound in blossoms. The planters hope to astonish the New Yorkers at their Crystal Palace Fair, with specimens of the horticultural advantages enjoyed by the "fairy isles" of Bermuda.

ORANGES AND LEMONS.—Delicious oranges and lemons have been grown near Memphis, Tennessee. The editor of the *Eagle* pronounces them equal to the best raised in Louisiana.

INVERTED POSTS.—The Hartford Times mentions a farmer who took up a fence after it had been standing fourteen years, and found some of the posts nearly sound, and others rotted off at the bottom. Looking for the cause, he discovered that the posts which had been inverted from the way they grew, were solid, and those which had been set as they grew, were rotted off. This is certainly an incident worthy of being noted by our farmers.

DISTRICT SCHOOL JOURNAL.—The fifth No. of this valuable Monthly has reached us, and bears about it the evidence of success and prosperity. It is filled with a variety of well written articles, and commends itself to the confidence and patronage of the friends of education. Gilbert & Spaulding, Dubuque, Iowa: \$1.

APPLETON'S MECHANICS' MAGAZINE, for May is on hand. Every mechanic in the country should be a subscriber to this work.

THE ILLUSTRATED MAGAZINE OF ART, for May is an excellent number. The contents of this Monthly are varied. All who see it will pretty surely become subscribers.

PROSPECTS OF WINTER WHEAT.—From all the information we can gather, from various parts of the West, the prospects for a good crop of winter wheat, were never more flattering to the farmer, than at the present time of writing—May 10th. The fields on the open prairie have been injured some by the dry winds of March and April, but the reports from the timber and openings are universally favorable to a good crop. The storm which has prevailed in this section for the last eight days has tended in a great measure to recover the crop from the effects of the spring drouth. We have a field of five acres, some portions of which, two weeks ago, scarcely promised a return of the seed, but which now looks well. Patches that were then considered entirely dead, at the present time show a vigorous growth.

The Appleton Crescent says:

The wheat crop looks promising in Fond du Lac Co. The timber lands produce the best crop.

In Dodge Co. the wheat crop looks first rate.

The Fountain City says:

We learn from our friends in the country that in the timber portions, the winter wheat

looks remarkably well, and bids fair to bring forth a bountiful harvest.

On the prairies, the winter has been rather too severe for the wheat crop, but it is beginning to revive and as a general thing looks quite promising.

The Wisconsin of 11th, says: The wheat crop as we learn from all sections of the State, promises as well as it was ever known.—The late heavy rains which have been so uncomfortable to our denizens, have been hailed with pleasure by the farmers, as it places the winter wheat beyond the possibility of future drouths.

The Mineral Point Tribune says:

We have made inquiries of persons from nearly all portions of the Mining district, as to the prospects of the wheat crop, and learn from every source that but little was sown last fall, but that winter wheat never looked better than at the present time.

FRUIT.—The Soil of the South, for May says:

We have never seen a brighter prospect for fruit than the present season. Apples, pears, plums, peaches, figs, grapes, strawberries, and all the Wild fruits, are even now, bending under the weight of immense numbers. To those who sometimes pick a "saucer full" of strawberries, we would say, that if the heavens prove propitious, or will give the water, we shall be able to pick one thousand bushels of this delicious fruit this season.

CISTERNS.—A cistern eight feet in diameter and nine feet deep, will hold a hundred barrels of water. If built of cement, the proportions are one part of water lime to three parts of clean coarse sand, free from all vegetable or mineral matter.

MANURE MORE AVAILABLE THAN PRAYER.—We are not much given to facetiousness, but the following humorous anecdote is too good to pass. It pictures to the life, hundreds of farmers who scratch and sow—starve their lands, and trust to Providence for a full harvest more than to their own industry:

A priest was called upon to pray over the barren fields of his parishioners. He passed from one enclosure to another, and pronounced his benediction; until he came to a most unpromising case. He surveyed its sterile acres in despair. "Ah! brethren," said he—no use to pray here—this needs manure."

EDITING A PAPER.—Hear what the National Intelligencer says about editing a newspaper:

"Many people estimate the ability of a newspaper and the industry and talents of an Editor by the Editorial matter it contains. It is comparatively an easy task for a frothy writer to pour out daily columns of words—words upon any and all subjects. His ideas may flow in one wishy washy everlasting flood, and his command of language may enable him to string them together like bunches of onions; and yet his paper may be a meagre and poor concern.—But what is the toil of such a man who displays his leading matter largely, to that imposed on a judicious, well informed Editor, who exercises his vocation with an hourly consciousness of his responsibilities and duties and devotes himself to the conduct of his paper with the same care and assiduity that a sensible lawyer bestows upon a suit, a humane physician upon a patient, without regard to show or display! Indeed, the mere writing part of editing a paper is but a small portion of the work. The care, the time employed in selecting, is far more important, and the tact of a good Editor is better shown by his selections than any thing else. But as we have said, an Editor ought to be estimated, and his labors understood by the general conduct of his paper, its tone, its temper, its uniform consistent course, its principles and aims, its manliness, its dignity and propriety."

TALL CORN.—The San Francisco Times of Dec. 15th, describes a "stalk of corn twenty feet tall, with some of the ears still upon it about eighteen feet from the root," brought to that office from near Sacramento. Strange corn that. Only think! stalks twenty feet high, and ears within two feet of the top!!

TALL TREES.—California beats the world on trees as well as on corn. A Watertown Californian in describing the timber on the Nevada Mountains, says:

"The timber on these mountains acquires a wonderful height. I saw trees from 18 to 20 feet through, and from 2 to 300 feet high. The width of one board will close in the side of a two story house."

The longest railway in the world is the N. Y. and Erie railway, which is 457 miles in length.

If you wish to have an orchard, never sow small grain of any sort among your trees.

SOOT TO DESTROY VERMIN.—I have been informed by a gentleman from England that they pay \$45 per load for chimney soot, to spread on their land for the purpose of killing vermin. I wish to know if it is used for such a purpose in this country? Would it not be good to roll corn in before planting?

JOHN M. MERRILL.

REMARKS.—Soot is a capital fertilizer, and is frequently used to kill insects. It is certainly advisable to save it all and apply it in some way to the crops. N. E. Farmer.

The debt of Great Britain is \$126 per head, of France \$33 per head, of Germany \$26 per head.

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Dr. L. ARNOLD,

DENTIST.

Exchange Block,

WEST END OF THE UPPER BRIDGE

Milwaukee Street.

OFFICE HOURS—From 9 A. M. to 5 P. M.

EVERYTHING in the line of *Dentistry* attended to. All Jobs warranted. Dr. A flatters himself that he has no small share of ingenuity, which being connected with eleven years practice enables him to feel confident in pleasing all who may favor him with a call.

SOMETHING NEW

AT THE

Wisconsin Boot, Shoe and Leather Store.**Ready-Made Clothing**

AND

GENTLEMEN'S FURNISHING GOODS.

The only thing that has been lacking heretofore in Janesville.

I HAVE just received, in addition to my extensive stock of Boots and Shoes, Leather and Findings, the largest and most complete assortment of

READY-MADE CLOTHING, AND GENTLEMEN'S FURNISHING GOODS,

Ever brought into the interior of Wisconsin, and can assert with due propriety that I can and will

Sell at Lower Prices,

Than any other concern in the city of Janesville, simply from these facts, to wit: that dealing exclusively in these articles, and buying from the manufacturers themselves, and that too very largely, I certainly can purchase my goods at much lower rates than those who buy but small stocks in this line, as is the case with our Dry Goods Merchants, which in connection with the lightness of my expenses, compared with gentlemen of families, enables me of course, as every one can see, to sell at

Lower Prices and Smaller Profits.

But as gassing is so much the order of the day, particularly with the Auction Shops, and other quack concerns about town, I will give you the prices of some of the articles that are to be found among my tolerably good sized stock of Boots, Shoes, Leather, Findings, Ready-Made Clothing, Gentlemen's Furnishing goods, &c., &c.

BOOTS AND SHOES.

In this line can be found 1000 pair Satin Fransa Gaiters, from \$1 to \$1.50, such as cannot be bought about town for less than \$1.50 to \$2. 2,000 pair Calf Bootees from 75 cts. to \$1. 1000 pair Goat Bootees, expressly for summer wear, from 7s to 9s—never sold less than 10s and 12s. 1000 pair Enameled Buskins 7s to 8s. Also, an endless variety of childrens' and misses' Shoes, at prices to correspond.

MEN'S WEAR.

In this line I defy competition. Being engaged extensively in the manufacturing of Boots and Shoes, and buying my materials in the eastern markets at very low rates, I am positive that I can sell my work at lower prices than can be found at the small shops about town.

Good Calf Boots, eastern made, 16s to 20s.
Warranted Kip, do., 14s to 20s.
Such as cannot be bought in Janesville for less than 20s and 22s.

Leather and Findings.

Of these I have and shall keep constantly on hand a full assortment, and can furnish Country Manufacturers at Milwaukee and Chicago prices.

Ready-Made Clothing and Gentlemen's Furnishing Goods.

Having entered into an arrangement with an eastern manufacturer, whereby I am enabled to buy at very low rates, I have been induced to go into this trade in connection with Boots and Shoes, and I do know beyond a doubt, that I can sell any thing in this line at as low or lower prices, as any concern this side of the Manufacturer's door, of whom I bought them, the very strong assertions that have emanated from these so called extensive clothing ware rooms, to the contrary notwithstanding.

I can show you in this branch of trade 500 good Linen Coats, for 6s each. 500 pair Summer Pants, 4s to 8s. Fine Doe Skin Cassimere Pants, from three to four dollars a pair; together with the largest assortment of Coats, Vests, Shirts, Collars, Socks, Cravats, Gloves and, in fact, everything that belongs to gentlemen's wear, that can be found in Janesville. In conclusion, allow me to say that Dry Goods and Groceries I know nothing about, but when you come to Boots, Shoes, and Ready-Made Clothing, I say again, and I say it boldly, that I can distance the crowd.

Call at the WISCONSIN BOOT, SHOE, and CLOTHING STORE, three doors above the Post Office, and for once be convinced.

TO FARMERS.

N. B. I have 500 pair of good Kip and Stogy Boots, eastern make, and just the thing for summer wear, that I will sell exactly at cost, for this reason—I shall hereafter manufacture all of my Boots, and consequently would like to dispose of what eastern work I have on hand. Gentlemen, I mean what I say—you shall have them precisely at cost, and that is from 11s to 16s. So call soon.

J. B. DIMOCK.
Janesville, May 16, 1853. v5n6

PITT'S**CORN AND COB MILL.**

This celebrated Mill is now made and sold by H. A. Pitts, the inventor, at his shop, West Randolph Street, Chicago, better known as H. Witbeck's Wagon and Plow Manufactory.

This Mill reduces the corn and cob to a proper degree of fineness by a different mode from any other mill in use, and is undoubtedly the best in existence. It will grind the cob and corn, if it is wet or dry, better and more of it, with less power, than any other. It is more durable and more easily kept in condition to grind than any mill ever before offered to the farmer.

H. A. PITTS.
March, 1853.

1853. 1853. WISCONSIN

Steam Foundry & Machine Shop

RACINE,

FOURTH ST., WEST SIDE OF THE RIVER.

A. P. DICKEY,

ANNOUNCES to the people of Wisconsin and the adjacent States, that he is prepared to manufacture to order at the shortest notice, all kinds of Castings, Horse Powers, Threshing Machines, Separators, &c.

He has a large and well selected assortment of patterns of the most approved and modern style for Steam

FLOURING AND SAW MILLS;

also, of Water Mills of every description,—He will get up at the shortest notice, and in workmanlike manner, spindles, bales, drivers, damsels, lighter screws, all the fixtures for common gear or muley saws. He keeps constantly on hand—

Road Scrapers,	Pile Drivers,
Clothes Dryers,	Ploughs & Ploughcastings, every variety,
Boot Crimps,	Wagon axels, and cast boxes,
Fly wheels various sizes,	do. do. boxes,
Band do. do.	Pipe boxes,
Wheelbarrow do.	Sleigh, Sled, and Cutter shoes,
Muleyrons,	Horse Power castings of every variety,
Cranks,	Millers' and Inspectors' brands,
Noddle pins,	Cob and corn grinders,
Rag irons,	Shovel planes,
Mill dogs,	Wheelbarrows,
Mill bars,	
Corn shellers,	
Cultivators,	
Joint Harrows,	
Tread Wheels for elevating wheat, Hoisting Gearing, &c.	

Columns for store fronts, fluted, plain, square and round. Caps and sills for windows and doors, dooryard and cemetery cast and wrought fences. Likewise always on hand a large assortment of

Potash and Cauldron Kettles, Coolers,

Stoves and Hollow Ware

of the latest and best construction, and in great variety. Any kind of machinery will be made to order, and turning and finishing of all kinds done promptly and at low prices.

In addition to the foregoing, he manufacture

STEAM ENGINES,

in the most modern style, of various sizes and power, suitable for flour, grist, saw and oil mills, and the various other purposes, to which steam power is applied. Steamboats and other machinery repaired on the shortest notice.

The proprietor will give his constant personal attention to the various branches of his business, employ none but the best of workmen, use none but the best of material in the construction of his work, and trusts by prompt attention to his engagements with his customers, he will not fail to give satisfaction.

most care will be taken that none but the very

He would also say to the public, and to farmers and threshers in particular, that the utmost care will be taken that none but the very best iron be put in his Horse Powers and Separator gearing; that he has taken especial pains to get the "Hanging-rock" iron from Ohio, and the Rossie iron from New York, which iron has the reputation of being the best in use for gearing, and that his Powers will hereafter be fitted up with castings made from that iron, and warranted to stand with fair usage. He is manufacturing the Rochester Separator, and double-gear horse powers, which are conceded by all to be among the very best now in use, all of which he warrants to be made of the very best material and in the most workmanlike manner.

A. P. DICKEY.

Racine, January, 5, 1853.

v5n5

PLANING MACHINE,

CIRCULAR and UPRIGHT SAWS, TURN-

ING LATHES and BORING MACHINES,

Running by Steam Power, which enables him to do all kinds of work, with either of the above machinery, with the greatest facility and on the most reasonable terms. As he keeps none but the best workmen, he feels assured that any work entrusted to him will be executed in a satisfactory manner. A proportion of patronage is solicited.

A. P. DICKEY.

Racine, January, 5, 1853.

v5n2

CHICKENS FOR SALE.

THE Subscriber offers for sale early chickens of the following varieties bred from his premium stock, and other choice selections of the same varieties procured from noted breeders at the east, that pairs may be made not of the exact strain of blood to prevent deteriorating from in and in breeding. They probably will lay and hatch this fall, as was the case with my April Shanghae pullets last year: viz: Gray Chittagongs; Brown, White, and Pearly Shanghaes; Black and Red Cochins; Black Cochins and White Dorkings, half and half—retaining the Cochins size and brilliancy of plumage, beautifully mottled; a few Braham Pootras at \$6 per pair, colored Dorkings just imported, and white Dorkings at \$5 per pair; Shanghaes and Dorkings, half and half, at \$4 per pair; Chittapratts, a variety that never set, and Sebricht Bantams, (very small,) at \$3 per pair.

Persons may rely on such fowls as ordered, carefully cooped, and delivered at express office, or the money returned. Orders will be filled according to date.

Schoolcraft, Mich., April 14th, 1853.

M. FREEMAN.

1000 BOOK AGENTS WANTED!!
TO SELL PICTORIAL AND USEFUL
WORKS FOR THE YEAR 1853.

1000 DOLLARS A YEAR!!

WANTED, in every County of the United States, active and enterprising men, to engage in the sale and publications of some of the best books published in the country. To men of good address, possessing a small capital of from \$25 to \$100, such inducements will be offered as to enable them to make from \$3 to \$5 a day profit.

The Books published by us are all useful in their character, extremely popular, and command large sales wherever they are offered.

For further particulars, address, (post paid)
ROBERT SEARS, Publisher.
 181 William Street, N. Y.

PIE PLANT
FOR SALE.

CAHOON'S well known Seedling, superior in quality and size to any of the varieties of Mammoth, Colossal, or Victoria, continues to produce new leaf stalks until November not being affected by the early frosts. This variety was raised by the subscriber 13 years ago from seed, and after being under cultivation that length of time holds good in size, having last year produced stalks weighing four pounds fourteen oz. each.

I will securely pack in Boxes, and forward according to directions, Ten Roots for \$5; Five Roots for \$3; or One for \$1; Cash to be sent with the order. A severe frost does not injure the Roots; they can be sent with safety to any part of the Union. Also, for sale,

DWARF PEAR TREES

Of superior varieties; most of them bearing sizes. Apple, Plum and Cherry Trees, of the varieties recommended for general cultivation by the American Pomological Congress. Gooseberry Bushes of best varieties. Quinces and Raspberries, in variety. Grapes, four varieties Red and White Dutch Currants. Flowering **Shrubs and Ornamental Trees.**

Bulbous, Flowering Roots, and Dahlias, that received all the Premiums awarded at the last Fall State Fair, over 70 varieties. 1500 Balsam Firs, Spruce, Hemlock, and Arbor Vitae, from one and a half to five feet high.

In the list of Gooseberries will be found the celebrated Houghton's Seedling, which now stands at the head of all known varieties, never mildews in any locality; a single Bush in my Garden, four years old, produced last year 16 quarts of fruit. It frequently makes a growth in one year from four to five feet. It requires training on a Trellis.

I wish it particularly understood that I have not for sale any Cheap Goods in my line of

business bought at Auction at half price, but all I have for sale have either been grown on my own ground, or purchased from the **BEST EASTERN NURSERIES** only, having regard to **BEST VARIETIES**, vigor of growth, and form of Trees. Price being a secondary consideration, I shall sell for what a **VERY GOOD** Article is fairly worth.

B. P. CAHOON.

Kenosha, April, 1853.

v5n5tf

THE THOROUGH BRED BULL,
YOUNG DEFIANCE,

Will be kept for Cows the ensuing season at the stable of the owner, and will be taken out three times a day, morning, noon and night.

YOUNG DEFIANCE is four years old this spring, is a cherry red, stands 14½ hands high, girths seven feet and four inches, and weighs 1800 lbs, and for strength of muscle, beauty and activity, he cannot be surpassed by any animal of his kind in this State. Farmers and all lovers of good cattle had better come and examine him for themselves.

Pedigree—He is seven eighths short horn Durham and one eighth Devon—was sired by Young Splendor, owned by Isaac Root & Bros., of York, Livingston Co., N. Y. His dam was sired by the Defiance owned by Gen. M. Brookes of Mt. Morris, N. Y. Defiance was imported from England by a Mr. Weddle of East Bloomfield, Ontario Co., N. Y.

TERMS—For the season \$1 00, if paid by the 1st of October, if not, 1.25 will be charged.

Good pasture furnished for cows at a distance.

HIRAM TAYLOR & BRO.

Sugar Creek, May 4, 1853.

6n1t

NOTICE
To Farmers.

ANY one wishing to obtain the Suffolk Breed of Hogs, can obtain the same of **C. S. BLANCHARD, M. D.**, of East Troy, Walworth County, Wisconsin.

Residence half mile West of East Troy.

Troy, March 28, 1853.

v5n5

LIVE STOCK
AND AGRICULTURAL DEPOT.

CHARLES W. KELLEY & BRO., NORTHWOOD, MINNESOTA.

DEALERS in Live Stock, Farming Implements, Fruit Trees, Farm and Garden Seeds.

Live Stock consigned to us will be pastured on fertile bottom lands in inclosures watered by the Mississippi, from the 15th of June to the 10th of September, without charge.

Red River Spring Wheat, and other choice grains raised in this latitude, 46° north, for sale in quantities to answer all orders.

200 GOOD HEALTHY SHEEP,

wanted. Address, **C. W. KELLEY & BRO., Northwood, via. Itasca, Minnesota.**
 April, 1853.



Wisconsin Wholesale Drug WARE HOUSE.

ESTABLISHED IN 1844.

S. JOHNSON, JR.,

Wholesale Dealer in Drugs, Medicines, Paints, Oils, Dye Stuffs, &c. General Agent for most of the popular Patent Medicines sold in Wisconsin

Proprietor of Johnson's Chemical Hair Invigorator, Johnson's Cherry & Liverwort, and the famed Bone & Nerve Liniment.

151, East Water St., Milwaukee.

T. LITTELL, WHOLESALE AND RETAIL DEALER

IN

Agricultural Implements, Seeds, &c.,

109, East Water-st.,
MILWAUKEE,

Is prepared to supply Dealers and Farmers with any kind of PLOWS, manufactured by Ruggles, Nourse, Mason & Co., at manufacturers prices,

adding only cost of Transportation. Their new Series of Plows, comprises the most desirable patterns that have ever been introduced.

Their EAGLE PLOWS, are already too well known to need one word said in their favor.

And is also prepared to furnish Extra Points, Mould Boards, Land Sides, or any part of the Plow that may be wanted. Wherever their Plows have been introduced, they have received the highest commendation.

I am prepared at all times to supply Hay Cutters, Harrows, Cultivators, Corn Shellers, Road Scrapers, Thermometer Churns, (and all other desirable patterns,) Fan Mills, Seed Sowers, Corn Planters, Meat Cutters, Field and Garden Seeds. Also Wholesale Dealer in

GROCERIES AND PROVISIONS,

Agent for the sale of **Dupont's Celebrated Powder.** 5n3

HORTICULTURAL!!

Rock County and the State can now be supplied with Cahoon's far-famed Mammoth Seedling Pie Plant,—unequaled by any other kind from Maine to Texas. Also a large assortment of the choicest varieties of Gooseberries, Currants, Grape, Strawberries, Quince, &c. Any orders for Fruit Trees of any kinds, and Ornamental Shrubbery, will meet with prompt attention on most reasonable terms. Arrangements are being made to supply this market with Cahoon's entire stock from Kenosha.

Yard near Monterey, Janesville, Jan. 25 '53.
n2tf GEO. J. & S. H. KELLOGG.

AZTALAN NURSERY.

THIS Nursery is now well stocked with choice Fruit Trees, Shrubs and Vines.

The stock of Apple Trees of choice varieties, is large and complete.

The stock of Pear and Plum Trees small; comprising only the most hardy of the choice varieties.

Persons ordering trees can rely upon being fairly dealt by, and will get no trees but those which have proved good in the West, if the selection is left to the proprietor.

J. C. BRAYTON.

Aztalan, Jefferson Co., Wis.,
March 1st, 1853. }

EGGS FOR SALE.

THE SUBSCRIBER offers for sale, Eggs which may be relied on as pure and fresh, carefully packed, put on cars and directed as desired of the following varieties, viz: Brown, Perly or Diminico and White Shanghaes, Gray Chittagongs and Black Cochins, Dorkings, just imported from the town of Dorking, Surry Co, England, at \$3 per dozen. White Dorkings Chitterpratty, a new variet that never sit. Shanghae and Dorkings $\frac{1}{2}$ and $\frac{1}{4}$ and Seabright Bantams, at \$2 per dozen.

M. FREEMAN.

Schoeleraft, Mich., March 15, 1853. 5n3



WAUKESHA COMMERCIAL NURSERY.

THE Subscribers offer for sale, this season, a fine assortment of Fruit Trees, comprising the best now cultivated. They are very thrifty and will be sold at wholesale or retail, for cash or approved credit, at reasonable prices.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruit, to merit the confidence of his friends and the public in general.

All orders accompanied with cash or satisfactory references will be promptly attended to, and trees will be packed and forwarded without delay. We will give cheerful and prompt attention to all post-paid communications requiring information, &c.

D. VAN KIRK, & CO.

Waukesha, January 1, 1853.

NURSERY BUSINESS.

FRUIT & ORNAMENTAL TREES

FOR sale at Janesville, Racine and Koskonong Nurseries, Wis. The proprietors are now enabled to offer to the public, a stock of trees heretofore unequalled in the West. Remarkable for their hardiness, vigorous growth, and adapted to our western climate; embracing fruit trees of every description. Apples, Dwarf Pears, Plums, Cherries, Flowering Shrubs, Bulbous Roots, &c.—comprising all the most popular sorts now in cultivation—and having devoted their personal attention to their propagation and rearing, feel warranted in recommending them to the confidence of the public. Nurserymen, Dealers and Planters are respectfully invited to call and examine for themselves. All *pre-paid* orders containing a remittance or proper reference will receive prompt attention addressed to,

E. B. & J. F. DRAKE, Janesville.

F. DRAKE, Racine.

Janesville, January, 1853.

WISCONSIN GARDEN AND NURSERY, *On Gardner's Prairie, town of Spring Prairie, Walworth Co.*

THE Subscriber takes this method to inform his patrons and the public, that he may still be found at the old and well known establishment, at which he offers for sale the coming spring, over Forty Thousand Apple Trees of a fine size and from five to seven years from the graft. Sound, healthy and stocky trees at 18 cents each. Also Pears, Plums, Peaches, Cherries, Quinces, Grapes, Currants, Gooseberries, Strawberries, Raspberries, &c., at prices to correspond to the times. Of the ornamental, a large assortment of Shade Trees, Shrubs, Flowering Plants, Hardy Roses, Bulbous Roots, Dahlias, a choice assortment. Green House Plants, any quantity. Ever Greens; Spruces, Firs, Pines, Cedars and in fact almost every thing usually to be found in such an establishment. The fruits have been selected with great care as regards quality of fruit and hardiness of trees. The Nursery is located on the open prairie with a northern exposure. The land has never been manured and consequently the trees are perfectly hardy. Trees taken from this Nursery seldom fail to grow in transplanting. All are invited to call and examine for themselves as the Subscriber hopes from long experience and strict personal attention to merit a continuance of public patronage.

N. B. All letters of inquiry sent to Burlington Post-office will receive prompt attention.

Catalogues Gratis at the Nursery, and by mail post-paid. JOHN BELL.

Wisconsin Nursery, January 1853.

THE GROVE NURSERY AND GARDEN.

LARGE Budded and Engrafted Apple Trees, with fine heads, at 15 to 25 cents each, or \$15 per 100—Average sizes, by the thousand, \$100 to 140. Plums and Quinces—a good supply, at 25 to 37½ cents each. Pears and Cherries—a small stock at old rates. Ornamental Trees, Flowering Shrubs and Plants, in great variety, and the lowest prices, in lots, principally of our selection. These last furnished to dealers on commission. Address,

J. A. KENNICOTT.

Northfield, Cook Co., Ill.

The New Edition of LAPHAM'S POCKET MAP

OF WISCONSIN, showing the surveys of the Menomonee Lands, &c., may now be had at the bookstores, or by application (accompanied by the cash) to the undersigned. It will be sent by mail to any address upon the receipt of one dollar. A liberal discount made to dealers.

I. A. LAPHAM.

Milwaukee, January, 1853.

WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V.

JANESVILLE, WIS., JULY, 1853.

NO. 7.

PUBLISHED ON THE FIRST OF EACH MONTH, BY
MARK MILLER.

TERMS:

50 Cents a Year in Advance;

Five copies for \$2, if directed to one Post Office, and at the same rate for a larger number. All subscriptions to commence with the volume. Back numbers supplied to new subscribers.

ADVERTISING;

One page per year, \$50. Half page, \$30. Quarter page, \$18. Eighth page, \$10. One square (twelve lines or less,) 1 year, \$6.50. (Less than one year,) for first insertion, \$2.00. For each subsequent insertion, 50 cts. And at the same rate for a larger amount.

If These terms will be strictly adhered to. The circulation of the FARMER is large, and the amount of advertising limited, which renders it a more valuable medium for advertising than if a larger space was appropriated to this department.

State Agricultural Society,

ITS ORGANIZATION UNDER THE CHARTER—AMENDMENTS OF THE CONSTITUTION—PROCEEDINGS OF THE EXECUTIVE COMMITTEE AT THEIR MEETING, MAY 25th. 1853.

Pursuant to a call issued by the Executive Committee, and according to previous and public notice, the Wisconsin State Agricultural Society met at the State Agricultural Rooms, in the Capitol at Madison, on Wednesday, May 25th, A. D. 1853.

At 11 o'clock, A. M., in the absence of the President and Vice Presidents, the Society was called to order by the Corresponding Secretary, who read the following section of the Charter recently granted by the Legislature of the State of Wisconsin to the Society, viz:

"Sec. 4 For the purpose of organizing said Society under this charter, and for the transaction of such other business as may come before it, the Executive Committee of the Society may call a meeting of the same at such time and place as they may deem proper, first giving due notice thereof."

Also the following extract from the minutes of the Executive Committee, had in pursuance thereof.

"At a meeting of the Executive committee of the Wisconsin State Agricultural Society, held at the Society's Rooms in the Capitol at Madison, on the 11th day of February, A. D.

1853, on motion of Judge Baker:

"Resolved, That the Secretary be requested to call a meeting of the Society at Madison on the 25th day of May next, for the purpose of completing the legal organization of the Society under the charter, and for the transaction of other business, as provided in Sec. 4 of the charter, said meeting to be called as prescribed by statute."

And also the following call:

"AGRICULTURAL NOTICE"

"There will be a meeting of the Wisconsin State Agricultural Society, at the Society's Rooms, in the Capitol, at Madison, on Wednesday, May 25th, A. D., 1853, at 11 o'clock, a. m., for the purpose of accepting the charter recently granted by the Legislature, and for the transaction of such other business as may come before the Society.

Madison, Feb. 11th. 1853.

By order of the Executive Committee."

And also an affidavit of the publication of the above for four successive weeks, in the Wisconsin State Journal

Which several notices having been read,
On motion of Simeon Mills, of Madison,

S. S. DAGGETT, of Milwaukee was called to the chair,

The charter of the Society was then taken up, and read as follows:

CHAPTER V.

An Act to incorporate the Wisconsin State Agricultural Society.

The People of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

Sec. 1. The "Wisconsin State Agricultural Society" is hereby declared a body politic and corporate, and by that name shall be known in all Courts and places whatsoever.

Sec. 2. The object of the Society being to promote and improve the condition of Agriculture, Horticulture, and the Mechanical, Manufacturing and Household Arts, it shall be al-

lowed, or those purposes only, to take, hold and convey real and personal estate, the former not exceeding in value ten thousand dollars.

Sec. 3. The said Corporation shall possess all the powers and privileges conferred, and be subject to all the liabilities imposed upon corporations by the Revised Statutes of this State, so far as the same may be applicable.

Sec. 4. For the purpose of organizing said Society under this charter, and for the transaction of such other business as may come before it, the Executive Committee of the Society may call a meeting of the same at such time and place as they may deem proper, first giving due notice thereof.

Sec. 5. The said Society may continue to use and occupy the south-east corner room in the basement of the Capitol, until otherwise ordered by the Legislature.

Sec. 6. This act shall take effect and be in force from and after its passage, and may be amended, altered, or repealed by any future Legislature.

Approved, February 9th, 1853.

The same having been read at length,

On motion of Mark Miller, Esq., of Janesville, it was

Resolved, That the charter just read be accepted as the charter of this Society.

The Secretary then laid before the Society, several amendments to the Constitution of the Society, which had been drafted by the Executive Committee at its meeting, held February 10th, 1853, and which were read at length.

On motion of F. G. Tibbits, Esq., the Constitution was unanimously amended in accordance therewith.

On motion of Hon. Simeon Mills, the Constitution as amended was then unanimously adopted as the Constitution of the Society, under the charter previously adopted, as follows:

CONSTITUTION.

ARTICLE I.

Of the Name and Style of the Society.

The style of this Society shall be the Wisconsin State Agricultural Society. Its objects shall be to promote and improve the condition of Agriculture, Horticulture, and the Mechanical, Manufacturing and Household Arts.

ARTICLE II.—Of the Members.

The Society shall consist of such citizens of the State as shall signify in writing their wish to become members, and shall pay on subscribing not less than three dollars, and annually thereafter three dollars; and also of Honorary and Corresponding members.

The Presidents of County Agricultural Societies, or a delegate from each, shall *ex-off-*

ficio be members of this Society. The payment of twenty-five dollars, or more, at one time, shall constitute a member for life, and shall exempt the donor from annual contribution.

ARTICLE III.—Of the Officers

The officers of the Society shall consist of a President, three Vice Presidents (one to be elected in each Congressional district) a recording Secretary, a Corresponding Secretary, a Treasurer, an Executive Committee, to consist of the officers above named, and five additional members, together with the three ex-Presidents of the Society, whose term of service last expired, three of whom shall constitute a quorum: and a General Committee, to consist of one member from each County, or organized for judicial purposes.

The ex-Presidents of the Society, not members of the Executive Committee shall constitute a board of Councillors, to which may be referred, for consultation and advice, all questions that may from time to time arise, in the decision of which the Society may in any manner be interested.

ARTICLE IV.—Of the Duties of the Officers.

The Recording Secretary shall keep the minutes, and have charge of the books of the Society.

The Corresponding Secretary shall carry on the correspondence with other Societies, with individuals, and with the General Committee, in furtherance of the objects of the Society.

The Treasurer shall keep the funds of the Society, and disburse the same on the order of the President or a Vice President, countersigned by the Recording Secretary, and shall make a Report of the Receipts and Expenditures at the annual meeting in May.

The Executive Committee shall take charge of, and distribute or preserve all Seeds, Plants, Books, Models, &c., which may be transmitted to the Society; and shall also have the charge of all communications designed or calculated for publication, and so far as they may deem expedient, shall collate, arrange and publish the same, in such manner and form as they deem best calculated to promote the objects of the Society.

The General Committee are charged with the interests of the Society in the counties in which they shall respectively reside, and will constitute a medium of communication between the Executive Committee and the remote members of the Society.

ARTICLE V.—Of Meetings and Elections.

There shall be an annual meeting of the Society on the third Wednesday in May in each year, in the village of Madison, at which time all the officers shall be elected by a plurality of votes, with the exception of the General Committee, who may be appointed by the Executive Committee; who shall also have power to fill any vacancies which may occur in the offices of the Society during the year.

Extra meetings may be convoked by the Executive Committee. Ten members shall be a quorum for the transaction of business.

ARTICLE VI.

Of the Annual Cattle Show and Fair.

The Society shall hold an Annual Cattle Show and Fair at such time and place as shall be designated by the Executive Committee, who shall prepare a Premium List, appoint Viewing Committees, and award the premiums at the same. It shall be the duty of all the officers to attend the Annual Cattle Show and Fair.

ARTICLE VII.
Of Amendments.

This Constitution may be amended by a vote of two-thirds the members attending any annual meeting,

On motion of Ira W. Bird, Esq., the Society then adjourned *sine die*.

S. S. DAGGETT, President.

ALBERT C. INGHAM, Sec'y.

STATE AGRICULTURAL ROOMS.

Madison, May 25th, 1853.

The Executive Committee met at the Society's Rooms in the Capitol, at Madison, on Wednesday, May 25th, at 10 o'clock, a. m. pursuant to call and previous adjournment.

Present—Messrs Henry M. Billings, Samuel S. Daggett, Mark Miller, Simeon Mills, and Albert C. Ingham.

Mr. Miller in the chair.

Mr. Ingham, Secretary.

After some conversation, the hour for the meeting of the Society, called in accordance with the charter, and with the previous action of the Executive Committee, having nearly arrived, the committee took a recess until 2 o'clock p. m.

Two o'clock p. m. The Executive committee re-assembled, present as before.

The action of the Society in adopting the charter and amending the constitution of the Society being laid before the committee, the subject of Bye Laws for the government of the Executive Committee was taken up in committee of the whole, and after some time, the committee having risen, the following Bye Laws were reported, and unanimously adopted, section by section.

BYE LAWS.

SECTION I.—Of the Meetings.

The Executive Committee of the Wisconsin State Agricultural Society shall meet annually on the day succeeding the day on which the annual meeting of the Society is held. They shall also meet on the day preceding the first day of the Annual Cattle Show and Fair of the Society, at the place where the same is to be holden. They shall also meet on the day succeeding the third Wednesday of January in each year. They shall also meet on the day preceding the second Wednesday of February in each year, and also on the day preceding the

annual meeting of the Society, and they may adjourn to any stated time. They shall also meet at the call of the Corresponding Secretary of the Society, of which each member shall have due notice.

SECTION II.—Of a Quorum.

At any meeting of the Executive Committee, three members shall constitute a quorum for the transaction of business.

SECTION III.—Of the Officers.

The officers of the Society shall *ex-officio*, fill the corresponding offices in the Executive Committee.

SECTION IV.—Of Committees.

There shall be three permanent committees of the Executive Committee, which shall be respectively styled the Standing Committee, the Auditing Committee, and the Finance Committee.

The Standing Committee shall consist of the President, Corresponding Secretary and Treasurer, and this committee shall have power in the recess of the Executive Committee, to transact any business for the Society, and shall generally possess all the powers of the Executive Committee. Provided, however, that the proceedings of the Standing Committee be recorded with the proceedings of the Executive Committee, and shall be laid before the Executive Committee for confirmation or disapproval at its succeeding meeting.

The Auditing Committee shall be composed of the President and Secretary, and they shall have power to audit, adjust, and allow or reject any bills, claims, or demands against the Society, and to issue orders upon the Treasurer for the payment of the same, making report of their doings at each meeting of the Executive Committee. They shall also annually examine the books, papers, and vouchers of the Treasurer, and compare the same, and adjust the accounts between the Society and that officer, making a report of the same.

The Finance Committee shall be composed of the President and Treasurer, and it shall be their duty to suggest means for the increase of the revenue of the Society. They shall also have power to invest any portion of the funds of the Society that may from time to time be set apart by the Executive Committee for investment, disposing of such funds upon such terms and conditions as may be prescribed by the Executive Committee.

Each committee shall be responsible to the Executive Committee for the faithful discharge of its duties, and an appeal may at any time be taken from their decision to the Executive Committee.

SECTION V.—Of the Order of Business

At each meeting of the Executive Committee, the following order of business shall be observed:

1. Reading the minutes of the Standing Committees, and Reports from the same, and their confirmation or rejection.
2. Reports from the Auditing Committee.
3. Reports from the Finance Committee.
4. Reports from Special Committees.
5. Communications from the Secretary.
6. Communications from the other members of the Executive Committee.
7. Unfinished business.
8. Miscellaneous business.

This order may, however, be suspended at any time; at the request of two members of the Executive Committee.

SECTION VI.—Of the Fiscal Year

The Fiscal Year of the Society shall commence on the first day of January in each year and all annual reports shall be made up to that time.

SECTION VII.—Of the Expiration of Offices.

For the purpose of closing the business of any year, the terms of office of the members of the Executive Committee shall be deemed to continue until the Monday next succeeding the election of their successors. The newly elected Executive Committee may, however, meet in the meantime and transact business, but shall not be entitled to the possession of the property and books of the Society until the said succeeding Monday.

SECTION VIII.—Of Amendments.

These Bye Laws may be amended at any regular meeting of the Executive Committee, by a vote of eight of the effective members.

Mr. Ingham, from the Committee of Arrangements for the coming Fair, reported such arrangements as had been entered into already, and also submitted a plan of the grounds; also explaining verbally the views of the Committee and their plans, which, on motion of Mr. Daggett were approved, and the papers presented were ordered to be placed among the files of the Society.

In the absence of the Chairman of the Aud-

iting Committee, sundry accounts were laid before the Executive Committee and allowed, and orders drawn upon the Treasury for the same.

On motion of Mr. Daggett, the seal heretofore in use was adopted as the seal of the Society in its corporate capacity.

On motion of Col. Billings, the medals and diplomas heretofore in use were adopted as the medals and diplomas of this corporation.

Mr. Ingham laid before the Executive Committee a preamble and certain resolutions passed by the Executive Committee of the Milwaukee and Waukesha County Agricultural Society, in relation to a claim of that Society against the State Agricultural Society, and also several papers in relation thereto. And after some conversation thereon, the whole subject was, on motion of Mr. Mills, referred to a select committee, consisting of the President, E. W. Edgerton, and Messrs Barker and Field, with instructions to examine into the matter and report at the next meeting of the Committee, to be held at Watertown in October next.

On motion, a Professorship of Agricultural Chemistry to the Society was constituted—the Professor—to be styled, State Agricultural Chemist, and to be elected annually, at the first meeting of the Executive Committee after their election. Prof. S. Pearl Lathrop, of Beloit, was then elected to this Professorship, the duties of which, and its relations to the Society are to be arranged hereafter.

After the transaction of some other business of no general importance, the Executive Committee adjourned.

MARK MILLER, Chairman.

ALBERT C. INGHAM. Sec'y.

REMARKS.—It will be seen by the above that the amendments to the Constitution of our State Ag. Society, which were adopted at the meeting of the Executive Committee, in February last, were adopted by the Society. Those amendments were such as were found necessary in order to give greater efficacy to the workings of the Society. As it formerly was, the annual meeting of the Society took place just when the Executive Committee were in the midst of the arrangement of the Annual Volume of Transactions; and thus it might happen every year, that an unfinished volume would be put into the hands of new officers to complete, who

of course, would be entirely ignorant of the plans and aims of their predecessors in its preparation. As now arranged, each Executive Board can complete their own business before going out of office. The increase in the fee for membership in the Society, does not in the least affect exhibitors at the Annual Fair of the Society; since they are no longer required to become members before entering their articles for exhibition. As now arranged, each exhibitor, not a member of the Society, pays an exhibition fee of one dollar, which entitles him to all the privileges of a member at the Fair. This we regard as a great improvement, as it simplifies the whole details of the management of the Society. The other arrangements were merely verbal, and of no great importance. We regard our noble Society as now standing on a permanent basis, and in a position to accomplish a vast amount of good, both for the present and future prosperity of our State.

The second annual Vol. of Transactions will be issued from the press, probably by the first of August next.

Parsnips and Carrots.

We are glad to perceive that the cultivation of these roots for stock purposes is beginning to occupy the attention of Western Farmers. Seed has been in great demand, and large quantities of the carrot have been sown this season—designed principally for feeding to horses. As to the relative value of the parsnip and carrot, we believe the latter has generally been considered the most nutritious and valuable. It would seem, however, from a careful analysis of the two, lately made by Prof. Voelcker of the Royal Agricultural College of England, that the nutritive qualities of the parsnip, as compared with the carrot have been underrated—that its fattening properties are greater than those of the carrot. If the results assumed by Prof. Voelcker be correct, they are certainly worthy the attention of all farmers who may cultivate the parsnip and carrot for feeding. For spring use the parsnip has

an important advantage over the carrot, inasmuch as it may remain in the ground through the winter, thus saving the expense of harvesting and storing in the fall

"PARSNIPS Contain,		Per Cent.
Water		82.050
Ash		0.932
Nitrogenized organic substances, capable of producing flesh		1.280
Substances fitted for the support of animal heat and the formation of fat		15.738

CARROTS Contain,		Per Cent.
Water		88.260
Ash		0.745
Nitrogenized organic substances, capable of producing flesh		596
Substances fitted for the support of animal heat and the formation of fat		10.399

ASH of Parsnip (Voelc.)		ASH of Carrot (Way.)
Per Cent.		Per Cent.
Potash	36.12	32.44
Soda	3.11	13.52
Magnesia	9.94	3.96
Lime	11.43	8.33
Phosphoric acid	18.66	8.55
Sulphuric acid	6.50	6.55
Silica	4.10	1.19
Phosphate of iron	3.71	Peroxide of iron 1.10
Chloride of sodium	5.54	6.50
Carbonic acid		17.30

The Farmer's Companion Remarks:

1. There is a general resemblance in the composition of both roots.

2. Parsnips, however, differ from the carrot chiefly by containing less sugar; the deficiency of which is replaced by starch, not occurring in carrots.

3. White Belgian Carrots (the best field variety) generally contain 5 to 6 per cent. more water than parsnips. Thus, fresh carrots contain on an average but 12 per cent. of solid substance, while parsnips contain as much as 18 per cent. In their natural state, therefore, parsnips *will be found much more nutritious than carrots.*

4. The nutritive value of parsnips, in so far as it is dependent on the production of *flesh-forming* constituents which are found in the root, according to the above results appear to be greater than that of carrots. While fresh parsnips contain 1.30 per cent., and dry 7.25 per cent. of flesh forming-constituents, Belgian carrots were found to contain only 0.612 per cent. of the same in their natural state, and 5.46 per cent in their dried state. Compared with other crops, parsnips are about as rich

in albuminous (flesh-forming) compounds as mangolds; and ought, therefore, to go as far as mangolds in producing flesh.

5. Parsnips, richer in flesh-forming compounds than carrots, also contain more nitrogen in the form of ammoniacal salts; and therefore, when eaten the dung forms a richer manure for wheat.

Thus, on the whole, parsnips appear to possess greater value than white Belgian carrots as a feeding or fattening material. Parsnips are indeed *very valuable as an article of food*; they are liked by cattle; and highly esteemed by Continental farmers for fattening stock. Moreover, they stand the frost better than any other root crop, and keep well for a long time, as they contain less water than almost any other root crop usually cultivated in England."

Stock Breeding.

The object of improved breeding is to diminish, or, if possible, to remove the defects of live Stock, and to acquire and perpetuate desirable properties. The general art is to make such a selection of males and females as are most likely to promote the object, paying particular attention to a maxim which is too frequently forgotten—the governing law of the animal kingdom—that like produces like—that the good or bad properties of the parents are hereditary, and are almost invariably imparted to their progeny. We know that some animals fatten faster than others, and that they are generally more handsomely formed; on handling them, we find the skin and parts beneath are soft and "mellow."—This "mellowness" is a kind of softness and elasticity perceived upon pressing the skin, and is a very favorable sign of the aptitude of an animal to fatten. These parts are the cellular membranes, which in fat animals are full of fat; and stock possessing this mellow feeling denotes that there are plenty of membranous cells ready for the reception of fat. To breed cattle possessing this mellow feeling is an important object, for an animal is almost valueless though it may be possessed of perfect symmetry, if it cannot be made fat without very extraordinary keep.

The object of a breeder should be to get as little bone as possible; large round leg bones indicate a coarse animal; whereas flat and small bones are symptoms of being

well bred. It is highly desirable that there should not be excess in one part and deficiency in another; but that an animal should lay on fat on every point in equal proportions, taking care to get as much as possible in those where it is most valuable; for instance, it is of more value on the loins, ribs, and rumps, than on the neck or hocks—therefore, breadth of the loin, length of the rump, rotundity of frame, a good deep chest, and shoulders placed obliquely, that there may be no hollowness behind them, are indispensable qualities in a good formed animal; and I believe our best Devons possess these requirements in a greater degree than any other breed of cattle.

[Devon Herd Book.

Cost of Wintering Sheep.

A Huron Co., Ohio, correspondent of the Wool Grower, thus sums up the cost of wintering 113 grade Merino sheep, during 118 days:

The hay, oil meal, apples, potatoes, etc., charged at cost to the 113 sheep during the 118 days amounts to \$36.16; equal to 32 cents each for what they consumed, and \$6 for use of shed; and \$9 for foddering; in all \$51.16—equal to 45 cts. each.

The lambs run to a stack, and ewes had corn before Dec. 18th, when foddering was commenced—and all had oats after April 16th, when foddering ended; counting which, and the hay at \$4 per ton, about its market value, and the whole cost of wintering would amount to 60 cts a sheep. Another flock of 75, nearly all ewes, which had more hay and less grain, cost about the same to winter, counting hay at \$4 per ton.

CLOVER SEED.—It is stated on good authority, that 9033 clover seeds are contained in one cubic inch, thus equaling 19,466,761 seeds in a bushel. As an acre of ground contains 43,560 square feet, we have only to multiply it by 144, and we shall readily see the amount of clover necessary to sow an acre. If a seed per square inch is allowed, tillering will be found sufficient to bear a good crop.

Working Farmer.

For the Wisconsin & Iowa Farmer.

Illinois Farming.

FRIEND MILLER:—I have taken your paper ever since it started. I have lived in Wisconsin eight years, but now live in Illinois about twenty miles south of the State Line. There is quite a difference between Wisconsin and Illinois farming as is practiced in my neighborhood. No pride or pains is taken with stock—any thing that has got four legs is reckoned tolerable, and about good enough. I have not seen but one good hog since I came here, about four months ago. Our plows are entirely behind the times. When the ground is wet they work the best; but when dry, unless very dry, they do not work. Our soil is generally a little sandy, and where there is most, there is the most trouble—and now if there is a plow made that will work right and not dredge along, it could have a chance to turn over the soil of Crystal Lake Prairie for the first time. This prairie is the handsomest I ever saw. We are in sight of a Railroad on every side, and can get to a depot in one half hour, either south, north or east. There are but few settlers on it yet, owing to the scarcity of timber. Most of the farmers are trying the Osage Orange, B. C., Crystal Lake, Ill., June 1853.

REMARKS.—We will assure our Illinois friend, that Richard E. Ely, of Rochester, Wis., or J. M. May, of this place, can furnish him with a plow, that will turn the soil of Crystal Lake or any other prairie in the West. No better plows are made in any country. We speak understandingly, for we have used and seen used the plows of both these manufacturers.

For the Wisconsin & Iowa Farmer.

Wheat with Corn.

MR. MILLER:—I find much said in the Wisconsin Farmer on the subject of Winter Wheat, and as many plans have been

proposed and even tried to protect it from the cold during the winter season, I will venture to offer one more, or rather an improvement on what is already known, viz: sowing wheat in with the standing corn. As this mode is quite sure, but attended with some inconvenience, and the time being close at hand when we shall be preparing our fallow ground or breaking up the wild prairie, I will propose that we sow corn in rows, say 5 or 7 steps apart, just as we are in the habit of sowing if on the sod. It needs no more care, and in the common fallow would need but little attention. For this labor the corn would be a full compensation. Place the rows so as to cross the most sweeping winds of the winter season; this would at least secure all the snow that would fall on the field,—it would be a sure guide in sowing, and but little in the way of harvesting. Leave the stalks standing, and nature will do the rest, by flinging her mantle of snow over the young and tender plants. I would be glad to hear from any one who may try the experiment, through the columns of your valuable paper.

FARMER.

Kinnekenne, St. Croix Co., June, 1853.

REMARKS.—Sowing winter wheat among corn as proposed above, has been tried some in this quarter, and has proved quite satisfactory. The stalks should be left standing until spring, and the cattle not allowed to browse them.

For the Wisconsin & Iowa Farmer.

Over Estimate of Corn.

MR. EDITOR:—I saw in a recent number of your Farmer the valuation of a bushel of seed corn. The writer asks any one if there is any mistake in his estimate to point it out in the next number. I have waited to have some one answer him, but no one has as yet.

The writer thinks that A. would have been the gainer if he had paid \$103, for a bushel of seed corn—the whole amount of

B's crop, I think not, for A had better not have planted nor cultivated; but labored and got six tons of hay which I call equal to six acres of corn fodder, B's crop is over estimated, according to good judges.

I had a field of 20 acres—husked it by the load—wagon box held 40 bushels of ears—allowing two bushels of ears to make one of shelled corn; thus making C's yielding 40 bushels to the acre. D. husked in B's field and in C's field, D. gave it as his opinion that C's turned out the most corn per acre. D. is an experienced farmer whose judgment we can rely upon.

One word on over estimating crops in the fall. It is one reason of losing so many sheep and having so many poor cattle. If we would not over estimate, our *sheep*, *swine*, and *cattle* would winter better, and we should have some grain left to feed through the summer to our swine and get some growth before fattening time. I think it a poor estimate to give for the seed, all that the crop will fetch when harvested, for the sake of stalks or straw. Will the writer harvest six acres of corn for me, for \$5?

A LOOKERON,

Johnstown, May, 1853.

Minnesota Salt Region

Probably there is not a richer salt region on the face of the earth, than the one in Minnesota. The territory is generally supposed to be valuable for its agricultural resources alone; nothing however can be more erroneous. True, its natural agricultural wealth is probably second to none in the Mississippi valley, but its mineral wealth is not less extensive and valuable. Among the latter, its salt stands pre-eminent. The region lies between 47 and 49 degrees north latitude, and 97 and 99 degrees west longitude. Its exact locality was ascertained and defined by an expedition sent out from fort Snelling, by Major Long, in 1822-3. A description of that salt region, together with its locality, will be found in the Topographical department at Washington.

Our first information of that salt region

was from a soldire in the expedition. He says that they had been travelling for severaldays over a vast rolling plain, with no trees or water; the troops and horses were almost famishing with thirst, when they came suddenly on the shores of a beautiful lake, about half a mile in diameter, sunk down deep in the plain. It resembles more a vast sink hole. From the height above the waters a vast snow bank appeared to line its shore, but upon examination it proved to be an incrustation of salt as pure and white as snow. The waters of the lake were like the strongest brine. So strong was it that one bathing in it, upon coming out, in a few minutes would be covered with the white crystallization of salt.

If this salt region be as rich as it is supposed to be, a railroad projected into it would prove to be the best stock in the country. There are mines of undeveloped wealth more extensive, more durable, and more important than all the gold regions beyond the Rocky Mountains. We are informed also, that a very short distance below the surface, the pure rock salt lies in a strata like coal or lime rock. We hope the attention of the public and the Government, will be turned to this subject. There is a region lying in our immediate neighborhood, almost unknown, containing more intrinsic wealth than any State in the Union, and which would yield an annual income probably equalling the entire revenue of the country. [St. Louis Union.

DURATION OF POSTS.—The result of forty years experience and observation, with me is, that common fence posts set in the ground *green*, and butt end downwards will last in a sandy loam, about ten or twelve years. The same set in a like situation, inverted, will last fifteen or eighteen years. The same timber, (and soil the same,) well *seasoned* before setting will last eight or ten years longer. I speak of good white chestnut or white oak.

Timber cut in the old of the moon in February, will not be eaten by worms, will not snap in burning, and will last much longer made into posts than when cut at any other time. I have chestnut and white oak posts standing well that were set 28 years since.

OTIS BRIGHAM.
[N. E. Farmer.

Thinning out Vegetables.

It was Cobbett, we think, that remarked, when speaking of the ill effects of thick planting, that one cucumber plant in a hill would bear more fruit than two; more than four and so on, and if there were fifty plants in a hill, the whole of them put together would bear no cucumbers at all! The truth is, there is a much greater loss in allowing vegetables to stand thickly together, than most are at all aware of. To ensure a good crop plenty of seed is sown, with the intention of thinning at the proper time; but when the thinning day arrives, it requires rather more nerve to commit what appears to be merciless havoc of tearing out nine-tenths of the beautifully grown young plants, than most persons possess. A crop of beets has just commenced forming handsome bulbs, precisely one inch assunder in the row; certainly something of the boldness of the surgeon it needs to lay nine-tenths of these withering in the sun; cucumbers are just beginning to throw out their runners and to show their yellow blossoms, and it seems hard to some to tear out three-fourths of the dozen now growing in the hill. It must, however be done—all the surplus plants in a bed of beets or turneps, or in a hill of cucumbers, squashes or melons, are to be considered as so many positive weeds, obstructing the growth of the rest and yielding little or nothing themselves. If our crops are to be crowded and stunted, we would quite as willingly have it done with pig-weed and fox-tail, as to have them smothered and the soil exhausted by weeds of their own species.

Many years ago, when the cultivation of the ruta. бага was first introduced, we could invariably distinguish the crops of the novice, by the thickly growing, half-developed bulbs. "O! but they had thinned them to a very great extent—they had cut out three-fourths, and reduced them from one inch to four inches in distance," where, as none should ever stand nearer than a foot to each other, if the soil possesses any thing like a fair degree of fertility; but this looked too much like indiscriminate slaughter, and could not be thought of for a moment. The finest specimens of garden products, which we see exhibited at horticultural shows, are those which have been

well thinned and allowed every opportunity to develop themselves freely; and the same is true of ornamental plants, where a full, rich, and luxuriant growth and bloom, are obtained through the adoption of the same principle. [Country Gentleman.

The Value of Corn for Fodder.

THE VALUE of corn fodder for soiling purpose has been tested by most farmers. I wish to call attention to its value for winter use in a dry state. On every farm pieces of ground are to be found which yield a very light crop of grass, but which the owner cannot conveniently plant.—Take a piece of this character, mow it early in July, and immediately break it up with the Michigan plow if possible. Spread upon it a moderate dressing of manure and harrow it well in. Then sow quite thick, yellow flat corn broadcast, and cover it with the cultivator, and leave it until the harvest. This method has advantages, which give it preference to myself over the usual manner of sowing in drills. In the first place, if sown sufficiently thick, (and no one need fear getting too much seed upon the ground) it grows smaller in the stalk and is far more tender, so that stock eat it perfectly clean, without leaving a great quantity of refuse butts to be removed, or to try the patience of the farmer when loading his manure. In the second place, all labor of hoeing is saved, and the rapid growth of the crop completely excludes the rays of the sun, and keeps down the weeds. In harvesting it should be reaped and leaned against a wall or poles placed for the purpose until the sun has so far dried it that the leaves rattle well in handling. Then let it be made into convenient sized bundles, and packed in the floor or other convenient place in layers, each layer being placed across that below it, and coarse or fine salt sprinkled freely upon it as each layer is finished. Whenever the heap is found heating freely, which will generally be in thirty-six hours, separate the bundles, and hand them or stand them separately around the barn, to remain till wanted for use. No man who has ever tried this process once will fail to repeat it, as no dried crop will produce more milk, or keep cattle in better order than this. [Middlesex Farmer.

Rancid Butter.

The "Echo du Monde Savant" says:—A farmer in the vicinity of Brussels having succeeded in removing the bad smell and taste of some butter by mixing it with chloride of lime, he was encouraged by this experiment, and he has restored to butter, the taste and odor of which were insupportable, all the sweetness of fresh butter. This operation is extremely simple and practicable by all. It consists simply in working the butter in a sufficient quantity of water, in which from 25 to 30 drops of chloride of lime have been added to every two pounds of butter. After having mixed it till all its parts are in contact with the water, it may be left in for an hour or two, afterwards withdrawn and worked again in clear water. The chloride of lime having nothing injurious in it, can with safety be augmented; but after having varied the experiment, it was found that from twenty-five to thirty drops to every two pounds of butter was sufficient.

Another method of restoring sweetness and flavor to rancid butter, said to be very effectual by those who have tried it, is to put it into a churn with new milk, and work it till all the old salt and rancidity is removed, after which it is to be taken from the churn, worked and salted afresh.

The above should be tried on a small scale first. [Scientific American.]

THE TURNIP FLY.—This insidious insect deposits its eggs in the fall of the year, but the eggs do not hatch till the following spring, when they are vivified by the warmth of the soil, and the young insect appears contemporaneously with the plant on which it is to feed. By stirring the surface of the soil a fortnight or so before the seed is sown, and affording a liberal dressing of sulphur, house ashes, soot and salt, in equal parts, as soon as the plants appear, its ravages will be prevented in a degree. The stirring of the soil lets in the solar heat, and the eggs are developed at once, but there being no food ready, the young insects perish. This is thought to be the most effectual remedy known, and is almost universally adopted in Germany and Great Britain, as well as in many sections of the United States and France.—

[Germantown Telegraph.]

GUM FROM STARCH.—The Annals of Science gives the following as the process of manufacturing the gum that is used for sticking letter stamps:

Take wheat starch, (not corn,) and pulverize it thoroughly so as to make it as fine as possible; place this in a clean iron vessel over hot coals, sufficient to raise the temperature to about 400 degrees, Fahrenheit, and stir the starch to prevent burning or adhering to the iron vessel. In a few minutes it will be seen that the starch has become of a very light grey color, resembling in appearance powdered slippery elm bark, or pulvis Ipecacuanha. The process is now completed, and the prepared substance may be put up in jars for future use. This substance is called by Chemists, *Leio-come*.

To make the gum or paste, mix this powder intimately with water and raise the temperature gradually to a boiling point. The mixture then becomes semi-transparent and is fit for use. It is much more adhesive than any of the gums, and is the best article for paste that I have ever seen.

VALUE OF CARROTS.—In the transactions of the Franklin Co. (Mass.) Agricultural Society, we find the following remarks:

"Cattle become accustomed, during summer to green food, and when kept altogether on hay and other dry fodder, they cease to take on flesh with rapidity.

The use of carrots, particularly, should be introduced. Carrots for horses are now the ordinary practice of even the livery stable keepers of our larger cities.

A bushel of carrots and a bushel of oats fully equal as food for the horse two bushels of oats; for although carrots do not contain the same amount of nutriment by measure as the oats, still their pectic acid gelatinizes the contents of the stomach of the animal, and enables the oats to be entirely digested.

Too much money is paid out by farmers for grain for their milch cows. There must be a more general resort to roots to be fed with good English hay; when these are in sufficient quantity to carry the stock thro' the winter, there may be profit in producing milk for the market."

"A merciful man is merciful to his beast."

"Tired of Farming."

A few months ago, a man who had been a farmer from his early life, came to the city to buy stoves to sell again. Said he to the stove dealer "the weevil begins to infest the wheat, and all things considered, I am 'tired of farming,' and so have sold my farm." The stove dealer remarked, that he thought within himself, that just as like as not the discontented farmer would find a weevil in the heart of the new business—and so it proved, for when the day arrived on which the note matured, given for the stoves, the old farmer, now turned tradesman, confessed he had not been able to sell his stoves—that he had most of them on hand.

"Tired of farming," the most indepent business a man can engage in, because, forsooth, there are disappointments, and perplexities, and trials and vexations, attending it. Remember, you who are tillers of the soil, that your cares and troubles and anxieties are few and far between, compared with those suffered by commercial men. If your chances to become rich are not so inviting and profitable, as those of the tradesman, bear in mind that the dangers of being very poor or destitute are far less. Famine and abject poverty seldom overtake the farmer, or haunt him in their ghostly visits. He lives on the high table-land of promise, rising far above the murky regions of want and destitution. His children can say, there is bread in our father's house, and a piece to spare to the hungry of other less fortunate callings.

"Tired of farming!" Supposing you are. What is to be done in such a case? Do you expect to find an employment without trials and perplexities? If so you are doomed to disappointment. There is no vocation in this world that will exempt those who engage therein, from cares and fears and vexations. So if you are tired of farming, the best way is to get rested just as soon as you can, and prosecute anew the business for which you were early trained, and which, if diligently followed, will yield a good supply of all the comforts and necessities of life, together with opportunities for mental and moral culture.

[Rural New Yorker.]

He that would eat the kernel, must not complain of cracking the nut.

AGRICULTURAL AXIOMS.—In no department is Bacon's celebrated maxim, "Knowledge is power," worth more than in agriculture. Hence, no farmer can be accounted skilful in his profession, who does not avail himself of the information to be derived from the experience of others, and who does not improve his knowledge of husbandry by the perusal of the ablest works which have been written on the subject. It is absurd to imagine, that the communication of knowledge which has promoted the advancement of every other art, should be of no use in agriculture.— Endeavor to raise good grain, for it will always sell, even in years of plenty; whereas it is only in dear and scarce seasons that there is demand for grain of an inferior quality. Let your stock of cattle, horses, &c., be of the best bloods, and more remarkable for utility than for beauty or fashion. None ever ought to undertake to cultivate more land than he can manage to advantage. It is better to till twenty acres well than one hundred in a slovenly manner. A man's owning a large farm is no excuse for imperfect tillage.— What he cannot improve he need not undertake to cultivate. A large farm without skill, capital, or industry, is a plague to its owner. It is like what somebody said of self-righteousness, the more you have of it, the worse you are off. [Ex.]

POTASH WATER.—The editor of the Farmer and Planter, published at Pendleton, S. C., in cautioning people to use all alkalies with great care when applied to fruit trees, says: "Two springs since we killed some young trees by applying too liberally a solution of one pound of pearl-ash and one pint of soft soap in three gallons of water. A very dry spell followed the application, and hence not being washed off, the caustic liquid turned the bark of several trees quite yellow, and much injured those that escaped."

IMPLEMENTS AND TOOLS OF HUSBANDRY.—Examine these *yourself*, and have them put in first rate order. See, too, that you have an ample supply to answer all your farming purposes throughout the coming season; don't wait till you want to use an article, but buy at once and be sure to get the best and most substantial, as it is always cheapest in the long run.

HORTICULTURE.

INFLUENCE OF PLANTS UPON THE ROOTS OF FRUIT TREES.—A Hoosier says in the *Genesee Farmer*, It is surprising to people who have not observed very closely the results of various modes of culture upon trees, how soon young trees show the influence of plants growing around or near their roots. A few years ago, in an economical mood, we sowed carrots between some rows of young apple trees. The rows were 3½ feet apart and we sowed only one row of carrots in the space—the ground, too, was kept clean all summer, and yet we lost the seasons growth of the trees, and got a poor crop of carrot. Other trees of the same age, in the same soil, *without* carrots, were twice as large in the autumn.

STRIPED BUGS.—The Soil of the South says, "The application of a handful of guano on the top of the hill under the vines will keep off the striped bug."

Experience has taught us that a cheaper and better remedy is to kill them outright. This may seem a tedious undertaking at first, but we have tried it two seasons, and have found it not only less trouble, but much more effectual than all the nostrums and scare-crows we have ever tried. Take two strips of shingle, about six inches long and a half wide, tapered at one end to an edge—with one in each hand, pick the bugs from the vines or ground (for they generally seek the ground for a hiding place when disturbed) and crush them. Morning and evening are the best times to hunt them. Two or three rounds a day, for two or three days in succession, will exterminate them so far, that the vines will be out of their reach before the reappearance of a new brood. These bugs are not so numerous as many suppose, but they are great gormandizers.

Dwarfing Fruit Trees.

The French have a method of cultivating dwarf fruit trees, or trees which have been stunted by a certain process, which one of their writers describes as follows:

"Young trees are to be treated in the following manner:—If there are more than three shoots on the plant, reduce them to that number, and shorten each to three, four, or six eyes, according to their strength. The following season, reduce the number of leading shoots to six, and shorten them to three-fourths of their length, and spur in the remaining shoots. The tree should be managed in every respect in this manner, until it has attained the required size, which of course depends upon the fancy or convenience of the owner or conductor of the garden. I make a point of letting the trees take their natural form of growth as far as the system described will admit; for I consider it of little consequence what shape is given to the tree, provided my end is attained; that is, to make every branch, as it were, a long spur, with bearing buds from the extremity to the base."

It is asserted by both French and English writers, that trees so stunted are not so much exposed to injury by high winds, that they produce better fruit, bear earlier and more abundantly, and occupy less space. Dwarfs are also produced by inoculation on stock of small growth. The apple is often inoculated on the *Paradise* or *Doucin* stock, the peach on a slow growing plum, and the pear on the quince. We have seen large pears on trees not more than five feet high, the tops of which were not possessed of sufficient strength to sustain their weight of fruit without the assistance of props. This is a common result where some varieties of the pear are set in quince stocks. The writer above quoted says:

"Two or three years trial of this method only, might deter many from a continuance of it, in consequence of the young wood which will be produced yearly at first, and of the apparent difficulty of getting rid of the superfluity. But that inconvenience will be utterly surmounted if the foregoing instructions are attended to, and the consequence will be possession of both healthy and fruitful trees."

When to Prune.

A correspondent has furnished us with the following text: "At what time in the year should different kinds of pruning be performed, in the cold latitudes of the north and in the milder climates of the south?"

We hold that pruning in general, in our northern climates, is safest after the severe frosts of winter are over, immediately before the swelling of the buds. When performed early in the winter, or in the autumn, as is practiced properly in mild climates, the ends of the cut shoots dry up, shrivel and die; losing the buds intended to make leading shoots, and leaving dead points that require much labor to prune off afterwards; or if large branches are cut off, leaving a broad, fresh surface, the wood and bark dry up and require a long time to heal. We perform most of our pruning in the month of March, although a great deal of the less exact nursery pruning is done in February. Southward, as the winter is mild and spring early, we should prefer pruning very early in the winter or immediately after the fall of the leaf, because *activity* in the functions of the tree commences early, or scarcely ceases, as we must believe it does during our intensely cold weather, and by pruning early we economize the sap and strength of the tree.

"*Pruning in the season when the leaves are on.*" The only pruning we hold to be sound, safe, and commendable, at this season, is the *finger and thumb*, in other words *pinching*. It is quite inconsistent with good management to rear a crop of shoots and then cut them away. This can only be avoided by nipping superfluous and misplaced shoots at two or three inches of growth, before they attain to woodiness. This economises the force of the tree and turns it into a channel where it will promote, instead of frustrating, the ends we are aiming at. For instance, if we plant a young tree, and have pruned it with a view to a certain form, and contrary to our expectations breaks out at an unexpected point, and assumes a vigorous habit and robs all the other parts, it would evidently be unwise to tolerate this intruder until it arrives at full growth and then cut it away. Too many trees are thus managed, by the neglect of summer pruning or pinching.

We admit, however, that there are cases in which the summer pruning, or entire lopping off or cutting out branches of considerable size may be judicious and safe.—For instance, in the case of neglected orchard trees in a luxuriant state, with dense heads in which the fruit is deprived of air and light. In such a case branches may be thinned out, and the cut surface heals over more rapidly and smoothly than at other time. But is unsafe to produce very sensible diminution of foliage, as it arrests the growth of the tree.

All pruning in the growing season tends to arrest growth. Nurserymen know that a slight pruning of stalks before budding, will so arrest growth as to make the bark adhere firmly; when before the pruning, it lifted freely. It is on this principle that most all pruning, to promote fruitfulness, must be done, at a point of a greater or less activity of growth. Late spring pruning of resorted to as a means of subduing superabundant vigor, and it has the same effect as root pruning to a certain extent. [Hort.

DISEASED PLUM TREES—A correspondent of the New England Farmer says: "I am very well satisfied, from personal observation, that the circulation of the sap has nothing to do with forming the wart, so prevalent in many sections of the country. But a disease probably arising from an insect that works its passage into the very heart and pith of the twig, or branch affected. I observe that this insect ascends upwards, and in order to exterminate its ravages the branch should be cut at least one foot below the wart, and as much further as is found necessary, until you come to a sound, healthy wood and pith, even if the whole tree goes in consequence. Then burn the cuttings. I am satisfied that if one tree is left to destruction, that the disease is as contagious to the remaining ones as the yellows to a peach orchard. I have many standard plum trees and many in nursery rows, all of which are in sound, healthy condition; it has been my practice to watch carefully this disease, and cut freely, sparing no imperfection of wood; I have seen plum trees not fifty rods apart, some clean and round and others literally covered with black warts; therefore no one will presume that *locality* has much to do with the disease." [G. B. SLADE.

Colors of Flowers.

Remarkable changes take place in the color of some flowers during the course of the day. Those of the Pink Phlox, early in the morning are of a lightish blue, which alters as the day advances, and becomes a bright pink. The *Oenothera tetraflora* has white flowers which change to red. The *Hibiscus variabilis* has its flowers white in the morning, pink at noon, and at sunset bright red. Many flowers of the Boraginaceæ are red before expansion, and afterwards blue. The bracts of *Hakea Victoria* are yellowish white at the centre the first year; the second year these become of a rich golden yellow; the third year rich orange; the fourth year blood red, and the green parts of the bracts become annually darker. *Hydrangea* changes its color between blue and pink. The *Dahlia*, of the yellow species, has been made to produce all varieties of that series, but has never been produced of a green color. [Artizan.

Insects—Plum Tree Warts.

The depredations of insects upon fruits and vegetables may sometimes prompt the farmer to wish it were in his power to exterminate their whole race. But as the Creator has granted every green herb for food to "every creeping thing," no less than to fowls and beasts, as well as nobler man, and has effectually secured them from any such sad doom, we must content ourselves to be fellow commoners with them, despite all we may wish or do. The fruits, flowers and plants which we claim as exclusively ours, they emphatically declare, by unmistakable deeds, are no less theirs; for hate and fight them as we may, they will live, beget their progeny, and eat freely what they like, find it as they may, in the prince's or the humblest cottager's enclosure. Choicest fruits, sweetest flowers they love as decidedly as man. Do they invade our rights? Not so, they claim instinctively only their own. A vast family is supplied from the same bountiful hand, and it would be wise for the agriculturist to reflect more on obvious facts, in the providential arrangements established between him and inferior orders of animal existence.

Suppose all insects that annoy us and prey upon fruit trees and cultivated plants were extinct. Then what would become

of the birds? They would be robbed of their appointed food, and starved, and their matchless, wild music would greet us at our toils no longer. What solitude, amid the luxuriant vegetation, and bright suns of summer! Say you, be it so? Our fruits and grains are safe from these vile foes. Patience, friend—think again, what result would follow even as to these. Not a blossom or germ would be attacked, by a marauder, and all of them would be left to live or die as they might, in unimpeded development. Think you that your trees would be sure to cast off all the superfluous fruit, and reserve only a quantity which they were capable of well sustaining, and bringing to perfection? Not so; they would be over-loaded, and your fruit would be smaller and of inferior quality, and at the same time the trees would be greatly exhausted, and perhaps rendered short lived, by overtaking their vital powers. Their wood and branches must grow annually, and be sustained by the same stock that yields the fruit, and in due proportion to the general demands on the trees for maturing their present fruit, and preserving their vigor and health for subsequent years. Many lessons the Ruler of Nature teaches us, which through inattention we are wont to overlook. If animals need rest and endure only a given amount of labor, why should not fruit trees follow the same law, and be relieved of the excessive burden they would be destined to bear, without that kind of pruning, for which certain insects are employed? Let us not say, then, that they are altogether pernicious, when we see our peach branches ready to break down without props, or unless much relieved of their burden by our own hands, and we may be sure a superabundant and imperfect fruitage would load our orchards, if no worm-eaten apples were not dislodged from their branches.

As to plum tree warts, my conjecture is, that as they have not, so far as I know, been proved to be produced by insects; they arise from the want of the healthy disposition of the woody fibre, and that this may result from obstructed circulation of the sap, this being caused by deficiency of one or more ingredients in the soil. Impeded circulation of sap may cause an accumulation of it in particular places, there forming the warts. If the conjecture should be well founded, the desideratum would be

to ascertain what to apply to the soil around the tree, to promote free circulation of the sap. I desire vegetable physiologists to cast light upon the subject if they can; if such is the disease, what is the cure? We would refrain from constant amputation of the trees, if a better course can be prescribed.

A young seedling peach tree began last spring to send out long, curly, misshapen leaves, and certain branches were distended, grew crooked, and stopped extending themselves. Free application of urine to the root was followed by their recovery and healthy growth. Hence I surmise that as the disease of the peach tree yielded to this application, the same, or phosphate of ammonia, or phosphate of lime, might have the like effect upon the plum tree. But fair experiments are better than conjectures or surmises.

J. LEE.

[N. E. Earner.

Increase of Heat in Flowering.

Brogliart observed the opening of the flower of the *Colocaria odora*. The spathe opened March 14th, the discharge of pollen commenced on the 16th, and continued until the 18th. The temperature he states to be as follows:—

March 14	3 p. m.	4.5 deg	centigrade	above	air
do	15 3	do	10	do	do
do	16 5	do	10.2	do	do
do	17 5	do	11.	do	do
do	18 11	6 a. m.	8.2	do	do
do	19 10	do	2.5	do	do

Flowering usually takes place at a definite period of the existence of a plant. Annual plants are so exhausted by flowering as to die. But by retarding the epoch of flowering for two or more years, as by nipping off the flowering buds, time is allowed for the accumulation of sap; the stem, from being herbaceous, (that is, dying annually,) becomes shrubby, and sometimes, as in the tree Mignonette, they may be made to live and flower for many years.

[N. Y. Farmer's Club

ILLINOIS PEACH CROP.—The editor of the Alton Telegraph says:—We have been engaged, for some days past, in trying to relieve our trees, by picking off the superabundant fruit, removing overcharged limbs, &c, and have found it an almost interminable task. In many cases, small shoots, less than one inch in length, are burdened with four or five peaches.

Making Clover Hay.

A. Y. Morse, Schoolcraft, Mich., communicates to the *Farmer's Companion* his method of curing clover:

"AS THE time for making clover hay is soon at hand, and as my mode of curing that article differs from most farmers, I wish to make it public. Clover is generally cut, spread out, dried as soon as possible, and hauled in on the second day in the afternoon if convenient. It is supposed to be good, but when fed out in winter, proves to be mouldy and not fit for horses at all. Now, I contend that this is all bad management. I will give my system. I, while mowing, have men to follow, and put every swath in small cocks, at about one rod distance, if the crop is heavy, and those cocks all in rows; on the second day, or some-times not till the third, I turn over one of those small cocks and place two more upon it, putting three into one, laying the greenest part nicely on top, so as to shed rain; then let it remain, several days, till it becomes a little heated and the moisture becomes evaporated through the cock. When I haul in, I open those cocks and give it air, about an hour previous; by loading and unloading, it all receives enough to be thoroughly cured if properly sweated in the cock. It remains green, with all the leaves upon the hay, just as it came from the scythe. Clover hay should not have any sun upon it, and it requires several days to cure it thoroughly. When put up green, the rain will not penetrate the cocks, and the hay is, in case of storms much more secure than by the quick mode of curing. It requires some judgment to be exercised in airing the hay, while in the cock, if it be a rainy and warm time; but a good farmer would soon know that, when he understands the philosophy of curing hay in the cock. By this method it gets thoroughly cured before it gets into the mow, and of course, no danger of spoiling there.

I have practiced this method for several years, and am so well satisfied with it, that I would not permit my clover made into hay in "quick time," if it were done for nothing; for it is not possible to be cured in thirty-six hours. I always take five or six days, and it is much less labor, besides being worth much more when done."

Written for the Wisconsin and Iowa Farmer.

Chemistry of Plants. No. 1.

UPON WHAT DO PLANTS LIVE—FROM WHENCE COME THEIR MATERIALS—WHAT IS THE EFFECT OF PLANTS UPON THE SOIL ON WHICH THEY GROW, AND THE AIR IN WHICH THEY LIVE.

BY PROF. S. P. LATHROP, M. D.

"For many years, chemists and philosophers have been investigating the affinities and other peculiarities of molecules, or ultimate indivisible particles of matter. These scientific researches have revealed many important truths and natural laws, which have a direct bearing on all the economical purposes of agriculture. *Some pains should be taken to impart a knowledge of these laws to all practical farmers.* When we consider how little opportunity the mass of agriculturists have to study the chemical composition of their soils and their crops, it can readily be seen that information of this kind is greatly needed in all operations which aim to feed cultivated plants with their appropriate aliment."—D. Lee, M. D.: Introduction to Patent Office Report—Agricultural, 1850.

It is not to be expected; amidst the multitude of cares and duties which fall to the lot of most of our farmers, that they should find time to make themselves completely familiar with the physiological principles of plants in general, or become thorough botanists, yet there are some facts regarding the growth, nourishment and ripening of the various crops and fruits, which come under the management of the agriculturist and horticulturist, and these so comparatively few and so important, that it becomes a duty, both on the part of him who is able to instruct, and of him who needs to learn, to extend the knowledge of these facts or principles, as widely and as thoroughly as possible. Sincerely desiring the highest interest of our fellow laborers in the cultivation of the soil, and knowing well the many difficulties with which they have to contend, but gratefully rejoicing in the present fair promise for the future, we will endeavor in a short series of articles on the *Chemistry of Plants*, to state some facts and make such suggestions as we hope may be of service to the farmer. We shall endeavor to do this in so plain a manner that every one, who can read, and is not already familiar with the physiological and chemical principles concerned in the growth of vegetation, may learn our views and comprehend

what we have to say. It is to be hoped, then, that no one will be frightened with the heading of our subject, and pass it by because he has not studied chemistry. Please give us your attention, and we will try to do you good. We have things to say most important to you, if you desire to raise good crops of grass or grain, and at the same time, preserve the fertility and, thereby, the value of your soil.

The questions—Upon what do plants live from whence come these materials and what is the effect of plants upon the soil on which they grow, and the air in which they live,—cannot but be of great importance to the farmer. These questions we will endeavor to answer in this series of articles and deduce from them some practical suggestions.

UPON WHAT DO PLANTS LIVE?

This question suggests the idea that plants, like animals, eat something, and that there is a process going on within the plant as within the animal, which uses up material, which is called their food, or nourishment. This process in animals is called digestion, and, with a good degree of propriety, it may be called by the same name in plants. Now the idea that plants use up material as long as they live, is an important one to the farmer. No one would think of raising a stock of cattle without providing something for them to eat—simply giving them a place to stand, without either water to drink or grain or grass to eat, would hardly be sufficient. Putting a litter of pigs into a pen, however good looking it may be, is doing but very little towards fattening and fitting them for the pork barrel. Something further must be done. They must be fed, and that with the kind of food which experience has determined to be the most appropriate. If this food is withheld, to any degree short of the actual demand, they suffer, and if to a greater degree, they ultimately perish. It is of no use to furnish them with that which, from their peculiar habits, they never eat. Exactly so is it with plants. They require something more than a mere foothold, or a place where to stand. They must be fed, and that, too, with the kind of food peculiarly adapted in composition and properties best fitting their service, and in a quantity adequate to the demand. Hence the question—*Upon what do plants live?* To determine this point may, at first thought, seem difficult. We can readily determine the food of an animal by observing what it chooses when a variety of

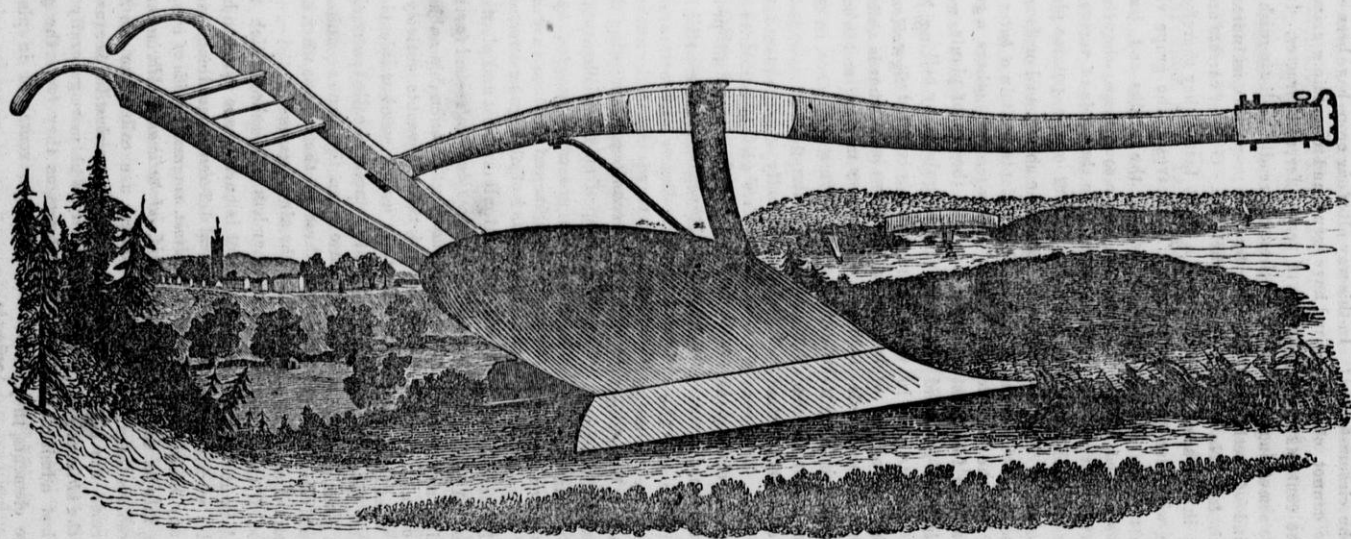
food is placed before it. If the circumstances of the case are such that we cannot observe this, then we may examine the contents of the stomach. We may also judge something from its digestive organs—the kind of teeth, the length of its digestive canal, &c. Now, we learn the food of the plant in the same, or quite similar way. It is true, with our rude, undisciplined eyes, we cannot really see the food as it is taken up and swallowed by the field of grain or of grass; but it does it none the less surely and evidently to the eye of the chemist. Animals, from the structure of their organs can take their food in a solid as well as in a liquid and gaseous form, but the organic structure of plants is such that the food must be in the form of water or air, that is, liquid or gaseous. When a plant is made to grow in a measured portion of air—the composition of which is known to the chemist, he readily determines what the plant has appropriated to itself by the composition of the air that remains. He learns the composition of its liquid food and the amount in a similar way. This is as easy, in the case of the plant to the chemist as in the case of the animal to any one.

There are two ways by which we may know how much hay a horse has eaten; we can weigh the hay from which the horse eats, before and after he has eaten, and thus learn the amount; or, which is equally certain—we can weigh the horse before and after he has eaten, and thus determine the amount. This is precisely the way the chemist determines the amount of the material which the plant uses. Again, as the plant has no power of creating any new element or substance, if the chemist can but find out its composition, or of what it consists, he will thus know its food. Now, he can easily do this, so that the food of a great number of plants—especially of those cultivated by the agriculturist—has been determined, and is now about as well known as the food of the different kinds of animals. Let us look at this a little closer. "When the chemist wishes to investigate the composition of any body, he reduces it, in the first instance, into its coarser components, and then again resolves these into their finer elements. The former are called the *proximate*, and the latter the *ultimate* constituents of bodies. If these last admit of no further separation into simple elements, they receive the name of *elementary substances*, or *chemical elements*."

In this way all of our crops have been examined, and have been found to contain *proximate constituents* of very different character. In many instances these can readily be distinguished from each other by their properties, as indicated by the taste, smell, &c. Grapes, carrots and most fruits have a sweet taste; they therefore contain sugar. The leaves of the grape vine and leaves of sorrel, the stalks and leaves of the rhubarb have a sour taste; they therefore contain an *acid*. In the seeds of various kinds of grain, the tubers of the potatoe plant, we find a substance resembling meal or flour—this is *starch*. Other plants contain a *bitter principle*, others still a *fatty oil*, others a *gum* and others a *resin*. In the sap of plants we find a substance that coagulates by boiling, like the white of an egg—this is called *vegetable albumen*. In peas and beans we have what is called *vegetable caseine*, or cheesy matter; and in oats, rye, wheat, &c., we have a substance, in composition, exactly like the flesh of animals—this is called *gluten*. Finally, after the plant is burned, we have in its ashes what is called its *mineral constituents*. The above are all *proximate constituents*. By separating these still further, we come to their *ultimate constituents*, or *elements*. Remarkable as it may seem, all the above variety of *proximate constituents*, excepting the mineral, are made up of only four elementary substances. These are called *oxygen*, *hydrogen*, *carbon* and *nitrogen*, and because they are the principle elements of all *organic structures*—by which is meant, all animals and plants—they are called the *organic elements*—and further, because when the plant or animal is subjected to fire, or burned, these elements entirely disappear,—they are called *combustible elements*. Again they are sometimes called *putrescible elements*, because when the plant or animal dies and decays, these all, the same as when burned, escape into the air as gases.*

On the other hand, the ashes, which remain when the plant is burned, are found to be composed of several different ingredients—such as *potash*, *soda*, *lime*, *magnesia*, *oxide of iron*, *silica*, *phosphoric acid*, *sulphuric acid*, *chlorine* and *carbonic acid*. These are called the *mineral constituents*, also the *non-combustible*, because they are not burned up, and more generally the *inorganic constituents*, as they form the greater bulk of all matter not contained in plants or animals.

*Stockhardt.



MAY'S IMPROVED PATENT STEEL PLOW—Manufactured at Janesville, Wis.

We have had in use for some time one of Mr. May's Plows of the above pattern, and can say freely, that a better plow for prairie soil it has never been our luck to find. These plows are also made in the most durable manner, and of good material—the steel upon the front part being doubled. The form of the mould-board and share is such, to our mind, as will give to the plow the easiest draft.

This plow was exhibited at the Wisconsin State Fair, in October, 1851. Upon trial, (at the plowing match,) it received the Society's First Premium.

JAPANESE GARDENS.—The gardeners of Japan display the most astonishing art. The plum tree, which is a great favorite, is so trained and cultivated that the blossoms are as large as those of dahlias. Their great triumph, however, is to bring both plants and trees into the compass of the little garden attached to the houses in the cities. With this view, they have gradually succeeded in dwarfing the fig, plum, and cherry trees, and the vine, to a stature so diminutive as scarcely to be credited by an European; and yet these dwarf trees are covered with blossoms and leaves. Some of the gardens resemble pictures in which nature is skillfully modeled in miniature—but it is living nature! Meylon, whose works on Japan was published at Amsterdam, in 1830, states that in 1828, the Dutch agent of commerce at Nagasaki was offered a “snuff box, one inch in thickness and three inches high, in which grew a fig tree, a bamboo, and a plum tree in full bloom.”

WISCONSIN LEAD MINES.—The Potosi Signal says since the price of mineral has advanced, miners have set themselves to work in good earnest. All kinds of mining tools are in demand at Potosi; and it is expected that more mineral will be raised in that neighborhood this year than in any one for many seasons back. Several prospects are already reported as “showing” well.

Beetown, which has for years been abandoned by miners, is now represented as having awakened from a long sleep, and the pick and drill are again as busy as of yore. Other parts of the mines are reported as being as enterprising as their neighbors.

What necessity there is of going to California for wealth, while the price of mineral is between \$30 and \$36 per 1000 lbs., one can hardly imagine. At such prices a man would not be much better off in the best gold regions of the earth; for, here provisions and clothing are cheap, and the hardships and exposures have not to be encountered.

A SHARP FLY.—A London paper speaks of a fly in South Africa, whose bite kills horned cattle. Two or three of them are the death of a large ox.

SINGULAR PHENOMENON.—Some months ago Mr. Nichelos Flint, of Great Valley, in digging a well, after excavating to the depth of about forty feet and finding no water, determined to dig no deeper, as the space had already become so small that he was afraid, should he sink it deeper, that the sides would fall in if he attempted to stone it up. He accordingly abandoned it, throwing planks across the mouth to prevent accident, intending to fill it up again when he had leisure. One day he heard a singular noise, which seemed to proceed from the well, and on going to it he discovered that it was caused by a heavy draft of air forcing itself up from the well. This continued for some days, when the current of air became reversed, and there was a strong draft *downwards*, so much so that light substances brought near the crevices in the planks, were instantly drawn in. He then procured a piece of pump log about two feet long, with an aperture of two inches in diameter, and inserted it firmly in one of the planks.

The air as it forces itself in or out of this tube, makes a roaring sound, which can be heard for nearly a mile. In fact, this well seems now to perform all the breathing functions of a huge pair of lungs although the inhalations and exhalations continue for a much longer period than in any other animal now known—as it is sometimes several days in drawing in its breath, and as long a time in forcing it out. The boys in the neighborhood often amuse themselves, while exhalation is going on, by pulling their caps over the end of the tube, to see them thrown several feet in the air. Another fact is, that the respiratory organs of this “breathing monster” seem to be entirely under the control of the atmosphere; so that in addition to its other singularities, it acts the double part of thermometer and barometer. For some hours preceding a change from a lower to a higher degree of temperature, the inhalations grow less and less until it is finally imperceptible; then the air commences rushing out—the current growing stronger and stronger, until the weather has become settled, after which it again subsides to await another depression of the mercury to “take in another breath.” Who will elucidate this misery? [Cattaraugus Whig.]

EDITOR'S TABLE.

COVER PAPER.—We shall hereafter, use the same kind of paper for covers that is used for the body of the Farmer. This change is made, not on the score of taste or economy, but because it has often been the case, that the required amount of colored paper could not be obtained at any price, short of sending to some of the eastern manufactures,—thus involving an expense which we could not afford.

There is only one mill in the West, where colored paper, suited to our use, is manufactured, and even at that mill, the amount made is limited to a peculiar kind of stock—a medium quality between those used for manufacturing white and wrapping papers. It is not, as some may have supposed, a matter of self-interest with us, to send out the Farmer minus the cover; for we lose in advertising patronage, more than double the expense of adding the cover. We hope this explanation will be satisfactory to all concerned, and save us from all suspicion of selfishness.

In making this change, we have added 8 pages to the usual number—making our paper 32 pages—equal in number and amount of matter to most of our Dollar Agricultural Contemporaries.

We commence in this number, the publication of a series of six articles from the pen of Prof. S. P. Lathrop, of Beloit. These articles have been prepared for the Farmer with a great deal of care and labor, and we trust our readers will duly appreciate them. They are scientific and practical—written in a plain and familiar style—such as may be understood by every reader. The subject is also an important and interesting one to every farmer.

BOOTS AND SHOES.—All who wish to improve their understanding are referred to the advertisement of J. B. Dimock. Mr. D. has much the largest and best selected stock of Boots and Shoes to be found west of Milwaukee; Mr. D. buys in large quantities and of course can sell cheaper than smaller purchasers. Give him a call.

See the advertisement of McKey & Bro. That is the place to buy goods cheap, judging from the rush of customer constantly thronging their Store.

HON. BEN. C. EASTMAN will accept our thanks for public documents.

OUR ACKNOWLEDGEMENTS are due for a very neat pamphlet copy of Hon. Wm. S. King's Address before the New Hampshire Agricultural Society.

LITTLE NEW HAMPSHIRE.—This State is enjoying a high degree of prosperity, as appears from the Governor's Message to the Legislature, which convened on the first Wednesday of June:

There are in the State 624 3-4 miles of railroad in operation, which cost \$18,346,086 64; the last annual receipts were \$1,768,455 98; and the expenses \$949,567 54.

The banks of deposit, discount and circulation have a capital to the amount of \$3,226,000. The number of these banks is 33. There are also 16 Savings Institutions with a capital of \$2,132,218.

There are 44 cotton and 61 woolen mills.—The amount of capital invested in cotton mills is \$10,950,500; that invested in woolen mills \$2,437,700. The whole number of hands employed in these mills is 14,219.

The total number of persons pursuing education in all the schools in the State, including Dartmouth College, during the past year was 92,900, being one in every 3 42-100 of its whole population. The amount of money applied to the purposes of instruction was \$271,747. The State debt is about \$74,000.

MULES.—Gov. Stevens' Surveying party on the Pacific Railroad route, from St. Paul to the Pacific, employs 171 mules.

DUBUQUE ENTERPRISE.—As a condition of assistance from others, Dubuque county is to subscribe \$200,000, Dubuque city \$100,000, and private individuals \$100,000, to build 30 miles of the Dubuque and Pacific Railroad. Such enterprise, on the part of the citizens of Dubuque, presents a striking contrast with the niggardly selfishness, in Railroad matters, of those of some other towns we might name.

WORLD'S FAIR IN FRANCE.—The Emperor has informed our minister at the Court of France, that there will be held a Universal Exhibition in Paris, on the 1st of May, 1855, and that all nations are cordially invited to participate in it.

It is very common that a man too poor to take a newspaper, always spends a shilling a week for pig-tail tobacco, and a dollar for liquor.

NEW POTATOES IN IOWA.—New potatoes, full grown and delicious, were offered for sale at Burlington, on the 31st May.

HOW TO FILE SAWS.—The following plan of filing and setting cross-cut saw is original, I believe, and may be of use to some of our readers. From the saw, as commonly used, remove every third tooth, file the side of each tooth next this space, perpendicular, the back at an angle of forty-five degree; set the first two fronting on open space on one side, the next two on the other, alternately. The saw is now like a cross-cut tenon saw except that it cuts both ways, with the advantage that one half of the teeth prevent the other half from gripping; it runs smooth and cuts fast. [Ex.]

NAVIGATION OF WOLF RIVER.—The Steamboat Montello has made a trip up Wolf River 180 miles.

Emperor Boulouque, of Hayti, has a single piece of mahogany weighing nearly three tons.

SALERATUS is said to be injurious to the human system, and that it destroys thousands of children and some adults every year. In New Brunswick, contiguous to Maine, the physicians are wont to say that half the children are killed by the use of saleratus. The evil is fast spreading throughout the Union. Families of moderate size already use from ten to twenty-five pounds of saleratus yearly. [Ex.]

About 50,000 sheep were driven from New Mexico to California last year. They were purchased at the rate of \$2 per head, and sold for from six to eight.

WHEAT CROP.—In some parts of Ohio, the wheat crop has been severely injured by the fly.

BOOK KEEPING.—We acknowledge the receipt of an Elementary Treatise on Book Keeping by S. W. Crittenden, Accountant, Philadelphia; and published by E. C. & J. Biddle. This work is designed for Common Schools. From a careful examination, we pronounce it admirably adapted for elementary instruction in the art of book keeping. We most cheerfully recommend it to both teachers and students. The work is commended by a large number of accountants, representing some of the leading Banking and Commercial Houses of New York, Philadelphia, Boston, Baltimore, Cincinnati, St. Louis and New Orleans.

Book keeping has hitherto received too little attention, both in our common and higher schools. A practical knowledge of book keeping is next in importance to that of arithmetic, yet it is almost wholly neglected.

THE PHRENOLOGICAL AND WATER CURE JOURNALS commence new Vols in July. Renew your subscriptions and enlarge your clubs.

THE AMERICAN ARTIZAN.—This paper, as its name indicates, is devoted mostly to the mechanic arts. New York, weekly, at \$2. John Bullock, Editor. The Artizan is a large sheet, done up in quarto form, and embodies a large amount of valuable matter, illustrated in many cases with cuts.

CONNECTICUT VALLEY FARMER.—A new Agricultural Journal.—S. Bonells & Co, Springfield, Mass. Wm. B. Calhoun, Editor. It is neatly printed, and gives promise of taking rank with the best of its New England co-workers. 50 cents.

THE SACHEM.—Such is the name of a large weekly sheet by Thomas Picton, N. Y., \$2 To the miscellaneous reader we recommend the *Sachem*. It contains many good stories, besides a summary of passing events.

THE SCHOOL MATE for June is a better No. than we have ever seen before. We have often recommended parents to take this work. It should have a place in every family where there are children to read. Geo. Savage, N. Y., \$1

THE WESTERN HORTICULTURAL REVIEW for June is an excellent No. Dr. Warder, its able Editor, is doing good service in the cause of Western Horticulture and its kindred arts. We say again to all interested, take the Review. The *Vineyard Department* alone, is worth double the annual subscription.

THE WOOL GROWER enters upon its 5th Vol. with the July No. Every stock breeder should have it.

CROPS IN WESTERN NEW YORK.—The Rochester American says:—"On the whole, the fields and farms of Western New York present to the eye of the husbandman, a spectacle of rich promise and beauty, such as can nowhere be excelled."

THE HESSIAN FLY is reported to have greatly injured the wheat crop in Ohio. In some counties whole fields are completely destroyed, while in others, not half a crop is promised.

THE KENOSHA TELEGRAPH says:—We believe we hazard nothing in saying that during no spring season for the last ten years in Wisconsin, has the prospect been so flattering for an abundant crop of all kinds of agricultural products, as at the present time.

E. W. PHELPS'**"PREMIUM OHIO BEE HIVE."**

THE inventor of this Hive, after twenty years of practical experience in keeping Bees, and during the last ten of which he has devoted a large amount of time and expense in studying the habits of the Bee and the Bee-Moth, and in experimenting in Hives of various forms and sizes, flatters himself that he has finally succeeded in constructing a hive in every way adapted to the natural habits and wants of the Honey Bee, and devising the most effectual means to prevent the aggressions of the miller and the moth, and the best possible means for catching and destroying them after they have entered the hive, without disturbing the Bee, or exposure to their attacks.

It is acknowledged by all Bee-keepers, who have given this Hive a fair trial, that it combines more convenient and good qualities than any Hive previously invented or known.

It is adapted to either large or small colonies as the Bees may be made to occupy from one to six boxes (or sections) as their numbers may require, and thereby give them at all times as much or as little room as they may need, at each and all seasons of the year.

The arrangement for removing the old brood combs (so essential to keep a colony in health and vigor,) and for removing the surplus honey, are equalled by no other Hive, as the bees may be made to leave either box before removing it from its place in the hive.

It is decidedly the best non-swarming hive ever invented, as colonies may be divided and multiplied without the trouble and uncertainty of swarming; or swarming may be prevented by giving ample room, and taking the surplus honey as fast as gathered.

It is also the best swarming hive, as the bees may be confined to a small amount of room during the fore part of the season, and thereby induced to swarm early, after which more room may be given them, so as to prevent their clustering on the outside of the hive, and a much larger amount of honey obtained than in any other hive.

It affords bees protection against the ravages of the moth and miller, and the apiarian better and more effectual means to destroy them after they have entered the hive, than any other.

It affords better accommodations for feeding either late swarms, or for obtaining honey, as the arrangements are such that for robbers to gain access to the feeding apparatus, they must enter a small passage at the spout, and pass directly through the main body of the hive.

And in fine it is warranted to give better satisfaction upon a thorough trial than any other hive known.

Some two or three hundred of these hives have been in use during two or three seasons past, in the counties of Licking and Muskegon, Ohio, and several the past season in N. Y., and Massachusetts, and have given far better satisfaction than any of the kind heretofore known, and from the universal satisfaction it has given

thus far, it is confidently believed that it will supersede all others, for convenience, utility profit and practical purposes.

The first premium has been awarded this hive for three years in succession by the Licking Co. Ag. Society, where its merits are known. Also the first premium and a diploma by the Ohio State Agricultural Society, at their 2d annual fair held at Columbus, Sept. 1851, also diplomas from the New York State Ag. Society, and several county societies in those states.

For individual rights to use and Township or County rights in Michigan, Illinois, Wisconsin and Iowa, application must be made to the undersigned.

Individual rights to make and use \$5, including feeding apparatus.

E. B. QUINER, General Agent.

Address—Watertown, Wis.

April 2, 1853.

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NOTICE**To Farmers.**

ANY one wishing to obtain the Suffolk Breed of Hogs, can obtain the same of C. S. BLANCHARD, M. D., of East Troy, Walworth County, Wisconsin.

Residence half mile West of East Troy.
Troy, March 28, 1853.

v5n5



Wisconsin Wholesale Drug WARE HOUSE.

ESTABLISHED IN 1844.

S. JOHNSON, JR.,

Wholesale Dealer in Drugs, Medicines, Paints, Oils, Dye Stuffs, &c. General Agent for most of the popular Patent Medicines sold in Wisconsin

Proprietor of Johnson's Chemical Hair Invigorator, Johnson's Cherry & Liverwort, and the famed Bone & Nerve Liniment.

151, East Water St. Milwaukee.

T. LITTELL,

WHOLESALE AND RETAIL DEALER

IN

Agricultural Implements, Seeds, &c.,

109, East Water-st.,
MILWAUKEE,

Is prepared to supply Dealers and Farmers with any kind of PLOWS, manufactured by Ruggles, Nourse, Mason & Co., at manufacturers prices,

adding only cost of Transportation. Their new Series of Plows, comprises the most desirable patterns that have ever been introduced.

Their EAGLE PLOWS, are already too well known to need one word said in their favor.

And is also prepared to furnish Extra Points, Mould Boards, Land Sides, or any part of the Plow that may be wanted. Wherever their Plows have been introduced, they have received the highest commendation.

I am prepared at all times to supply Hay Cutters, Harrows, Cultivators, Corn Shellers, Road Scrapers, Thermometer Churns, (and all other desirable patterns,) Fan Mills, Seed Sowers, Corn Planters, Meat Cutters, Field and Garden Seeds. Also Wholesale Dealer in

GROCERIES AND PROVISIONS,

Agent for the sale of Dupont's Celebrated Powder. 5n3

HORTICULTURAL!!

Rock County and the State can now be supplied with Cahoon's far-famed Mammoth Seedling Pie Plant,—unequaled by any other kind from Maine to Texas. Also a large assortment of the choicest varieties of Gooseberries, Currants, Grape, Strawberries, Quince, &c. Any orders for Fruit Trees of any kinds, and Ornamental Shrubbery, will meet with prompt attention on most reasonable terms. Arrangements are being made to supply this market with Cahoon's entire stock from Kenosha.

Yard near Monterey, Janesville, Jan. 25 '53.

n2tf

GEO. J. & S. H. KELLOGG.

AZTALAN NURSERY.

THIS Nursery is now well stocked with choice Fruit Trees, Shrubs and Vines.

The stock of Apple Trees of choice varieties, is large and complete.

The stock of Pear and Plum Trees small; comprising only the most hardy of the choice varieties.

Persons ordering trees can rely upon being fairly dealt by, and will get no trees but those which have proved good in the West, if the selection is left to the proprietor.

J. C. BRAYTON.

Aztalan, Jefferson Co., Wis.,
March 1st, 1853. }

EGGS FOR SALE.

THE SUBSCRIBER offers for sale, Eggs which may be relied on as pure and fresh, carefully packed, put on cars and directed as desired of the following varieties, viz: Brown, Perly or Diminico and White Shanghaes, Gray Chittagongs and Black Cochins, Dorkings, just imported from the town of Dorking, Surry Co., England, at \$3 per dozen. White Dorkings Chitterpratty, a new variety that never sit. Shanghae and Dorkings $\frac{1}{2}$ and $\frac{1}{4}$ and Seabright Bantams, at \$2 per dozen.

M. FREEMAN.

Schoolcraft, Mich., March 15, 1853. 5n5



WAUKESHA COMMERCIAL NURSERY.

THE Subscribers offer for sale, this season, a fine assortment of Fruit Trees, comprising the best now cultivated. They are very thrifty and will be sold at wholesale or retail, for cash or approved credit, at reasonable prices.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruit, to merit the confidence of his friends and the public in general.

All orders accompanied with cash or satisfactory references will be promptly attended to, and trees will be packed and forwarded without delay. We will give cheerful and prompt attention to all post-paid communications requiring information, &c.

D. VAN KIRK, & CO.

Waukesha, January 1, 1853.

NURSERY BUSINESS.

FRUIT & ORNAMENTAL TREES

FOR sale at Janesville, Racine and Koskonong Nurseries, Wis. The proprietors are now enabled to offer to the public, a stock of trees heretofore unequalled in the West. Remarkable for their hardiness, vigorous growth, and adapted to our western climate; embracing fruit trees of every description. Apples, Dwarf Pears, Plums, Cherries, Flowering Shrubs, Bulbous Roots, &c.—comprising all the most popular sorts now in cultivation—and having devoted their personal attention to their propagation and rearing, feel warranted in recommending them to the confidence of the public. Nurserymen, Dealers and Planters are respectfully invited to call and examine for themselves. All pre-paid orders containing a remittance or proper reference will receive prompt attention addressed to,

E. B. & J. F. DRAKE, Janesville.

F. DRAKE, Racine.

Janesville, January, 1853.

WISCONSIN GARDEN AND NURSERY, On Gardner's Prairie, town of Spring Prairie, Walworth Co.

THE Subscriber takes this method to inform his patrons and the public, that he may still be found at the old and well known establishment, at which he offers for sale the coming spring, over Forty Thousand Apple Trees of a fine size and from five to seven years from the graft. Sound, healthy and stocky trees at 18 cents each. Also Pears, Plums, Peaches, Cherries, Quinces, Grapes, Currants, Gooseberries, Strawberries, Raspberries, &c., at prices to correspond to the times. Of the ornamental, a large assortment of Shade Trees, Shrubs, Flowering Plants, Hardy Roses, Bulbous Roots, Dahlias, a choice assortment. Green House Plants, any quantity. Ever Greens; Spruces, Firs, Pines, Cedars and in fact almost every thing usually to be found in such an establishment. The fruits have been selected with great care as regards quality of fruit and hardiness of trees. The Nursery is located on the open prairie with a northern exposure. The land has never been manured and consequently the trees are perfectly hardy. Trees taken from this Nursery seldom fail to grow in transplanting. All are invited to call and examine for themselves as the Subscriber hopes from long experience and strict personal attention to merit a continuance of public patronage.

N. B. All letters of inquiry sent to Burlington Post-office will receive prompt attention.

Catalogues Gratis at the Nursery, and by mail post-paid. JOHN BELL.
Wisconsin Nursery, January 1853.

THE GROVE NURSERY AND GARDEN.

LARGE Budded and Engrafted Apple Trees, with fine heads, at 15 to 25 cents each, or \$15 per 100—Average sizes, by the thousand, \$100 to 140. Plums and Quinces—a good supply, at 25 to 37½ cents each. Pears and Cherries—a small stock at old rates. Ornamental Trees, Flowering Shrubs and Plants, in great variety, and the lowest prices, in lots, principally of our selection. These last furnished to dealers on commission. Address,

J. A. KENNICOTT.

Northfield, Cook Co., Ill.

The New Edition of LAPHAM'S POCKET MAP

OF WISCONSIN, showing the surveys of the Menomonee Lands, &c., may now be had at the bookstores, or by application (accompanied by the cash) to the undersigned. It will be sent by mail to any address upon the receipt of one dollar. A liberal discount made to dealers.

I. A. LAPHAM.

Milwaukee, January, 1853.

WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V.

JANESVILLE, WIS., AUGUST, 1853.

NO. 8.

PUBLISHED ON THE FIRST OF EACH MONTH, BY
MARK MILLER.

TERMS:

50 Cents a Year in Advance;

Five copies for \$2, if directed to one Post Office, and at the same rate for a larger number. All subscriptions to commence with the volume. Back numbers supplied to new subscribers.

ADVERTISING;

One page per year, \$50. Half page, \$30. Quarter page, \$15. Eighth page, \$10. One square, (twelve lines or less), 1 year, \$0.50. (Less than one year,) for first insertion, \$2.00. For each subsequent insertion, 50 cts. And at the same rate for a larger amount.

[7] These terms will be strictly adhered to. The circulation of the FARMER is large, and the amount of advertising limited; which renders it a more valuable medium for advertising than if a larger space was appropriated to this department.

Prospects of the Season &c.

According to present appearances the prospects to the Western farmer were never more propitious. The prices received for his products, raised the last season, have furnished him a fair income, and the fair promise of the present season's being one of the most productive of a long series, has entirely changed the condition and prospects of our agriculturists. A year or two since, and it required more than common faith in the old promise of seed time and harvest, to hold out either in works or in credit. Many had become discouraged and others embarrassed, and their lands encumbered. But the last year's operations have put things somewhat to rights, and the present will about perfect the matter, when our farmers will doubtless be on the high road to wealth, and, we hope, to honor.

The accounts which come in from all parts of the State and other portions of the country, indicate an unparalleled rapidity of growth and weight of crops of all kinds. Corn the most reliable staple product of this re-

gion, though planted late, looks finely and never was clothed in a richer green. The same may be said of the vast wheat fields, which literally stand dressed in "living green." Potatoes, also, and, in fact, about every kind of crop and of fruit—even those kinds concerning which there has been much doubt heretofore, are now all promising finely.

The farmers, of course, are all in good cheer, and wear very smiling faces. A long, sour face—always so unbecoming nature's noblemen—now seldom disfigures their countenances, unless they have departed from their legitimate and heaven appointed calling and been dabbling in *Stocks* instead of *stock*. As a matter of course, the whole kingdom of men, women and children, ~~are~~ happy; for when the great substratum of all classes feel the glow of joy, it soon permeates and leavens the whole adherent mass.

Well, we say, farmers! rejoice and be exceeding glad. No class of men has a more legitimate right to take pleasure in the prosperity which attends their efforts, than the *subduers* of the soil. They were the *first* class of men created, all others are mere derivatives, and they are entitled to all the rights, privileges, honors and dignities pertaining thereto,—to quote from the old diploma—*is fructu contulit omnia et singula privilegia, honores, atque dignitates qua ubique gentium ad eundem gradum pertinent*. They are the class alone who, although, perhaps, altogether too unconsciously, have been strictly obeying the first command given to man by his Creator—to subdue the earth. How just

and proper is it then, when he has subdued the few or many acres, which have come to his hands, and has long and devotedly been waiting for the early and latter rain,—for seed time and harvest, and now sees the green fields waving their heavy locks and smiling under the genial influence of his plastic hand, for him to rejoice! Again, we say, yeoman! rejoice, and while your song of rejoicing sweeps over the broad fields and beautiful prairies now so beautiful—all decked as a bride for her husband—consider well how you may properly improve the boon so soon to be bestowed upon you. Never think of adding to your already too numerous acres, but rather think of curtailing them. Lands are bearing a good price. Now is a good time to sell. Seize upon the opportunity, and with the proceeds pay off all those old, accumulated scores, and *square up*. Improve the remainder of your farm, now of proper size, by erecting better farm buildings, and better fences, by introducing upon your farm better stock and better farming implements, and a better and more thorough mode of culture, by sowing a greater variety and better kinds of seed. Above all take two or three of the best agricultural papers, study their contents, and write for their columns. Teach your sons the true and the enlightened mode of agriculture, and educate your daughters to the proper management of domestic affairs, and instill into the minds of both, a love for rural pursuits—a love for their homes and their country and their calling, by showing them, in your own persons, how great, how good, and how worthy of esteem a farmer and his wife can be.

Thus shall your present rejoicing be greatly enhanced as the future rolls on, whether the fruitful season, be often or seldom repeated, and you will find yourself becoming a wealthier and, with all, a better man. †

OREGON.—A Rev. Mr. Yantis, who went to Oregon last year, thus writes to a friend in Missouri:—

"Another charm this country possesses over any other I have known—you can sow your wheat at any time from June to March, with certainty of a crop of from 20 to 35, and even 40 bushels, which you can harvest without haste and without fear of damage from a rainy spell, and then you can sell every bushel at from \$1.50 to \$3 per bushel. Potatoes here are at home; never saw such any where, from 150 bushels to 300, and even more, are expected from an acre; they are now selling here at \$2 per bushel. Turnips are finer, both as to size and quality, than I ever saw—what would you think to see a man give \$1 for a bushel, and to save trouble of measuring, take two turnips for his bushel? I have not seen this, but I have no doubt it has been done. I have given a dollar for three cabbage heads, and made better bargains than I have made in Missouri at five cents a head. Suffice it to say, I have never seen a country where the productions were so abundant, where the laborer was so richly recompensed for his toil, or where it was so easy to live and thrive."

AMERICAN TANNERIES.—The capital invested in the tanning business in this country, is estimated at nineteen millions of dollars. There are about six thousand five hundred tanneries in the different States, which turn out annually at least two millions of dollars. Add to this one and half millions of hides, imported every year, and we have some idea of the leather business in the United States.

THE LABORING MAN.—Mark the laboring man, who breakfasts at six, and then walks, perhaps, two or three miles to his work. He is full of health, and a stranger to doctors. Mark, on the other hand your clerk, who takes tea and toast at eight, and goes to the store at nine o'clock. He is pale and effeminate, full of sarsaparilla and patent medicines, and all sorts of wash. What a pity it is they don't lay down the yard stick and scissors and take up a more manly occupation. By remaining in their present occupation they only help to fill up cemeteries.

LARGE SHEEP.—Aaron Riley Esq., Aurora, Erie county, New York, sends us three rolls of wool, taken from a Bakewell ewe, four years old belonging to James Bicknell of that town, 32 inches in length.—Mr. Riley says, "Mr. Bicknell has 200 sheep of the Bakewell breed; has now three ewes one of them two years old, another four years old, and the other seven; their average weight will probably exceed three hundred pounds each, neither having been weighed for sometime; the four year old weighed last season 330 lbs.; she has a most beautiful snow white fleece, which hangs in over ten thousand rolls, as naturally grown, with an appearance as though it came from the machine. From this sheep I saw taken to-day the enclosed three rolls, thirty-two inches in length. As a matter of curiosity, I put a cord around her, and to my surprise she girted around the body and wool, near the fore legs, with a reasonable tight line not pressing the wool, nine feet and three inches. The seven year old sheep has, as counted, eight thousand two hundred similar rolls, with an average length of from 26 to 28 inches. The two years old is of a more beautiful white; her wool is of great length, but does not seem to grow in rolls as the others. These sheep Mr. Bicknell will have on exhibition, at the World's Fair in New York in May or June, next" [Journal N. Y. S. Ag. Society.

Stooking Grain.

The protection of wheat and other grain from the rain, while remaining in the field, is a matter of great importance. It should be well put up until thoroughly dried for the stack.

There are various ways of stooking grain for the purpose of keeping the sheaves dry and exposing them to the air for preparing them for the stack. The best way for making the stook is to first cluster six sheave together in an oblong form, with one at each end, in a perpendicular position, then cap the whole with two sheaves tied near the butt, with the stubble end uppermost—then spread out the straw, forming a thatching over the heads of the standing sheaves. Caps thus formed can be easily

taken off in good weather and replaced in case of rain. Grain stooked in this way may stand for weeks without receiving any material injury from exposure to storms.

Another and more expeditious method, is to make the stook round and cover with two sheaves, broken in the center and laid in the form of a cross—spreading out the ends so as to form a perfect shield from storms.



In Sweden an effectual way is practiced of keeping sheaves dry and exposing them to the air, as represented above. A pole is smoothed and tapered, and the butt end thrust into the ground to make it stand firm. One sheaf is then impaled upon it with the butt-end standing on the ground. Others are then spitted upon the stake at the bands above each other till the stake is full. The inclination of the sheaves with their heads downward, throws off the rain.



Improvement in Making Kettles.

The above engraving is a vertical section of an improvement in kettles, invented by S. W. Hoard, of Providence, R. I. The improvement relates to making the kettle in such a manner that the heat, while the kettle is on the stove or furnace, will be applied to nearly the whole outside of the water. As kettles are commonly constructed, the heat is applied to only a small portion of the outside. Above the bottom D, is a flange cast on a kettle of hollow ware, brazed on a copper kettle, or soldered to a tin kettle. The kettle otherwise is the same as any other in use. The space, *f*, is hollow and open, so as to let the heat of the fire pass up between the flange, D, and the out side of the kettle containing water. If the flange, D, is soldered, as in a tin kettle, the water will have to be kept at the horizontal line above the spout, but if it is of hollow ware (cast iron) it need not be above the apex of the conical flange. If this kettle is placed on a stove opening, which is of a larger diameter than the bottom, it will be readily seen how the heat will pass up and circulate round a great outer portion of that part of the kettle containing the water, so as to boil the vessel much sooner. When such a kettle is placed on an open furnace, the same effect is produced, as the heat from the charcoal fire will be compressed, as it were, around the portion of the kettle contain-

ing the water. The flange, D, may be cast on a stove to effect the same object; this embraces the same principle, but is not shown in the engraving.

[Scientific American.]

MILK AND OIL FOR WOOL.—A mixture of milk and oil for preparing wool for spinning, is now used in some of the principal English manufacturing establishments. In the United States, rectified *rosin oil* is found to be a valuable substitute for other oils for this purpose. It is afforded at much less expense, is said to answer the purpose equally well, and has less inflammable tendency than some kinds.

A table prepared from the last census returns in Lower Canada, shows that there are 95,823 occupiers of land in Lower Canada, of whom 14,477 have but 10 acres or less each—17,521 families have from 20 to 50 acres each—37,863 families hold each 50 to 100 acres—18,629 families hold 100 to 200 acres each—and there are only 4591 occupiers of more than two hundred acres, this latter class including many seigniors. [Montreal Sun.]

FARM ACCOUNTS.—No person can become a thoroughly skillful and successful farmer who does not keep accurate accounts of all his farming operations, that he may know precisely the amount of profit or loss on each of his experiments, and consequently which to adopt in his future movements. It is true, he may by shrewd guessing and a keen memory, form some estimate of the crops; but to comprehend accurately at a glance, the precise amount of expenditure through all the multifarious operations of a whole season, for even a single crop, would be almost as difficult as to undertake to decide, by means of the memory solely, the profits of a bank or railroad, and to divide the proceeds by guessing, among the stockholders.

The first weeping willow in England was planted by Pope, the poet. He received a present of figs from Turkey, and observing a twig in the basket ready to bud, he planted it in his garden, and it soon became a fine tree. From this stock all the weeping willows in England and America originated.

Barry's Improved Elliptic Spring Joint

The annexed is an engraving of an elliptic spring joint invented by S. S. Barry, of Brownhelm, Lorain Co., O.

This joint requires neither bolt nut, or pin, or any other appendage to keep it in place, the construction of the joint is such as will permit a full and easy motion to the spring without liability to wear, become loose, or get out of repair.

The springs can be taken apart when necessary simply by compressing them in the centre, then raising the lips (C) and from the tongue (B.) They are replaced by again compressing the springs when each joint will be again clasped in place as before. It will be readily seen that the action of the spring permits the joint to work laterally in a slight degree and thus prevent the cramping and breakage of the steel in case of unevenness of temper.

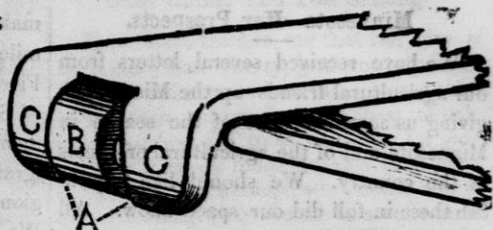
THE PUBLIC LANDS.—Recent statistics show that while we are pushing and striving for more room, we have more than a thousand million acres that we never use. The total amount of unsold and unappropriated lands in all the States and Territories is 1,387,534,001 acres, or more than fifty acres a piece for every man, woman, and child in the Union.

GEN. WASHINGTON'S FARMS.—According to the schedule annexed to Gen. Washington's will, he owned at the time of his death, in farms of various sizes—

40,622 acres of land in Virginia,	
1,149 " " Maryland,	
234 " " Pennsylvania,	
1000 " " New York,	
2,051 " " N. W. Territory,	
5,000 " " Kentucky:—	

Making in all, 51,056 acres. His lands in Maryland consisted of a farm in Charles county, of 600 acres, and one in Montgomery county, containing 549 acres.

WOUNDS ON CATTLE.—The wounds of domestic animals are easily cured with a portion of the yolk of eggs mixed in spirits of turpentine. The part affected must be bathed several times with the mixture.



From the Weol Grower.

Stock—Raising Calves.

In my judgement, after looking the country over, the short-horn Durhams are the most profitable cattle. Hence I tried them, and my experience confirms this belief. I have a grade of cattle which I esteem very highly, and think they are able to compete with any class in America.—They are a cross between the Short-horns and the imported Holland; they are varied in color, including all the colors of the Short-horns and of the Dutch, being black, blue and spotted. My stock number in all about forty, several good thorough bred Short-horns among them. I wish some of our stock men—good judges of cattle, would call and see mine, and be frank to let me know whether I am doing right or wrong, as I am a beginner.

I had the curiosity to weigh four head the 27th of last month. They were in fair store condition, and weighed as follows:

Bull, "Major," Short horn	2350 lbs
Cow, "Lady Barrington," do, imported,	1465 "
" "Lady Mar," Grade,	1450 "
Calf, "Bouncing Betsey," do, 13 mo. 5 d. old,	1020 "

I should like to know where I could see a heifer of the same age which would weigh as much

I have, I think a good and cheap way of raising calves. I let them suck but once or twice and feed new milk till one month old. I then commence mixing skim milk, warmed with new milk, while I take oil meal and middlings one-half each, and put in a little at first, and increase as I think they need, say from a gill to a pint each. I think my calves do not cost me over one cent per day, or the price of half a pound of butter per week—besides the skimmed milk they ought to have. I am now raising twelve calves; they look well, and last year I had good success in this way, and took premiums at town and county Fairs, over calves fed on new milk. I might sell my bull, Major, if a purchaser desired him.

D. McHARDY.

Minnesota—Her Prospects.

We have received several letters from our agricultural friends up the Mississippi, giving us some account of the season in Minnesota and of the agricultural prospects of the country. We should like to publish these in full did our space allow. All doubts regarding Minnesota's being one of the most promising districts for agricultural and even other pursuits, are now dispelled by the experiments which have been made. With fruit, however, there may be less certainty, as the experiment with regard to that, from the circumstances of the case, has not, as yet been completed. So lately has the country been settled that it has not been determined what will be the effect of its climate on the growth of fruit. We do not, however, fear in the least with regard to the matter. With regard to many crops, the seasons are earlier there than we had supposed. They had new potatoes on the fourth of July, and were expecting corn of sufficient advancement for use in a few days. The quickness of the season must be favorable to several kinds of fruit. The soil is said to be peculiarly adapted to bear either a wet or dry season. This may seem paradoxical to Eastern farmers, but it is remarkably true respecting most of our western soils. Minnesota, though so very lately the home of the red man, is even now blossoming under the hand of civilization and is destined, beyond all question, to be one of the wealthiest as well as one of the best agricultural States in the Union. The tide of Emigration to that region and the advancement of the country are equally astonishing. And, what is of immense importance to the future of Minnesota, it is the best class of inhabitants who are going there. Not only enterprising, but intelligent and refined families are not only looking to Minnesota for their future home, but are even now taking up their residence there. A steamboat is now

making its trips four times a week, thirty miles above the Falls of St. Anthony. Five years ago, a steamboat scarcely reached St. Paul once a year, except on government business. Let all, who think of emigrating farther West, and their name is legion, look well to Minnesota and Iowa. We hope often to hear from our agricultural friends in both of these regions. We are happy to know that you are forming agricultural associations among you, and we trust Heaven will smile upon your efforts.

CONDENSED CORRESPONDENCE FROM MINNESOTA TERRITORY.

Groveland Nursery, Minnesota T., July, 1853.

ED. WIS. FARMER:—Last winter I chanced to meet with a No. of the "WIS. AND IOWA FARMER," at the office of the St. Anthony Express. It was the first I had seen, and it appeared to me just the thing for the Northwest.

I expect to go about soon among the farmers to gain facts in regard to transplanting and the prospects of fruit trees in Minnesota, when I shall be able, I trust, to do something for your paper.

At some future time I would like to furnish your readers with some statistics &c., of farming in this beautiful Territory, which is destined to become a great agricultural country. At present every thing looks fine, and there is a prospect of an abundant harvest. The season has been quite wet, but our soil is remarkably adapted to either a wet or dry season. Every thing comes on much earlier than is generally supposed in your latitude. We had new potatoes in market on the fourth inst., and in a few days there will be green corn. Our first frost generally comes about the last of September, and for two seasons out of three, during my residence here, vines have not been killed until away into October. In short this is to be a fine country if we can

raise good fruit, the greatest luxury of any and all countries.

L. M. FORD.

REMARKS:—We thank friend Ford for any efforts he may make in behalf of the Farmer, and shall be pleased to receive from him any statistics relating to agriculture and Horticulture in Minnesota. We have already a respectable list of subscribers in this new Territory, with a fair prospect of soon having it doubled and trebled.

Northwood, Minnesota T. June. 1853.

FRIEND MILLER:—I have raised "dent corn," planted here on the 15th of June. My experience teaches me to get all my seed planted in May. Our fall frost commences generally about the 29th of September.

My location is thirty-five miles above St. Paul, on the Mississippi, about 26 miles above the Falls of St. Anthony. If there are any seeds we have, or that I can procure for you, from members of our Society, do me the favor to write me, and you shall have them gratis. The steamboat "Gov. Ramsey" passes the house regularly four times a week, and I can easily send to you. I have just broke up a piece of $6\frac{1}{2}$ acres rich sod, harrowed it twice, sowed $3\frac{1}{2}$ bushels of oats to the acre and harrowed them once; I seed heavy by way of experiment. I think the ground will be better for working next year. I soaked my wheat in strong brine, and rolled in ashes as you proposed in an old "Farmer," and it came up finely. I have $8\frac{1}{2}$ acres in wheat—balance in corn, potatoes, peas, beans, buckwheat, oats, &c.,—about 35 acres only—shall break about 30 acres more next year, if the crop does well this year.

The Surveying party to the Pacific, have been passing in detached parties for the past three days. I could write half a dozen sheets, but I fear it will not be acceptable.

O. H. KELLEY.

REMARKS:—Friend Kelly will accept our thanks for his kind invitation and tender of seeds.

Post timber and Post Setting.

Experience teaches me that red elm is far better than cherry, butternut quite as good as red elm, and sassafras better than either, even as good as the best of oak. Oak crotches are most desirable for gate posts, as they are more durable than plain straight timber, because more dense and of firmer texture; they should be set of course with the butt in the ground. These make lasting gate posts, and the larger the better. I have become satisfied that the oak of the same comparative size, and cut at the same time, which bears the sweetest acorn, is the most durable. Red or black oak is less durable than white oak, and white oak less durable than burr, I think sometimes called swamp oak, but grows on high timbered land. And with the contrast we find in the fruit of the white oak alone—some yielding sweet fruit and others much less so—the same difference may be observed in the durability of each.

There has been a mistaken notion that posts will last longer in sandy land than in clay. In such earth which is most porous, timber or wood will rot soonest, (sometimes called hungry soil,) and upon such soil, any material put upon the surface around the post to seclude that part of the post under ground from atmospheric action gives it durability.

W. H. ROWE.

[Michigan Farmer.]

RAISE GOOD STOCK.—Let us look for moment at the raising of stock for our market. Does it cost any more to rear for sale a good colt, than it does a poor one? Probably not five dollars more. The poor animal is a drag in the market at from \$60 to \$75, while the other commands readily from \$100 to \$200. Good horses are and ever will be in demand, are and ever will be sources of profit to the farmer, in a grazing district. But good horses will not come from poor stock and neglect. Constitutional peculiarities, family traits of health, strength, endurance docility, &c., follow physiological laws as surely here, as in the human race. If then the farmer would get profit from his horses in the market, he must make them enough an object of attention, that he shall raise only from good stock and due regard to the laws of animal physiology.

[Granite Farmer.]

Poultry

There seems to be no branch of domestic economy less understood than profitably raising poultry. When we say profitable 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 it; 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 had some little experience in the "henery," and have found a great secret in getting a supply of eggs through the whole season, but in not driving the hens up hill, or in feeding them exclusively on gravel, or in supplying them 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 crowd-

ed 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.]

PROTECTION AGAINST THE BEE MOTH.

The frequent and serious injury caused by this pestiferous insect, has deterred many persons from entering into the business of raising bees, as in some localities the ravages have been so great as to destroy both bees and honey. The plan is this: split joints of cane through the center and arrange them on the four sides of the hive, with the split side resting on the platform. The moth, instead of depositing its eggs under the hive, will lay them *under the split cane*. From these depositories, they may be removed and destroyed as often as necessary with little trouble. A friend informs us that he knows the plan has been tried and found entirely successful. [Mo. Trib.]

PRICE OF CATTLE & PRODUCE.—Wm. Anderson, Ann-Arbor, Michigan, writes: Cattle are high with us, and rather scarce withal. Store hogs are worth \$5 per cwt. alive, and scarce; cattle and swine have been picked up by drovers for the Eastern market, but soon as the Canada railroad is finished to Detroit, the West will send to Eastern markets large quantities of beef, pork, mutton and fowls; the Eastern farmers are unable to supply the demand of citizens with meat, they are compelled to draw upon us for large quantities of live stock. I am more in the sheep line than cattle. I grow the blue stem wheat; it weighs, with me, 64 lbs. per bushel, and when cut as soon as out of the milk, cattle eat the straw, if well saved, almost as well as hay. The only fault I have with blue stem, the straw grows too large, and apt more or less to lodge, although the straw is stiffer than many other kinds of wheat." [Journal N. Y. S. A. Society.]

For the Wisconsin & Iowa Farmer.

Cultivation of Red Clover.

MARK MILLER ESQ.—As the question is often asked amongst the farmers of Wisconsin—"Can red clover be profitably raised on our openings?" I beg leave to state, through the medium of your paper, the result of a trial I have made in seeding with clover. In the spring of 1851, I sowed a bushel of clover seed on about ten acres of land—sowing it at the same time to spring wheat. The clover came up very evenly and grew finely. The wheat was Hedgerow, which shared the fate of most of that variety that season—it rotted in the head, so that I harvested but a small portion of the piece. It was very stout and lodged badly. Where it was not down I cut it, and took it off for fodder. The portion down, I did not meddle with.—The effect was—where the wheat was left on the ground, the clover, the next spring, had mostly disappeared; where the wheat was taken off, it stood well, being probably about one-fourth of the piece well seeded.

In the spring of 1852, I did not turn into it, but left it to see what it would amount to. After the seed had matured, I think in August, I turned my hogs, calves, and colts into it, about fifty head, and fed it close all the rest of the season, and this spring the clover of last year is up and headed; but what is surprising to me, the whole piece is completely seeded with red clover, as thick as it would have been, had it received a new seeding equal to a bushel of clear seed to the acre. This to me, is entirely new, never having witnessed a similar result from feeding clover lands at the East, where I successfully raised that kind of grass for over twenty years.

I find by examination, that wherever the animals feeding that lot, had access to, the seed had been scattered and is now making its appearance in other fields, kept for pasturage, which have never been plowed.

This trial, (for this is the first I have tried the seeding with clover in Wisconsin, satisfies me that our soil is well adapted to the raising of clover and as soon as our farmers adopt the system of raising clover for pasture, we shall be able to compete with any State in the Union in raising stock of all kinds—one acre yielding three times the quantity of food for pasture in clover, that it will left to the native grasses, and lasting, too, late in the fall, when the other has entirely disappeared, and enabling our farmers to have their stock in much better condition at the commencement of winter, than they can otherwise do, and save four or six weeks' foddering. For the purpose of removing the impression which I know exists against the profitableness of cultivating clover in Wisconsin, I send you the foregoing statement,—confidently believing, if the farmers of Wisconsin, will generally and immediately commence the cultivation of clover, that they will find the value of their lands rapidly increased thereby.

HIRAM BARBER.

Juneau, June, 1853.

For the Wisconsin & Iowa Farmer.

FRIEND MILLER.—I have noticed in your Farmer, a number of articles, urging the farmers to improve their swine. I have long since been deeply impressed with that fact. The superiority of a fine blooded hog over the coarse, long snouted, long haired, long legged, grey hound breed, that most of the farmers raise in this country, should be more thought of. I have searched the country over to find some fine blooded hogs that would suit me. I have succeeded very well. I obtained a sow of S. B. Edwards, of Troy—a cross of the Suffolk and Leicestershire—she is a fine animal; also a boar—a cross of the Cheshire and China, which I obtained in Greenfield, Milwaukee County, and which was brought from Albany County, N. Y., by Col. J. C.

Crounse. The cross I have made between the sow and boar, will, I think, be a valuable breed. I have a litter of six pigs from her, which look very fine. The blood of the pigs are as follows:

One-fourth Cheshire, $\frac{1}{4}$ China, $\frac{1}{4}$ Suffolk, $\frac{1}{4}$ Leicestershire. The Cheshire breed (as you will see by referring to English writers on the hog) are the largest of any of the English breeds with one exception, (the Rudwick breed,) crossed as it is by my stock, I think it cannot be beat.

J. LANGWORTHY.

Richmond, Wis. May, 1853.

For the Wisconsin & Iowa Farmer.

Live and Dead Weight of Hogs.

EDITOR FARMER:—For the benefit of farmers I will give, through the Farmer, a little of my experience in determining the difference between the weight of hogs before and after butchering.

Nov. 8th, 1852, I weighed a pig 13 months old, alive, and found the weight to be

	265 lbs.
Weight after dressing,	224 "

Shrinkage,	41
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This pig was not first rate fattened.

Feb. 4, I weighed two others and found the following results.

One 16 months old—live weight, 324 lbs.

Dressed,	do 279 "
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Shrinkage,	45
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The other 2 years old, live weight, 424 lbs.

Dressed,	do 371
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Shrinkage,	53
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It will be seen that the one killed Nov. 8th, shrunk about one 1-6 and that the shrinkage on the other two was about 1-8 each.

F. B. COOK.

Johnstown, June, 1853.

When your hogs get sick, you know not of what, give them ears of corn, first dipped in tar and then rolled in sulphur.

Keeping Tires on Wheels.

As a general thing, in this section of the Union, when a tire is well put on to a wheel, it remains on it until the wheel is worn out. It is not unfrequently the case, however, that tires have to be reset, and as the following directions, which we take from the Southern Planter, although somewhat expensive, seems to be founded in reason, we give them to our readers for their consideration, and for them to put in practice if they see fit.

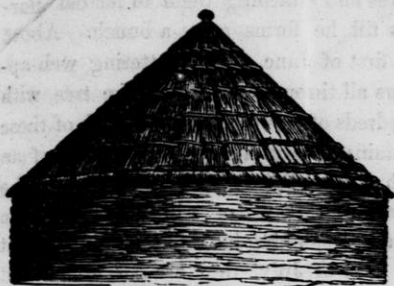
[Maine Farmer.]

"MR. EDITOR:—I wish to communicate to the public a method by which tires on wheel carriages may be kept tight. I ironed a wagon, some years ago, for my own use, and before putting on the tires, I filled the felloes with linseed oil; and the tires have worn out and were never loose. I ironed a buggy, for my own use, seven years ago, and the tires are now as tight as when put on. My method of filling the felloes with oil, is as follows: I use a long cast iron oil heater, made for the purpose, the oil is brought to a boiling heat, the wheel is placed on a stick, so as to hang in the oil, each felloe for one hour, for a common size felloe.

The timber should be dry, as green timber will not receive oil. Care should be taken that the oil be made no hotter than a boiling heat, in order that the timber be not burnt. Timber filled with oil is not susceptible of water, and the timber is more durable. I was amused sometime ago, when I told a blacksmith how to keep tires tight on wheels, by his telling me it was a profitable business to tighten tires; and the wagon maker will say, it is profitable for him to make and repair wheels—but, what will the farmer, who supports the wheelwright and smith, say?

T. H. BROWN."

The Paris Society for the Protection of Animals proposes prizes to all such coachmen, grooms, drivers, conductors, shepherds, wagoners, &c., as shall have "evinced a high degree of compassion, of mildness and of intelligent skill in the treatment of their animals." We should greatly rejoice to see such a society, and similar awards here. "A merciful man is merciful to his beast."



Stacking Grain.

If farmers would observe more care than they usually do in stacking their grain, a great saving would be made both in the quality and the quantity obtained. It is customary among the English farmers to protect their stacks from the weather by thatching—a stack with them is never finished without thatching with straw, well secured with rope made of the same material—as represented in the engraving above. The process of thatching is described in the Farmer's Guide somewhat thus:—Drawn straw is first laid upon the eave, beyond which it projects a few inches, and then in an overlapping manner upward to the top,—where the butt-end of a sheaf projects, it should be beaten in, and where a hollow occurs, a butt-end of a sheaf should be drawn out, or filled up with a little additional straw. In this manner the straw is laid all over the top of the stack. Before closing at the apex, a cap consisting of a small bundle of long straw, tied firmly at one end with a strong cord and cut square with a knife; the loose end is then spread upon the covering and forms a finish. The cap and thatching are then secured with straw rope.

The ropes are crossed over the crown of the stack, and are so arranged as to subdivide the top with equal triangular parts and their ends fastened into the side of the stack. The ropes at their crossing over the top, are fastened by a rope tied about them. The ropes which cross these are

either put on spirally from the top till they terminate at the eave, or separate ropes are put on in bands, parallel to the eave, and twisted round each crown-rope, at equal intervals of space, from the top to the eave-rope.

The ends of the ropes are fastened to the stack by pulling a small handful of straw from a sheaf a little out of the stack, and winding part of the rope around it; and the ball thus formed, is pushed through between the rope and the stack, which keeps the rope tight.

ITEMS FOR FARMERS.—Among the wonderful trees which the Creator and Sustainer of the World has adorned and beautified it for the benefit of man, is the Bread Tree, on the Islands of the Pacific, and the Cow Tree, of Venezuela, in South America, for supplying a part of the world with *bread and milk* from the forest. The bread tree rises to the height of thirty feet and attains to the size of a man's body, and the fruit grows to the size of a child's head. For food, it is gathered before it is ripe, and baked or roasted becomes a wholesome bread, with the taste of fresh wheat bread. The cow tree grows in rocky situations, high upon the mountains, and when its trunk is pierced, there flows from it a sweet and nourishing milk. It is tolerably thick, and free from all acidity, and of an agreeable and balmy smell.

Have an eye to the young pigs, when they first begin to eat slops from the dairy. Sour milk is apt to make them scour, and stint after their growth. Care to prevent the disease is cheaper and better than any remedy to cure it. Sweet milk is as much better for pigs, as it is for children.

[Plow and Hoe.

BUTTER.—Never buy it for its good looks. Taste it—smell it. Butter that is speckled with pinky spots, and has a milky appearance, will soon become rancid; for the reason that the butter-milk has not been thoroughly expelled.

GOOD ADVICE.—The sound of your hammer, says Franklin, at five in the morning, or nine at night heard by a creditor, makes him easy six months longer; but if he sees you at the gaming table or hears your voice at the tavern when you should be at work, he sends for his money the next day.

HORTICULTURE.

Blight and Insects.

FRIEND MILLER:—I would inquire through your paper, the best way to manage the *Blight* and a small worm that infests fruit trees in this section of country. For the last eight years I have been mostly engaged in raising an orchard. My delight is raising fruit and other trees—not to sell—but to adorn my own home, and I will give you my experience with the *Blight*.—

The *Blight* made its appearance here in 1848, in the tops of five or six trees,—the tops of the green shoots, in the first place, began to turn yellow and wilt, which run down to the trunk of the tree. In 1851 it was very bad, and I lost some trees entirely. In 1852 it was not so concentrated nor so violent, but scattered more over the whole orchard, which contains several acres. Some trees that have been affected one season, have not been touched the next, while it has continued on others every season from its first appearance. I have a row of apple trees on the north side of some Butternut and Black Walnut trees, which are shaded from the sun, and another row standing on the south side, where the sun strikes them. Those standing in the shade are the least affected. My very low, thick topped trees—that never had a limb taken off in the world—are not affected, while others, with tall bodies, and less top, have suffered badly. The closer you can get the top of an apple tree to the ground—according to my experience,—the better. I did not always think so. Almost all my low trees when the limbs lay on the ground bear every year. My orchard has been kept under a high state of cultivation.

There is a small worm that makes his appearance in the spring from his leaf house, as quick as the new leaves begin to start, and commences winding up more

leaves and attaching them to his old quarters till he forms quite a bunch. About the first of June, a fine scattering web appears all through the top of the tree, with hundreds of new tenements—each of these contains a worm about three-fourths of an inch long. By shaking the tree in the morning, this worm will make for the ground—spinning his web after him. About the first of July, they are all gone—but about the last of August, or first of September, they make their appearance again—wind more leaves to their old habitations or build more new ones on the newly extended branches, which are tenanted by a small worm that remains there through heat and cold, wet and dry—ready for his next spring's depredations. I have tried dry ashes in the morning without any effect. This worm works on both apple and plum trees. I wish some of our nurserymen, or some one else, would give a remedy for this worm.

Shopier, Wis.

B. E. MACK.

REMARKS.—The progress Mr. Mack has made in rearing an orchard out upon the naked prairie, unprotected—either from timber or hills—proves him to be a close observer of every thing pertaining to the cultivation of an orchard. His home is now embowered in the midst of one of the finest groves of fruit and shade trees, that is to be met with any where west of Lake Michigan—all the growth of about ten or twelve years. The butternut and black walnut trees now standing in his grounds, were raised from the seed planted by him—some of them have already borne fruit. Mr. Mack's example is worthy of imitation, by every prairie farmer in the West. No one can view Mr. Mack's place, and go away, without being impressed with the practicability of growing both fruit and forest trees in the most exposed situations upon our prairies. Every farm-house upon Rock Prairie, broad as it is, may, and should, present a like cheerful and homelike aspect.

*Rowles Jennet (Syn.).
Neverfail, Rockrummon
Jenneting, Janet, Ken-
tucky Jenneting.*

The description of J. J. Thomas, in the American Fruit Culturist, is as follows:

"Medium in size, roundish, approaching oblong, or obtuse conical, often oblique. Color, pale red, distinct stripes on light yellow ground. Stalk half an inch long; flesh nearly white, fine rich sub acid, fine texture, crisp, juicy, compact, about first rate. Growth slow; a profuse bearer with a portion of the crop knotty or under-size. Keeps through spring. Highly esteemed in the Ohio Valley; does not succeed further north. The blossom opens ten days later than usual, thus sometimes escaping spring frosts, and hence the name *Neverfail*."

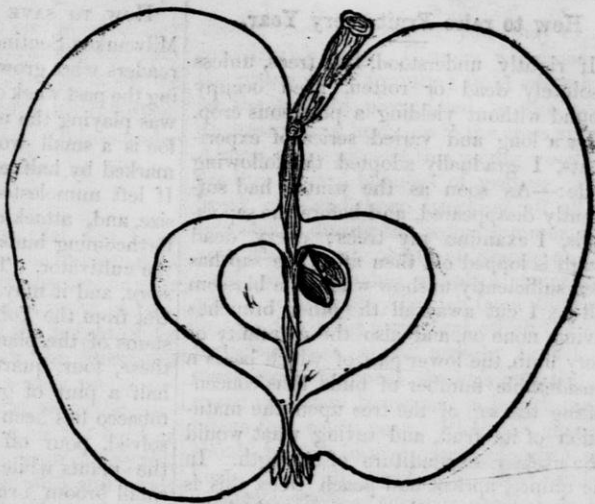
The above description I think incorrect in regard to the locality of the fruit. We are a long distance out of the Ohio Valley here. We raised our first crop of the *Jennet* last year, and have some specimens now, (June 20,) in a good state of preservation. The flavor is equal to any I have tasted further south, but are deficient in size—being about two-thirds as large as the specimen from which the above outline was taken, and which was raised on the Bureau Creek Bottom, Bureau Co., Ill.

The tree does well here, is hardy, and has a disposition to come into bearing at about eight years, from the graft when root grafted.

It seems to relish a deep rich sandy loam with a clayey sub soil.

Yours &c., J. C. BRATTON.

P.S. You made me say in a former



BOWLES' JENNET.

No. that the Perry Russet, specimen, from which the outline was taken, grew on a tree only two years old from the root graft. I wrote, or intended to write, *twelve years*.

J. C. B.

RAISINS.—Every body is fond of raisins, especially if they are of the finest quality, but every body, we suspect, does not know they are successfully prepared in this State, and we believe also in other parts of this country. The Horticulturist says:

"We have just received a box of nice raisins prepared from the Isabella grape, by Mr. E. A. McKay, of Naples, Ontario Co., who has one of the most complete little vineyards in Western N. Y. We have passed these raisins around among our friends, and they have invariably pronounced them *excellent*, some preferring them to the imported article. McKay informs us that they keep well, they certainly appear as though they would. Why may not this become an important branch of fruit culture? A very large amount of money is annually sent abroad for raisins. The matter demands attention."

FRUIT TREES.—A friend informs us that more attention is being paid to the culture of fruit trees, in Northern Wisconsin, than doing any previous season since the organization of the State. [Green Bay Adv.]

How to raise Fruit every Year.

If rightly understood, few trees, unless absolutely dead or rotten, need occupy ground without yielding a plenteous crop. After a long and varied series of experiments, I gradually adopted the following mode:—As soon as the winter had sufficiently disappeared, and before the sap ascends, I examine my trees; every dead bough is lopped off, then after the sap has risen sufficiently to show where the blossom will be, I cut away all the other branches having none on, and also the extremity of every limb, the lower part of which bears a considerable number of buds, thus concentrating the sap of the tree upon the maturation of its fruit, and saving what would be a useless expenditure of strength. In the quince, apricot and peach trees, this is very important, as these are very apt to be luxuriant in leaves and destitute of fruit. You may think this injures the trees, but it does not; for you will find trees laden with fruit which formerly yielded nothing. Of course all other well known precautions must be attended to; such as cutting out worms from the roots; placing old iron on the limbs, which acts as a tonic to the sap, &c. Try it, ye who have failed in raising fruit.

[Suffolk Democrat.]

PEARS ON THORN STOCKS.—The New England Farmer says:—"The present system of dwarfing fruit trees, which is said to be applicable to the pear as well as other varieties of cultivated fruits, removes in a great measure, the objections urged against the thorn, by nurserymen. It has generally been asserted, and no doubt truly, that while the scion of pears does remarkably well, and makes a rapid growth on the thorn, the latter is not large enough to secure a good sized and healthy tree. But in dwarfing the size is of a secondary consideration. Very productive trees are obtained by this method, and they are very generally preferred in consequence of their being less liable to injury from winds, more easily managed, and requiring far less ground. Thorn stocks also are easily obtained, whereas quince stocks and pear stocks are expensive and obtained only with difficulty, and from a distance, of those who grow them for sale, and at an exorbitant price.

HOW TO SAVE ROSES.—A writer in the Milwaukee Sentinel says:—Those of your readers who grow roses have perhaps during the past week observed that some enemy was playing the mischief with them. The foe is a small worm; and his presence is marked by half eaten and distorted leaves. If left unmolested he rapidly increases in size, and, attacking the young shoots and forthcoming buds, soon spoils the hopes of the cultivator. The remedy is tobacco and soap, and it may be prepared in this wise: Get from the Tobaccoist a quantity of the stems of the plant; pour on a handful of these, four quarts of boiling water; add half a pint of good soft soap. After the tobacco has been steeped and the soap dissolved, pour off the liquor and apply to the plants while the dew is on them—a small broom brush is a very convenient instrument for the purpose. Two or three applications will "do the business" for the worms. This remedy is a specific for the "green fly," which is so annoying to those who grow roses in-doors. It is also a very good thing to clear Dahlias of that triangular little villain, whose depredations have disheartened so many of the lovers of that fine flower."

STRAWBERRIES.—We are again enabled to record the beneficial effects of tannic acid applied to strawberries, and even spent tan, if partially decomposed so as to render the remaining portions of the tannin soluble, produces like effects. We last year planted a bed of Hovey's Seedlings, with an occasional plant of the Boston Pine, and covered two-thirds of the bed with a light coating of spent tan in the fall. The result is, that the portion of the bed to which the tan was applied is now yielding four times as much fruit per plant as the other part not so treated, while the beds to which we applied the dilute bark liquor two years since, continue to yield extraordinary crops and of superior size and flavor. A berry of Myatt's Eliza, pulled yesterday (June 7) measured four and a half inches in circumference, and although larger than the average, will give some idea of the general size, as compared with the same kind of strawberries differently treated. When bark liquor is applied to the beds, it should be diluted with one hundred times its bulk of water.

[Working Farmer.]

GRAFTING.—The *Lilac on the white Ash*—The *Currant on the hard and soft Maple*—The *Peach on the Plum*.—A correspondent of the Rural New Yorker, writing from Windsor, Ash't Co., Ohio—under the head of "MY EXPERIENCE IN GRAFTING"—says:

"I find by experiment, that the *Lilac* will grow, by grafting on the *White Ash*. Transplant a young and thrifty tree in your door yard—let it remain a year or two, until well started, then at the height of six or eight feet graft it with the *lilac*, and when in bloom it makes a very pretty ornamental tree. I find, also, that the *currant*, will grow by grafting on the hard or soft *Maple*. Transplant in your door-yard, (as directed for the white ash,) and graft with the red currant, and when they are ripe, they look very pretty and pleasing to the passers by. Be sure and not graft until the sugar water ceases to run, or they will fail to grow. Cut the scions from the last years growth, close to the ground, in March, and keep in a moist place until wanted.

I have several thrifty, nice plum trees in my yard, but the vexatious *Curculios* for a few years past have destroyed all the plums. I therefore concluded to change them into peach trees. A part of them I grafted a year ago last April, with the large yellow rare-ripe. They took finely; one scion grew last year to the length of five feet, and this spring looks most beautiful when in full bloom."

Grape Culture.

My plan of training the grape vine is this:—I place a row of posts the whole length of the vine eight feet high and two feet in the ground, three feet apart; across these I nail splits $1\frac{1}{2}$ inches wide and 18 inches apart; I lay a strong and long shoot of the vine, down in the ground about two inches deep, by the side of these posts, bringing it out against every post. Thus inlaid it produces young shoots against the posts, the best one of these I tie up to the post, the others I break off. The shoot thus tied up, must be broke off on reaching the top of the post, about every two weeks. Break off, also, all the small side

shoots, the next season you may expect considerable fruit. Clusters will come on the young wood, sprouting from every knot on the upright piece, (tied to the post,) tie these young branches to the cross splints. Almost every piece of this young wood will produce 3 or 4 bunches of grapes. Then break off—and keep breaking off all the side shoots during the entire summer, thus you may expect plenty of grapes, and of good quality, having supplied every post with a good healthy branch from the root; in the following spring cut off all the side branches from every upright branch, to make room for next spring's growth. A grape vine may be carried in length ten or fifteen feet every year. Plenty of manure should be dug in every spring (early,) and keep down all weeds, &c. Soap suds is excellent during summer, applied to the roots.

MATTHEW ATMORE.

[Michigan Farmer.]

Do not plant Trees too deep.

While enjoying the hospitalities of a farmer a few days since, in Worcester Co., he took occasion to show us his farm and garden. We observed some English cherry trees that were planted some three or four years ago that did not appear to be growing very thriftily. The thought occurred to our mind that perhaps they were planted too deep. We obtained a hoe, and on examination found our suspicions true.

The tree that appeared to be the most sickly, was planted more than a foot deeper than it should have been. The one that had out-grown all the others, was set more nearly as they all should have been. We no longer wondered at the unpromising appearance of his cherry trees. The marvel was that they looked so well, after having been buried alive, as it were, for so long a time.

Though the natural direction of the roots be downwards, they do not extend far below the surface of the earth, usually. They grow in a horizontal rather than a perpendicular direction. The summit of the roots, which connects it to that part of the tree or plant growing above the surface of the earth, is called the *Collum*, or neck. This, in planting trees should be placed near the earth's surface. [Amherst Ex.

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 ripened 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 method 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.

[N. E. Farmer.]

WORKING CABBAGE PLANTS.—If you have cabbage plants set out, see that they are regularly worked, and kept free from grass and weeds. There is no liquid manure that suits the cabbage better than soap suds. Occasional waterings will ensure vigorous growth, and destroy vermin. Dusting at intervals with plaster serves a good purpose.

SPECIAL MANURE FOR GRAPES.—The Committee at the exhibition of the Cincinnati Horticultural Society, reported that of the two specimens of wine, one from grapes to which a special manuring of potash had been given, the wine from the manured grape was "bright, clear and mellow like old wine." The other was declared to be less matured in all its qualities, nor was it clear. The grapes themselves from the two portions of ground were also presented to the committee. "Both were delicious and well ripened, but it was considered that those from the manured land were sweeter, and that the pulp was softer."

To Prevent Milk from Souring.

A correspondent of the Ohio Farmer gives the following plan:

"Agreeably to your request I will give you an account of my experience in the dairy business, with regard to preserving milk from becoming sour. We have kept from fifty to a hundred and fifteen cows for several years, and have milked seventy-two the past season. We strain the milk into a tin vat set in a wooden one, into which we pump cold water for the purpose of cooling it. Thus it is kept sweet until morning with very little trouble, when we strain in the morning's milk, which is warmed sufficiently by heating the water in the wooden vat. Thus we proceed until Saturday night when the milk is set and a curd made, which is kept until Monday morning and made into cheese. Sabbath morning the milk is strained into wooden bowls, which are painted inside and out with a thick coating of paint, smooth and hard, and set in a cool place on the cellar bottom, where it is kept sweet until Monday, when it is skimmed and made into cheese.

The result has been that we have not lost a bowl of milk the past summer. But milk in tin pans has sometimes soured. We formerly preserved it in tin pans by putting a piece of clean ice into each pan. The rest of the Sabbath may be enjoyed, and the practice of making cheese on that day be avoided."

Eggs.—Put the tongue to the larger end. If warm, it is fresh; or, put the egg into a pan of cold water—if new laid, it will sink immediately, and so, in proportion to its freshness. A rotten egg, like a body long dead will float on the top of the water.

Written for the Wisconsin and Iowa Farmer.

Chemistry of Plants. No. 2.

UPON WHAT DO PLANTS LIVE—FROM WHENCE COME THEIR MATERIALS—WHAT IS THE EFFECT OF PLANTS UPON THE SOIL ON WHICH THEY GROW, AND THE AIR IN WHICH THEY LIVE.

BY PROF. S. P. LATHROP, M. D.

In the present No. we will endeavor to render our readers familiar with the constituents of plants, which in the first number, we arranged under the two classes *organic* and *inorganic*. These we will take up in the order in which they were there mentioned and give a concise description of them:

I. ORGANIC CONSTITUENTS.

1. *Oxygen*, when combined with other bodies is an invisible air, having no taste or smell. A glass vessel filled with it has no other appearance than if empty. It has, however, very remarkable properties. If a lighted candle be put into a jar of it, it will burn with greatly increased brilliancy. If an animal be put into a vessel of it, he will breathe much faster and will soon be in a high feverish state, and ultimately die from *living too fast*, that is, from the excitement produced. Oxygen forms one-fifth of the atmosphere in combination with nitrogen, yet to be described. It forms eight-ninths of water in combination with hydrogen, of which we shall soon speak.

It is the most abundant body known, entering into combination with every other substance. It is the great supporter of combustion, or burning. There is no life of plants or animals without it. It is not only the means of life, but the great instrument of the decay of all bodies. When it combines with other bodies they are said to be *oxidized*. Iron *oxidizes* and iron rust is formed. When wood, or other carbonaceous substances are burned, they are *oxidized* and carbonic acid is formed. When milk or any liquid or mixture *sours* as it is called, it has *oxidized* or combined with the oxygen of the air. Bread, yeast, milk and cider, all become sour by *oxidizing* or combining with oxygen. Meat sours and decays by *oxidizing*. So of all the destructive processes going on around us. Wood when it rots, and iron when it rusts, and meat when it putrifies, are all undergoing the same operation. This, then, is a most powerful agent, though we cannot see it. Such is *oxygen*.

2. *Hydrogen*, in like manner, when com-

bined, is a transparent air or gas, without color, taste or smell. This is the lightest of known bodies, and because of this property, it is used to fill balloons. It differs from oxygen in not supporting combustion. When a lighted candle is put into a jar of it, instead of burning more brilliantly, as in oxygen, it soon goes out. Tho' not a supporter of combustion, it is itself combustible and will take fire by the candle which is put out by it, and burn with a pale blue flame. It will not support life though it can be breathed without injury. It is the basis of most all liquids, forming water when combined with oxygen.

3. *Carbon*, when not in combination, generally appears in a solid form, of a black color. Charcoal, soot, lampblack, and what is called blacklead, or plumbago, are almost wholly carbon. It sometimes becomes crystallized in beautiful transparent crystals of different colors, and these form the diamond, so much valued for its great beauty. Carbon does not seem at first to be very hard, and yet when in powder it will scratch glass. Though a very common substance in its various forms, yet it possesses some very remarkable properties. It has what is called strong disinfecting properties, which render it valuable in removing offensive odors, from liquids which are strained through it, making them pure and sweet. It is used on shipboard and in filtering cisterns for this purpose. It also removes the color from many liquids. It will preserve meats for a long time, as where they are smoked or buried in charcoal powder. It burns readily in oxygen, or in common air in which there is oxygen, and forms carbonic acid. The flame of our fires and the light of our candles and lamps all arise from the burning of carbon, of which they are chiefly composed, in the air. It is one of the principal ingredients in wood, sugar and starch, and forms an element of the flesh of animals.

4. *Nitrogen*, like the first two of these organic elements, is an air or gas, transparent, tasteless, and inodorous, except in the air, of which it constitutes eighty parts in a hundred; it is but scantily diffused in nature. It is entirely wanting in the mineral kingdom, and is found in the soil only when animal or vegetable substances are decaying in it. It abounds more in animals than in plants. Its great agency in the atmosphere seems to be merely to dilute the oxygen, and render it thereby a suitable medium for animals and plants.

Being incapable of burning, or of supporting combustion, it prevents the general conflagration which would occur in pure oxygen and also reduces its strength to the proper proportions for sustaining animal and vegetable life without bringing in any injurious or deleterious influences. Although negative in most of its properties, when uncombined, yet it forms, in union with other bodies, active agents.—Combined with oxygen it forms a strong acid, called Nitric acid, commonly aqua fortis. When united with Hydrogen it forms an air or gas of an extremely pungent odor, which is well known to all by the name of *hartshorn*.

"The proximate constituents of plants may be grouped according to the elementary substances of which they are composed, into two principal divisions. The first includes those vegetable substances which are composed of but three elements,—carbon, hydrogen, and oxygen; the second comprises those which consist of four elements,—carbon, hydrogen, oxygen and nitrogen. This classification possesses not merely a theoretical, but in an eminent degree, also, a practical interest, since very important conclusions are deducible therefrom, in relation to the food of plants, and the refuse matter engendered from them. The distinction upon which it rests, will be seen at once to depend upon the presence or absence of nitrogen. Hence the first group may be said to comprise the *non-nitrogenized* vegetable substances, and the second *nitrogenized* vegetable substances."

As Tables are always convenient for reference, we will arrange these in a tabular form.

TABLE I,

PROXIMATE CONSTITUENTS,

Non-nitrogenized substances.	Nitrogenized substances
Vegetable Fiber,	Albumen,
Starch and Sugar,	Caseine,
Vegetable mucous,	Gluten,
Gum and Dextrine,	Chlorophylle
Fat and Oil,	Vegetable Bases
Resin,	
Vegetable Acids.	

II INORGANIC SUBSTANCES.

1. *Potash*, is well known to every farmer as being the material which is obtained from boiling down the ley of wood ashes to dryness. When it is dried and combined with carbonic acid, yet to be described, it forms the common pearlash, or saleratus of the shops. Caustic potash of the shops is pure potash, and is so called because of its very caustic, or burning and corroding property. It is the basis of our

common soft soap, made by every farmer's wife.

2. *Soda*, nearly the same may be said of this constituent that has been said of potash. The two are much alike in many of their properties and in the purposes which they serve both as constituents of blands and of soils. It has the same caustic and burning properties, when pure, as potash. Soda is usually prepared from the ashes of marine, or sea plants, as potash is from the ashes of terrestrial, or land plants. Soda is used as the basis of the hard soaps. The soda and potash of commerce are generally carbonates—that is, soda or potash in combination with carbonic acid.

3. *Lime*, is known to every one in its usual form—that of quick lime. This when exposed to the air, however, soon unites with the carbonic acid of the atmosphere and becomes an insoluble substance, called by the chemist, carbonate of lime, which is our common limestone before it is burned. It is quite caustic when freshly burned.

4. *Magnesia*, is not so well known as lime, though it is quite an abundant material in the composition of the earth. The most common form is the calcined magnesia of the shops. This is a light, white and tasteless substance. Epsoms salts is another compound having in it, magnesia for its base. When freshly burned it has some caustic properties, though not to the extent of lime. It is a common ingredient in the limestone rocks of Wisconsin, as a carbonate.

5. *Oxide of Iron*, is well known to the farmer under the name of iron rust. There are two kinds of oxide of iron, but the one which is generally found in plants is our common iron rust, called by the chemist *per oxide of iron*—that is, a compound of iron with the greatest amount of oxygen, that can be combined with iron.

6. *Silica*, or silicic acid, is well known to the farmer by the name of *sand*, *flint* and *quartz*, or *rock crystal*. It constitutes nearly 40 per cent of the crust of the earth. It is very difficult to melt or dissolve. It is without taste or smell. It combines with potash, soda, lime and magnesia. When these combinations, which are called silicates, are exposed to the action of the air, heat and moisture &c., they undergo decomposition and their silica is separated from them in a soluble form. It is only in the soluble state, of course, that it can be taken up into the plant.

7 *Phosphoric acid*. This substance is not one that is often seen uncombined, by the farmer. It is formed by the union of phosphorus and oxygen. Most have seen phosphorus as exhibited in the shop of the druggist in round sticks which take fire very easily, even by the warmth of the hand. When these sticks of phosphorus are burned in the common air, it unites with the oxygen of the air and phosphoric acid is formed. It is sometimes seen when a match is first lighted, in the white fumes or smoke that rises before the sulphur of the match begins to burn. When phosphorus is burned in a confined portion of air, these white fumes will soon settle to the bottom, in the form of a white powder—this is phosphoric acid. This phosphoric acid forms a great many combinations, of which we shall speak further by and by. It is of great importance in vegetation.

8. *Sulphuric acid*. This substance is known to all by the common name of *oil of vitriol* and is formed somewhat in the manner that phosphoric acid is—by burning sulphur in the air. It is a very strong and powerful acid, and of great importance to vegetation.

9. *Chlorine*, (*muratic acid*.) This is not a common substance in a simple state. It is a yellowish green colored gas or air of a very pungent and somewhat offensive odor and greatly injurious to respiration. It is generally found in combination with other substances in nature, called *chloride*,—thus common salt is a *chloride of sodium*. Every 100 lbs. of salt contain 60 lbs chlorine. In combination with Hydrogen it forms *muratic acid*, the form in which it commonly exists.

10. *Carbonic acid*. This is a gaseous body and is very abundant in nature, and combines with many solid substances, forming what are called carbonates. It is itself a combination of oxygen and carbon, already described under Organic Constituents of Plants. It is the substance which gives the effervescence, or foaming to soda water, to beer and to all fermenting liquids. It is invariably present in the atmosphere, in greater or less quantities. In any very great amount it is injurious to animal life, but it is essential to the existence of vegetables. It is therefore a remarkable fact—that the Creator has regulated the quantity of carbonic acid, so that there is just enough for the necessities of the plant and not so much as to injure animals.

We will arrange these substances in a table for more convenient reference.

TABLE II.

I. Organic Constituents.	{	1. Oxygen, 2. Hydrogen, 3. Carbon, 4. Nitrogen.
II. Inorganic constituents.	{	Bases, { Alkalies. { Alkaline Earths. { Acids {
		{ 1. Potash, 2. Soda, 3. Lime, 4. Magnesia, 5. Oxide of Iron. 6. Silica (silicic acid) 7. Phosphoric acid 8. Sulphuric do 9. Hydro chloric do 10. Carbonic do

EDITOR'S TABLE.

A portion of our mail for July, unfortunately fell from the cart into a puddle of water, while on the way to the post office—completely spoiling a large number of packages. We were compelled to supply the loss by a reprint and new mail—hence the lateness of the July No. in reaching some of the subscribers.

ED FARMER.—If you or some of your correspondents will give a plan for a cheap poultry house in some succeeding number of your paper, and the probable cost of the materials, you will very much oblige,

A SUBSCRIBER.

REMARKS.—We are preparing cuts for a poultry house on an excellent plan, and will give it soon.

LITERARY NOTICES.—We have a budget of book and other matters to notice which must lay over till the next month.

WISCONSIN GAZETTEER.—We are indebted to the author, JOHN W. HUNT, of Madison, for a copy of this work. It is the first of the kind that has been published in this State and is a work much needed. It contains a mass of historical, descriptive, locative, and statistical information (with a map) in regard to Wisconsin—making it a most valuable source of information for every citizen and traveler. Mr. Hunt must have spent a deal of labor, and not a little of the ready in compiling and publishing this Gazetteer, and we bespeak for it a sale commensurate with its merits. Every keeper of a public house in the State, should have a copy of this book suspended in his bar room, for the accommodation of himself and the traveling public.

SALE OF SHORT HORNS.—Col. Sherwood's, sale of Short Horns took place at his residence near the city of Auburn, on the 8th of June. The herd consisted of 20 pure bred animals. About 200 spectators were present—sembled from all parts of the country. Before the sale took place, all in attendance, sat down to a sumptuous dinner provided by Col. Sherwood, and arranged on the main floor of his barn.

There were 18 cows, and heifers and heifer calves sold—averaging over \$250 each. The highest price paid for any one cow was \$525. There were 11 bulls and bull calves sold. The highest price paid was for Van Tempest, \$1,070; and for the youngest calf, three months old, \$90. Van Tempest was purchased by J. R. Robinson, of this State.

FINE CATTLE.—A few days ago a drove of cattle, numbering two hundred and fifty head, reached this city having been brought from Pike and Lincoln counties, Missouri, by land. Mr. McQueen informs us that farmers are rapidly settling up the country from the Iowa State line. [Minnesota Pioneer.

MINNESOTA.—Business in St. Paul continues to increase in activity as the season progresses. The prospects for abundant crops, is encouraging the heart of the farmer, the mechanic finds steady employment, the laborer is constantly occupied, the merchant is driving a good business, and the most skeptical have come to the conclusion that St. Paul is destined to be a city of vast commercial importance. [ib.

STATE FAIRS, 1853.

New York,	Sept. 20, 21, 22, 23
Michigan, at Detroit,	Sept. 28, 29, 30.
Vermont, at Montpelier,	" 13, 14, 15.
Pennsylvania, at Pittsburgh,	" 27, 28, 29.
Kentucky, at Lexington,	" 13 to 17.
New Hampshire,	Oct. 5, 6, and 7.
Wisconsin, at Watertown,	" 4 to 7.
Indiana, at Lafayette,	" 12 to 14.
Virginia, at Richmond,	Nov. 1 to 4.
Lower Canada Board of Agriculture	
Annual Exhibition,	Sept. 27 to 30.
Upper Canada,	Oct. 5 to 7.
Southern Central Agricultural	
Society, Augusta, Georgia,	" 17 to 20.
Ohio, at Dayton,	Sept. 20 to 24.
Maryland,	Oct. 25 to 28.
Illinois, at Springfield,	" 11 to 14.
North Carolina at Raleigh	" 18.
Missouri, at Boonville, in October.	

Ox YOKE.—Will J. P. send us a sketch of the ox yoke (though it be a rough one,) which he describes. We do not think the reader would understand how to make one from the description.

TRIAL OF REAPERS.—The Ohio State Board of Agriculture held an exhibition of Reapers and Mowers on the 6th and 7th ult. at Wooster, Ohio. Ketchum's patent cut its acre in 45 minutes—Manny's patent mower in 49 minutes, and Seymour and Morgan's in 31 minutes. The first premium (a gold medal of the value of \$50) was awarded to Seymour and Morgan's New York Reaper.

CRANE'S SELF MOVING POWER.—This is the most simple and ingenious motive power we have seen. It is designed for churning and for raising water from wells of any depth. The machine is small and light,—a medium sized machine, occupying a space about three feet by two, and from three to four feet in height, and weighs about one hundred pounds. The motive power is a weight, and so adjusted that a child ten years old can wind it up. The motion is so regulated by means of a pendulum, that in churning, from thirty to sixty strokes of the dash may be given per minute. The prices are, \$15, \$20, and \$25, according to size.

We see no reason why this machine cannot be used to great advantage, for the purpose of raising water from the deepest wells, at a small expense,—obviating a serious difficulty, which is felt in watering stock in many parts of the West. We hope soon to see one in operation in some of our deep wells.

DR. A. H. Platt, of Sheboygan Falls has the right for Wisconsin and Northern Illinois. He intends to sell a portion, and establish a manufactory at some eligible point to supply the rest. We are informed, Messrs Blair & Smith, of *Waukesha*, have commenced the manufacture of these machines for the supply of that county.

WAUSHARA COUNTY.—A correspondent writing us from Warshara county says:—"The winter wheat in this County (Waushara) looks well, the winter and spring have been favorable and it bids fine for a first rate crop.

The soil of this county is sandy, and from the experiments has proved to be productive, easy to till, and much smoother than much of the prairie portions of the State. And with a proper cultivation, will be one of the richest portions of the State!

LA CROSSE COUNTY.—The Democrat says of this county "We have seen in the short space of eighteen months, the town of La Crosse divided into some five or six new towns, with from 30 to 60 families in each town—we have seen the speckled trout caught from the pure spring branches of the La Crosse—we have seen hundreds of acres of the high farming lands in this County within the last eighteen months, inclosed by good substantial rail fences and now 'put in' to various kinds of crops."

EMIGRATION TO MINNESOTA.—The Minnesota Pioneer says: "The tide of immigration is stronger this season than ever before. Since the opening of navigation we have averaged a boat a day, and all have been crowded with farmers, who come among us to till the soil.—The Nominee brought fifty members of the Colony for which Messrs. Nutting and Nichols are the Agents: and the Clarion brought upwards of a hundred and fifty members of the Lake Minnetonka settlement. And still there is room!"

"The reports from the new settlements on the Cannon River, the Minnesota valley, Lake Minnetonka and Hennepin county, generally are encouraging. The erection of temporary buildings being completed, the settlers have turned their attention to the preparation of sufficient ground for a small crop this season. It is said that almost every person has planted, or is now engaged in planting a small field of turnips, &c. In a few cases a good field of corn and oats have been got into the ground by persons who have not been four weeks in the Territory. Them farmers will do."

TALL "CORN."—Mr. Joseph Walker, who resides a few miles below Henderson, on the Minnesota, and stands six feet two in his stockings, assures us that he has corn on his farm so tall that the leaves will reach above his head. That would be considered tall corn for the beginning of July, in almost any portion of this earth, except the valley of the Minnesota."

CALIFORNIA EMIGRATION.—Up to May 20th three thousand three hundred and forty eight men, nine hundred and five women, one thousand two hundred and seven children, one thousand three hundred and twenty wagons, thirty four thousand one hundred and fifty-one cattle, one thousand six hundred and ninety on horses, seven hundred and forty mules and twelve hundred sheep, had passed Fort Ker-

ney; and yet the bulk of this year's emigration, with their cattle and sheep had not passed. One California Company from Frankfort, Ky., have taken 400 head of cattle.

The increased receipts of cotton, over those of last year at this date at all the Southern ports, is set down at three hundred and forty-nine thousand bales.

IMMENSE LUMBER TRADE.—The Appleton Crescent says: "It is believed that 75,000 logs (equal to 25,000,000 feet of Lumber,) were cut upon the Wolf and Embarrass rivers during the past winter!"

About one hundred Germans are on the point of leaving their native land to settle in the town of Herman, Sheboygan county.

The editor of the Minnesotian is hopeful. He says: "We were at one time one of the only three white men residing within the limits of the present State of Iowa, which now has a population of over 400,000. In our beautiful territory we have made many trips between Prairie du Chien and St. Peter's and from St. Peter's to Traverse and des Sioux, when the hotels we lodged at were the open air, and our tables furnished with the supplies we carried, or from the game killed on the road. Yet with the blessing of God, we hope yet to travel in a railroad car on a continuous route from the Minnesota river to New Orleans, and very probably to San Francisco."

VALUABLE DONATION.—Richard Boylston Esq., so many years editor and proprietor of the Farmer's (Amherst) Cabinet, has laid the New Hampshire Historical Society, and, indeed, the public, under a perpetual obligation. He has presented the Society with forty bound volumes of the Cabinet, commencing October, 1812, and closing with May, 1852. This is probably the most valuable donation ever received by the Society from any one individual. No description of literary works are so good as ancient newspapers, from which to learn the "age and body of the times—their form and pressure."

[Concord N. H. Statesman.]

The Farmer's Cabinet is published in our native county, (Hillsboro, N. H.) and the first newspaper we can recollect of having seen or read—we still receive its weekly visits. Mr. BOYLSTON, its present proprietor, has conducted the Cabinet for more than half a century. Such industry and singleness of purpose, are truly rare in any business.

COMPENSATION OF POSTMASTERS.—One of the acts passed on the night of the 3rd of March, to establish certain post routes, &c., contains a section fixing the following as the commission of postmasters after the 1st of April

On a sum not exceeding \$100,	50 per cent
between \$100 and \$400	50 "
" \$400 and 2400	35 "
exceeding \$2400	15 "

Where the mail arrives regular between 9 at night and 5 in the morning, 60 per cent is allowed on the first \$100

Those officers whose compensation shall exceed \$500 are allowed one cent for every 'free' letter delivered out of their office, and each postmaster is allowed 2 mills for the delivery from his office to a subscriber, of each newspaper not chargeable with postage.

IRON PUMPS.—Much vexation and not a little expense is incurred by the users of this indispensable article, in consequence of the leather band encircling the upper box becoming worn out; obliging them to lay the pump aside when otherwise as "good as new," and procure a new one, because of inability to get the box repaired. It may not be generally known that this box is composed of two pieces, which are screwed together. The only difficulty in repairing is the danger of breaking the box, by applying force sufficient to unscrew it. The box being made of iron, this danger may be avoided by applying a moderate heat; then by the aid of the vice it is easily and safely unscrewed—when with a jack knife and a piece of an old boot leg, the leather band may be replaced in five minutes time, making the thing go again "like a book," and rendering the possessor, so far as pumps are concerned, perfectly independent of "all the world and the rest of mankind."

CALVIN SPERRY.

[Rural New Yorker.

THE POTATOE ROT.—The St. Louis Republican has the following cure for the potatoe rot, communicated to it by a Mr. Pennoyer of Union Co., Illinois, which he says he has tested thoroughly for four years, with perfect success.

He says: "Take one peck of fine salt and mix it thoroughly with half a bushel of Nova Scotia plaster, gypsum, (the plaster is the best immediately after hoeing the potatoes the second time, or just as the young potatoes begin to set, sprinkle on the main vines next to the ground a table spoonful of the above mixture to each hill. Be sure to get it on the main vines, as it is found that the rot proceeds from

the sting of an insect in the vine. The mixture coming in contact with the vine, kills the effect of it before it reaches the potatoe. This remedy, he observes will not only prevent the rot, but restore to the potatoe its primitive vigor and double its size"

SIGNS OF HEALTH IN SHEEP ARE—a skittish brightness, clear azure eyes, florid ruddy eye-strings and gums, teeth fast, breath sweet, nose and eyes dry, respiration free and regular, feet cool, dung substantial, wool fast and unbroken, skin of fine florid red, particularly on the brisket.

[Lawrence.

LAMPAS.—To a "subscriber," says the Boston Cultivator, who inquires for the best mode of treatment for a horse that has the Lampas, which is a swelling of the roof of the mouth adjoining the front teeth, we would say, feed with soft mashes, and wash the mouth with an infusion of bay-berry bark, two ounces of bark in one quart of boiling water, left to macerate for one hour—no burning with red-hot irons!

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PIANO FORTES from the best makers in the Union;
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Hews of Boston; Bacon & Raven, A. H. Gale
& Co., Nun & Clark, Stodart & Co., New
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much better and cheaper at the East than here.
To such we would say that we are connected
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sold for the same price, being constructed on a
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more powerful tone than any yet offered to the
public. Those in want of a Church or Parlor
Instrument, are invited to examine ours before
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THE Subscribers offer for sale, this season, a fine assortment of Fruit Trees, comprising the best now cultivated. They are very thrifty and will be sold at wholesale or retail, for cash or approved credit, at reasonable prices.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruit, to merit the confidence of his friends and the public in general.

All orders accompanied with cash or satisfactory references will be promptly attended to, and trees will be packed and forwarded without delay. We will give cheerful and prompt attention to all post-paid communications requiring information, &c.

D. VAN KIRK, & CO.

Waukesha, January 1, 1853.

NURSERY BUSINESS.

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FOR sale at Janesville, Racine and Koskonong Nurseries, Wis. The proprietors are now enabled to offer to the public, a stock of trees heretofore unequalled in the West. Remarkable for their hardiness, vigorous growth, and adapted to our western climate; embracing fruit trees of every description. Apples, Dwarf Pears, Plums, Cherries, Flowering Shrubs, Bulbous Roots, &c.—comprising all the most popular sorts now in cultivation—and having devoted their personal attention to their propagation and rearing, feel warranted in recommending them to the confidence of the public. Nurserymen, Dealers and Planters are respectfully invited to call and examine for themselves. All *pre-paid* orders containing a remittance or proper reference will receive prompt attention addressed to,

E. B. & J. F. DRAKE, Janesville,
F. DRAKE, Racine.

Janesville, January, 1853.

WISCONSIN GARDEN AND NURSERY, *On Gardner's Prairie, town of Spring Prairie, Walworth Co.*

THE Subscriber takes this method to inform his patrons and the public, that he may still be found at the old and well known establishment, at which he offers for sale the coming spring, over Forty Thousand Apple Trees of a fine size and from five to seven years from the graft. Sound, healthy and stocky trees at 18 cents each. Also Pears, Plums, Peaches, Cherries, Quinces, Grapes, Currants, Gooseberries, Strawberries, Raspberries, &c., at prices to correspond to the times. Of the ornamental, a large assortment of Shade Trees, Shrubs, Flowering Plants, Hardy Roses, Bulbous Roots, Dahlias, a choice assortment. Green House Plants, any quantity. Ever Greens; Spruces, Firs, Pines, Cedars and in fact almost every thing usually to be found in such an establishment. The fruits have been selected with great care as regards quality of Fruit and hardiness of trees. The Nursery is located on the open prairie with a northern exposure. The land has never been manured and consequently the trees are perfectly hardy. Trees taken from this Nursery seldom fail to grow in transplanting. All are invited to call and examine for themselves as the Subscriber hopes from long experience and strict personal attention to merit a continuance of public patronage.

N. B. All letters of inquiry sent to Burlington Post-office will receive prompt attention.

Catalogues Gratis at the Nursery, and by mail post-paid. JOHN BELL.

Wisconsin Nursery, January 1853.

THE GROVE NURSERY AND GARDEN.

LARGE Budded and Engrafted Apple Trees, with fine heads, at 15 to 25 cents each, or \$15 per 100—Average sizes, by the thousand, \$100 to 140. Plums and Quinces—a good supply, at 25 to 37½ cents each. Pears and Cherries—a small stock at old rates. Ornamental Trees, Flowering Shrubs and Plants, in great variety, and the lowest prices, in lots, principally of our selection. These last furnished to dealers on commission. Address,

J. A. KENNICOTT,

Northfield, Cook Co., Ill.

The New Edition of LAPHAM'S POCKET MAP

OF WISCONSIN, showing the surveys of the Menomonee Lands, &c., may now be had at the bookstores, or by application (accompanied by the cash) to the undersigned. It will be sent by mail to any address upon the receipt of one dollar. A liberal discount made to dealers.

I. A. LAPHAM.

Milwaukee, January, 1853.

WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V.

JANESVILLE, WIS. SEPTEMBER, 1853.

NO. 9.

PUBLISHED ON THE FIRST OF EACH MONTH, BY

MARK MILLER.

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These terms will be strictly adhered to. The circulation of the FARMER is large, and the amount of advertising limited; which renders it a more valuable medium for advertising than if a larger space was appropriated to this department.

Manure—Its Value to Western Farmers.

Few things more certainly evince the farmer's knowledge of his calling than his management of the manure which either naturally accumulates about his premises, or which he forms by artificial means. The farmer who has a just appreciation of the wants of his different soils for the various crops which he designs to cultivate, or who knows the value of the ingredients contained originally in his farm-yard manure, is careful to see that there is no waste of it about his premises. Nothing, perhaps, strikes an eastern farmer with more surprise, on visiting the west, than the manifest want of a due estimation of the worth of farm yard and stable manure. Hundreds of instances may be found in Wisconsin and Northern Illinois, which have fallen under our own eye, where this kind of fertilizer is suffered to accumulate from year to year undisturbed, "to waste its sweetness on the desert air." We have seen instances where the farmer (?) had moved his cow-yard to some new place, simply to get out of the way of the accumulated manure. In other instances

they have carted it to the rivers and ravines, that it might be carried as far as possible from their domains, as they would, and generally do, a dead dog or cat or other carcass. Now the truth is, this manner of proceeding is too literally and too irreverently, that is to say,—not worshipfully—"casting their bread upon the waters," never to "find" it again, even "after many days" of hard labor. Says the PROGRESSIVE FARMER, "good farming always tends to better;" and on no point is this more strikingly true, than in the care and application of manures. A load of manure well applied, not only produces a greater crop this year, but that extra crop produces more manure next year, and that extra manure produces a greater crop the year after, and so on indefinitely." Now if this be true, and who in his senses can doubt it, the reverse process must be equally true; the crops and the amount of manure, and we may add, the amount of cash, are all rapidly diminishing, till there will not be enough of the home-
stead left to pay the taxes. The farmer should not study to avoid labor, but to make labor pay well; and nothing pays better, literally hands over the clean cash, than the labor of saving manure—of increasing instead of diminishing its quantity, and improving its quality. There is nothing makes the farm shine like it, and nothing, either, will bring the shiners like it. We hear a great deal about foreign manures—about guano, Peruvian, Bolivian, African, and Artificial, by Potter, Hunt, Boost and Gregory; about bones and bone-dust, about phosphates of lime, and super-phosphates of lime; about oil-cake and rape-cake; about woolen rags by ragged Wooleys; this is all very

well, but after all, the farmer's great resource must be *at home*. We go for home consumption. *Our farmers must be made to enrich themselves and to keep themselves enriched.* To do this, every man, woman and child, throughout the whole animal establishment, must be put under tribute. The barn-yard, the hog-yard, the sheep-yard, the pig-pen, the out-house, the sink-drains, and the road washings, all must contribute their quota. Upon the best way of doing this we shall have to speak at another time. The thing to be remembered is, suffer no manure to be wasted about your premises. †

For the Wisconsin & Iowa Farmer.

French and Spanish Merino Sheep.

MR. MILLER:—Some western friend has the kindness to send me your valuable paper, the Wisconsin Farmer, which is well worth the attention of the farming community. As agriculture and stock raising has always been my theme, from earliest youth to the present time, I seek all opportunities to gain information upon that subject. I have been engaged in breeding sheep for about twenty years. I commenced breeding from a flock of pure blooded Spanish Merino ewes, and have improved upon them from the best blood, this side of the Atlantic. In 1847, I purchased of Mr. Taintor of Hartford, Conn., a number of his imported French Merino Sheep, which I found to be superior to any thing that I had ever seen in size, constitution, and weight of fleece. I crossed them with my Spanish Merinos, and found that the cross, thus produced, would be a benefit to the wool-growing community.

Since that time I have dealt quite extensively in French Sheep. I have purchased sheep from every importation that Mr. Taintor has made, excepting one or two, and am engaged in breeding both full and half blooded French, &c. I think my flock, at present, inferior to none in America.

I have proposed to some of your western farmers to attend your State Fair this fall, and exhibit a few full and half blooded French Sheep, and be ready to supply your breeders with a few superior imported stock bucks.

MERRILL BINGHAM.

West Cornwall, Vt., Aug., 1853.

MR. BINGHAM enjoys an enviable reputation as a breeder of ~~fine~~ sheep, and the farmers of the west (especially those who are engaged in the same business,) will be pleased to have an opportunity of seeing some of his choice stock at our next State Fair. [Ed.]

For the Wisconsin & Iowa Farmer.

FRIEND MILLER:—As there has been considerable said in your paper, relative to different breeds of hogs, I will state for the benefit of your numerous readers, that Mr. S. B. Edwards, of this place, who took the 1st premium on his Suffolk pigs at the late State Fair, has recently procured from L. G. Morris, of Westchester Co., N. Y., a pair of improved Suffolks pigs, also a pair of Essex pigs, all of which are from the imported stock of Mr. M. All who are interested in the improvement of the breeds of hogs in this State, will do well to call on Mr. E., and become satisfied that there is such a thing as a beautiful hog, and that there is a great contrast between such, and many of the prairie sharks seen in our State. Mr. E. will always be pleased to show his hogs and their pedigree, to all who may call on him. A

East Troy, Wis., July, 1853.

REMARKS:—Mr. Edwards evidently intends to keep at the head of the heap in the hog line. The pigs he exhibited at the last State Fair, we thought about good enough; but if he can fetch out any thing better at the next Fair, we will say amen. By the way, we don't want to brag, nor to frighten friend Edwards, but it is said, we have got the best SUFFOLK GRUNTER, ever seen in these diggings.

For the Wisconsin & Iowa Farmer

Deep Plowing and Heavy Seeding

EDITOR FARMER:—One great fault with many of us western farmers is, that of cultivating too much land—or rather scratching over it. I would suggest to those farmers who are accustomed to plow their land in the spring about two or three inches deep—miss half of it into the bargain—sow two bushels of oats to the acre—make a motion to go over it once with the harrow—that they plow in the fall, soon after harvest, at least one acre, just for an experiment, six or eight inches deep, on prairie land (oak opening would not do so well to be ploughed so deep.) In the spring, drag it with a short thick toothed harrow once over, then sow broadcast, six bushels of common white or black oats to the acre, then harrow them in thoroughly and finish up with a roller heavy enough to crush every clod and leave a smooth surface. The result will be a crop of sixty or seventy bushels of oats to the acre, instead of harvesting twenty-five or thirty. I have come up to either of these numbers myself, and believe it can be beat considerably.

I should be glad to learn, through the Farmer, whether any one has seen a good live fence made with the Hawthorn plant; if so, how it should be done and how to propagate the plant.

If any of your readers should have a cow or any other horned animal lose their appetite in the winter, just give them (for a cow,) 4 eggs, 6 table spoonsful of sulphur, two cups full of soot, one hand full salt, and 4 quarts of bran, well mixed together. This will make them eat heartily. So says a Yankee.

E. D. PHILLIPS.

Mineral Point, Wis., 1853.

TO PREVENT COWS FROM SHEDDING MILK.—Collodion (Liquid Cuticle) is a somewhat recent discovery, and has been applied to useful purposes by surgeons, but I am not aware that it has ever been

used to prevent the loss of milk by leakage from the udder of the cow. The mode of applying is as follows:—After milking, take a thin piece of muslin, the size of a three cent piece, wet it in the collodion and apply it quickly to the end of the teat. It dries immediately, and adhering firmly, prevents the escape of milk, from the orifice. It can hardly be removed at the next milking.

On first making use of this means I did not anticipate anything more than temporarily to prevent the evil. After making a few applications it was discontinued, and I was somewhat surprised to find that it had permanently lessened the fault. Upon reflection, the *modus operandi* appeared as follows:—First the collodion contracts the orifice and then prevents the escape of milk; and, second, the bag becoming distended its capacity is permanently enlarged. Try it.

Another useful process of this article may be mentioned. Cows' teats often become tender from chaps and deep fissures in them. They may readily be cured by moistening a piece of muslin in this liquid and applying it smoothly to the parts affected. It adheres so firmly that it will not be loosened even if the calf is allowed to draw the milk. [N. Y. Agricultor.

TO CURE SHEEP SKIN WITH THE WOOL ON.—Take one spoonful of alum and two of saltpetre; pulverize and mix well together, then sprinkle the powder on the flesh side of the skin, and lay the two flesh sides together, leaving the wool outside. Then fold up the skins as tight as you can, and hang them in a dry place.—In two or three days, as soon as they are dry, take them down and scrape them with a blunt knife till clean and supple. This completes the process and makes a most excellent saddle cover. Other skins which you desire to cure with the fur on, may be treated in the same way.

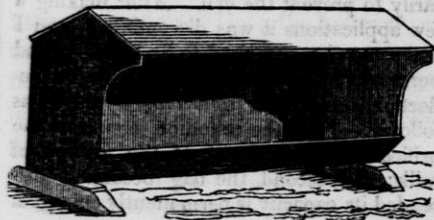
We can speak in favor of the above recipe. It does all it promises. Such skins make excellent mats for in-doors.

[Farmer's Companion.

THERE ARE NOW ten persons living on farms adjoining each other, on the road from Palmer to Ware, Mass., whose united ages amount to 807 years, and who were born, married, and always lived there. None of the ten were ever married twice.

Salting Sheep.

Salt, in my judgment, is indispensable to the health of sheep, particularly in the summer—and I know not a flock-master among the hundreds, nay thousands, with whom I am acquainted, who differs with me in this opinion. It is common to give it once a week while the sheep are at grass. It is still better to give them free access to salt at all times, by keeping it in a covered box open on one side, like the following:



A large hollow log, with holes cut along the side for the insertion of the heads of the sheep, will make a respectable substitute. A sheep having free access to salt at all times, will never eat too much, and it will take its supply when and in what quantities Nature demands, instead of eating voraciously at stated periods, as intermediate abstinence will stimulate it to do. [Randall.

HABITS OF BEES At a meeting of the London Entomological Society, Mr. Westwood mentioned some curious circumstances which had lately occurred in his apiary.

About ten days ago one of the hives threw off a swarm which settled in the front of the bee house, and stopped the entrance to the next hive, the inhabitants of which at once commenced fighting the invaders. Mr. Westwood then sought for and removed the queen, and having released her she led the swarm to the entrance of another hive, where a second battle began. The queen being again removed—this time to a rose bush, she flew away, and the swarm returned to the hive whence it had come. Yesterday a different hive gave forth a swarm which settled with and joined a swarm from another hive, much fighting ensued, but to-day all was quiet, whence it might be presumed that one of the queens had been killed. Mr. Waring knew an instance in which four swarms had united, and the hive had to be enlarged, being too small to hold the bees."

Chess—A Remarkable Instance.

GENTS. EDITORS:—In reply to Mr. Markham I would say, that my conclusions are that cattle running upon wheat in a wet time crush and break the roots, which causes a partial abortion or blight and chess is the product. I have pastured wheat at two different times since I settled in this Co., and in one instance had an abundance of chess where I had no other reason to suppose there would be any, the ground being new and seed clean. In the other instance there was but little chess, as I took good care to keep the stock out when the ground was wet.

Early in the spring of 1820, [not in the 16th century] I had occasion to cross one of my father's wheat fields on horseback, (in Northumberland Co., Pa. The soil was a heavy limestone clay, and the frost just out the ground. I threw the rider off the fence, jumped the horse over and mounted him, and supposing that the faster I rode the less damage would be done, put him to full speed. At every jump the horse sunk into the wet soil nearly to the knees. On arriving at the opposite side of the field, I threw the top rail down and jumped into the road.

At harvest the wheat was very heavy and leaned, and had to be cut all in one direction. We had not made but two or three thorough, when some of the hands noticed a "streak of cheat" across the field and none in any other place. This reminded me of the stampede I made across it in the spring, and on tracing the streak both ways it laid direct to where I had entered and left the field. The upper rails of the fence being down, and the tracks of the horse still visible and a bunch of chess in every track. Now I would respectfully ask Mr. M., to explain how the chess came there if it did not spring from the wheat roots.

It is well known to observing farmers, that when corn is two or three feet high, if a stalk is cut partly off near the ground with the hoe and left standing, it will produce a perfect husk but no ear of corn.—The husk will be filled with smut, sometimes a cob in the center of the roll of smut, and in a few instances I have found a few grains of corn on the cob. This I think runs parallel with the transmutation of wheat to chess.

[Michigan Farmer.]

[STRAWS.]

Damp Stables.

When I first came to the farm which I now hold by purchase, I found the stables built under large trees, and near a spring of water, with a northern aspect. My horses were soon in poor condition, with long and rough coats, and almost always lax in their bowels, nor could I get them up by extra food or lighter work; but my cows suffered the most, for they were always sick. Their milk fell off and their butter was poor, and of a bad color and taste, and four of them slipped their calves before their time. When the spring came they left their winter quarters in a worse state than I had ever seen them, and two of them died from scours on going to pasture. On inquiry I found that the tenant who had left had always been what the neighbors termed unfortunate in his horses and cattle, and from that cause more than any other, he had not been able to make both ends meet. The truth flashed upon me in an instant, and in a very little longer time than it has taken me to tell my story, I had commenced pulling down the stable, the unhealthiness of which had been I was convinced, the cause of all the evil and all the loss; and it was no more than two days before there was not left one stone upon another of the whole fabric. I now set to work and erected another on higher ground, removed from water, and clear from the shade of trees, with a south-east aspect, and dry capacious yard; and from that day I have had neither sickness nor sorrow in my out door household. My horses live on less food, are always sleek and in good condition, and my cows are a credit to their keep. Our butter brings 2 cents a pound more in the market, and for the last year our sales are more than doubled from the same number of cows and the same pasturage, and no more premature calves. Instead of watering my cattle as heretofore, at the spring under the trees—the water cold, with a deadly taste and bad color,—I sunk a well, and put in a pump; and at a long trough in the yard for the summer, and another under shelter for the winter, my cattle slake their thirst without setting up their coats, as they use to do after drinking at the hole under the trees. Even when the weather was warm they were accustomed to shake all over as

if they were in a fit of ague, after drinking their fill of this water; and to this, with the bad aspect of the stables, I attribute all the sickness and misery which I have experienced amongst my cattle and horses.

[Cor. Boston Cultivator.]

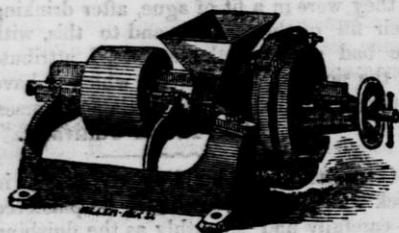
CHIMNEYS.—In building chimneys, in brick walls, the inside should be plastered as carefully and smoothly as the finishing coat of a parlor. Masons do not do this; they put on the common lime used by them for jointing, and the interior surface is covered without a proper regard to the functions of the chimney. The reasons for laying on the lime coat of a chimney smooth, are obvious, if we take into consideration that the rough edges of the lime, when dry, serve as points of attraction and adhesion for soot, because they resist the passage of the smoke. A smooth chimney has a better draught, to use a common term, than one with a rough interior; the reason of this is also obvious, because rough surfaces retard the passage of smoke, as well as water or any other substance in motion is retarded by them. In the building of houses, masons are too careless about these things; indeed, the majority of them do not appear to have any knowledge of natural philosophy, yet there is no man living, be he mason, plasterer, or hod-carrier, but stands high as a workman according as he is well informed.

The rules which should be followed in the building of a chimney, is to build it of a uniform diameter from bottom to top, not too wide, and smoothly covered with plaster inside.

[Scientific American.]

TO PRESERVE FENCE POSTS.—I saw in your paper, lime recommended to preserve posts. But I think my plan is preferable. I prepare my posts for setting, and then let them season. I then take coal tar and paint them with three coats of the same. I paint the posts from about fourteen inches from where they set in the ground to the bottom, and the end that sets in the ground, also—putting the paint on hot. A gentleman informed me that he had known a fence set in this way, that had stood forty years, and was as permanent then as at first. I think this is much easier and cheaper than lime, and more durable.

[Rural New Yorker.]



Ross' Conical Grist Mill:

By invitation of the agent, Mr. Sedgbeer, we have recently had the pleasure of an examination of this Mill. We were struck with both the simplicity of its construction and evident durability—being made entirely of stone and iron. But we admired still more, the facility with which it performed the operation of grinding.—In all its essential parts, this Mill is unlike any thing of the kind that has been previously introduced to the public.

This Mill consists simply, of a solid cone runner of French Burr Stone, revolving on a horizontal shaft within a concave, composed of Burr Stone, firmly set within a cast iron shell, the grinding surfaces being with exactness fitted to each other. As an evidence of the rapidity with which it grinds, we will state, that it ground a half bushel of corn and oats in four minutes, and did the work better than we ever saw it done by any other mill. We also saw wheat flour, manufactured by the same mill, equal, so far as we could discern, to that turned out by the best mill in this place. A one horse power is all sufficient to propel one of these mills of the largest size, while the smaller size may be operated by hand.

We believe the cost of one of these Mills may be saved to any farmer, by one year's use, who has fifty hogs to fatten, or who feeds out the same equivalent of grain to any kind of stock. To the emigrant who is going into a new country we regard it as invaluable.

PROSPECT OF THE HOP CROP.—We see it stated in several of the New York and Albany papers, that the recent rise in hops is owing to a speculative move. That is correct, if at all, only to a very limited extent. Several large dealers, principally in Madison county, having contracts to deliver hops at certain prices next fall, and becoming convinced that the crop will be a light one, have been obliged to go early in the market, and also to offer very high prices. We have heard of one or two sales of the new crop at 35 cents—and 30 cents cash is freely offered for old hops of a prime quality, though not many can now be bought even at that price.

The falling off in the crop in this section of the State, from that of last year, will be fully one-third. The accounts from England are somewhat contradictory—still it is conceded that the crop will be considerably short of that of last year. The duty last year was about £250,000—that for this year is now estimated at about £50,000.

In 1850 the duty was less than £100,000. More definite information may be expected within a fortnight.

[Farmer's Journal.]

Live and Dead Weight of Cattle:

Salesmen commonly calculate that the dead weight is one-half of what the animal weighs when alive; but the butcher knows that the produce is greater; it often approaches to three-fifths; and by an extensive stock bailiff of the late Mr. Curwen, it was found that the dead weight amounted to fifty-five per cent of the live. But the amount differs strangely, as may be seen by the following statement of Mr. Ferguson, of Woodhill, Canada West:

	Live Weight		Dead Weight		Tallow
	St.	Lbs.	St.	Lbs.	St. Lbs.
Aberdeenshire ox, 132	11		86	6	16 5
Short horned ox 132	0		90	1	14 0
Str horn heifer, 130	4		77	9	15 8
Short horn steer, 120	5		67	7	14 12

[British Husbandry, vol. 1. p. 392]

The subject of live and dead weight of cattle being one that deeply interests farmers, we again call attention to the subject, in the hope that it may awaken inquiry, as to the question, what should be the rule of paying the farmer, for beef he may have grown? It costs him as much to grow hide and tallow, as it does muscle or flesh

and we should like to know, why he should not be paid for so doing?

[Ed. Am. Farmer.]

In continuation of this subject, we make the following extracts from Colman's Massachusetts Report:

"In New York, only four quarters are made by the slaughterer, and the hide and tallow are not reckoned in the price, facts which are to be remembered in making comparisons of prices in the different markets."

"The following are some examples of live and dead weight of New England cattle killed at home, and after being driven from Connecticut river to Brighton, the Boston beef market, a distance of 75 or 80 miles."

Example 1.—One ox live weight in market, 2,393 lbs. quarters weighed 418 lbs., 324 lbs., 331 lbs. hide, 150 lbs., tallow 173 lbs., 1,811.

Difference, 582 lbs.

Example 2.—Two oxen of A. S., killed at home, weighed as follows:

Live.	Killed.
1,970 lbs.	1,400 lbs.
1,910 lbs.	1,341 lbs.

About 294 lbs. lost on a hundred of the live weight.

Example 3.—An ox weighing on Connecticut river 2,250 lbs, weighing in market, 1,572 lbs.

Example 4.—An ox weighing as above 2,250 lbs., weighed in market 1,487 lbs.—Loss 768 lbs.

Example 5.—A fat bull, of D. S. killed at home, and weighing alive 1,495 lbs. dead, 1,021. Loss, 544 lbs. [Stock Reg.]

Ashes for 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; the elements are the ashes of the plant. 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 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, as a general rule, is double that of plaster. I have used both, separately and mixed, and find that a compound of two bushels of ashes and one of plaster, gives a better result than either when applied singly. I take a small shovel with which I put about one 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 day 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 its 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 twelve 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.

[Dollar Newspaper.]

Effects of feeding Cut and Uncut Hay To Milch Cows.

From a communication made to the Agricultural Society of Worcester county, Massachusetts, by Mr. WILLIAM S. LINCOLN, we make the following extract. We copy from the New England Farmer:

"My milking stock consisted of one cow, which came in on the 29th of October, the two trial cows, and the other, which calved last April, and is expected to calve again the 1st of next April. Some time before commencing this experiment, I was feeding my stock—what would be called poor stock—with hay, with an allowance of roots. I commenced cutting this hay for all my stock, young and old, (sixteen head) occupying me $1\frac{1}{2}$ hours daily. Almost simultaneous with feeding the cut hay was an increase of milk very perceptible as it was milked in the pail. An inquiry was made by my wife, who in person takes sole charge of the dairy, as to the cause of this increase. An evasive reply was made.—From day to day the milk increased enough for the substitution of six quart for four quart pans, which had been previously used. I think I am within bounds in saying that the increase was over a pint daily, per cow, occasioned, to the best of my knowledge, solely by the use of cut hay."

Cutting and Grinding Food for Cattle.

There is much question in the minds of of many Farmers in regard to the utility and consequent profit of cutting hay, or grinding grain, or cooking roots for cattle and horses. Some contend that nature designed they should perform the business of reducing their food with their own teeth, and that the mixing the saliva with the food, while doing this, is a very important part of the nutritive process.

Experiments, however, prove that the process of cutting hay and straw, or grinding grain to be fed to cattle and horses, does not preclude the necessity of their chewing such food, and the mixing it with a sufficiency of saliva to ensure healthy digestion, and that there is a manifest advantage in doing it.

We have, from time to time, published the details or the results of such experiments. We have recently met with statements respecting this question, by Mr. A.

Gyde, in the last report from the Patent Office, from which we extract the following:

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 day 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 of the horse fed on crushed oats were found to be deprived of all nutritious matter contained in the food, and to consist of woody fibre, mixed with animal secretions and some salts; while 100 parts of the dung of the horse fed on the uncrushed oats were found to contain one-quarter 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.

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 3rd 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 nutritive matter.

The shorter period, however, occupied by the horse in filling his stomach, and consequently greater amount of rest obtained, and the means of mixing the food and preventing waste by cutting it into chaff, recommend the cutting.

It seems, therefore, by Mr. Gyde's experiment, that there is a great saving in grain by grinding or crushing it; that, as regards hay, the nutritive parts were all extracted by the stomach, whether cut or uncut, because the animal ground it equally fine in either case, but by cutting it does not take so long a time to grind it, and the horse is also enabled to grind some things when cut that he could not if uncut.

[Maine Farmer.]

Feeding Swine.

Laconic, sensible and seasonable is the following from the Granite Farmer. It should be well digested by all concerned. The science of pork making is not sufficiently understood:

1. Avoid foul feeding.
2. Do not omit adding salt in moderate quantities to the mess given; you will find it to your account in attending to this.
3. Feed at regular intervals.
4. Cleanse the trough previous to feeding.
5. Do not over-feed—give only as much as will be consumed at the meal.
6. Vary your bill of fare. Variety will create, or, at all events, increase appetite, and it is further most conducive to health; let your variations be guided by the state of the dung-cast; this should be of medium consistence, and of a greyish brown color? if hard, increase the quantity of bran and succulent roots; if too liquid, diminish or dispense with bran, and let the mess be firmer; if you add a portion of corn, that which is injured, and thus rendered unfit for other purposes, will answer well.
7. Feed your stock separately in classes, according to their condition; keep sows in young by themselves; stores by themselves—and bacon hogs and porkers by themselves. It is not advisable to keep your stores too high in flesh, for high feeding is calculated to retard development of form and bulk. It is better to feed pigs intended to be cut up for bacon loosely and not too abundantly until they have attained their full stature, you can bring them into the highest possible condition in an inconceivably short space of time.
8. Do not regret the loss or scarcity of potatoes so far as swine feeding is concerned. Its loss has been the means of stimulating inquiry, and producing experiments, which have resulted in the discovery that many other superior vegetables have hitherto have neglected and foolishly passed aside.
9. Do not neglect to keep your swine clean, dry and warm. These are essentials and not a whit less imperative than feeding, for an inferior description of food will by their aid succeed far better than the highest feeding will without them; and suffer me to reiterate the benefit derivable from

washing your hogs; this will repay your trouble manifold.

10. Watch the markets. Sell when you see a reasonable profit before you.—Many and many a man has swamped himself by giving away to covetousness, and by desiring to realize an unusual amount of gain; recollect how very fluctuating are markets, and that a certain gain is far better than the risk of loss.

WINTER FLAX.—The Secretary of the N. Y. S. Ag. Society, has received from a Russian gentleman, by the name of Faltersaborf, a sample of the seed of a variety of winter flax. A larger quantity is promised, which is expected to arrive in the fall. The same gentleman also proposes to send some "the seed whose weed furnishes the precise powders for killing insects of all kinds."

The advantages claimed for the winter flax, are set forth as follows:

a. Besides it has the advantage to be sown in the fall, not subject to be sown either too early or too late, as this is often the case with the spring seed, and has always a failure of the crop in its train.

b. That the winter seed shoots sooner, yet before the weeds come out, which latter are kept back by it; it is earlier ripe, and can be brought in before the hands are wanted for other agricultural operations.

c. In order to prevent the shooting in the fall, the seed must be worked in by the plow, as late as possible, and then the seed is not damaged neither by 20 degrees of cold (Reaumur.) In the spring, as soon as the field is dry, it must be lightly harrowed. It shoots with the first rays of the warm sun, and is already in flower when other spring seed is sown, and before the insects can do any harm.

d. This winter seed is glossy, but dark and mixed with black grains, yet all shoot.

It is a great deal more oily than the common seed.

[Boston Cult.]

CANARY BIRDS AND CANARY SEED.—The Boston Atlas having mentioned that during last year 56,000 bushels of canary seed were imported, costing \$13,500, a writer in the Journal of Commerce adds the intelligence that 41,000 canary birds are annually imported, costing \$17,390, making a total of nearly \$31,000 for birds and their food.

For the Wisconsin & Iowa Farmer.

Agricultural Knowledge.

IMPORTANCE OF AMPLE MEANS FOR THE GENERAL DIFFUSION OF AGRICULTURAL KNOWLEDGE.

Foremost in the class of producers stands the cultivator of the soil. It is for him to make a country rich or poor—to leave the desert barren, or to make it “bud and blossom as the rose.” The science of agriculture depends mainly upon the process of experiment for its advancement, and were every individual left to himself—to depend on his own experience and discovery, the progress of Agriculture would of necessity remain without the pale of the Sciences; and our country, from one end to the other, present to the traveller, one broad scene of confusion and varied desolation. By the principle of association, however, this calamity is, in a measure, removed, and what is communicated from one to another, aids the information and action of many.

From this advantage of communication between farmers, arose the necessity of *Agricultural Journals*. These Journals should contain all the important practical discoveries in a certain region of country—as a State—and be disseminated to the entire mass of the Agricultural population.

The time has come when Wisconsin can, and will; support such a Journal—one that will meet the wants of the State, and that shall have ability to disseminate knowledge of all kinds useful to the farmer—Agricultural, Mechanical, and Educational.

With two Editors, one for the Agricultural and Mechanical, and one for the Educational, who should be a practical teacher, a Journal might be produced which would be a credit to the State, and which would be liberally sustained. It would also do more to drive that mass of mental corruption in the form of light literature from our country and city homes, than any other agency that can, in my opinion, be devised.

The farmer who raises only 15 or 20 bushels of grain to the acre, can there learn of him who raises from 60 to 80. Might I not ask why is it that some of our farmers always have good crops, while others invariably produce an inferior article? Why can some of our dairymen always get from 12 to 18 cents per pound for butter, while others, even when the market is destitute, cannot obtain over 10 or 12 cents?

Now why will not our successful farmers impart their knowledge, which they hold as such a profound secret, to others, so that all may produce good and sufficient food, and “cause two blades of grass to grow where only one grew before.”

There are numerous reasons why such a Journal, as I have been recommending, should be located at the Capitol of the State. That is the depot for the accumulating treasures of the State Agricultural Society, and the great centre of action for the entire State. It will shortly be in communication with every part of the State and Union, by railroad, and will inevitably and irresistibly become in a very short time, the great center of trade for an immense region of the richest farming and mineral country in the Union. Other reasons might be urged for a removal to the Capital, but I think they will naturally suggest themselves to you and your readers. Trusting that you may speedily remove to Madison, enlarge your paper to a dollar a year—procure a good Educational Editor, and give us just what we want, as you can, I remain yours.

W. COLEMAN.

Oregon, Wis., Aug., 1853.

REMARKS:—We are quite willing to devote a space in the Farmer to Educational matters, whenever those who profess to be the friends of that cause, will help to sustain such a Department. The proposed enlargement, and removal to MADISON, has often been urged, upon us before. As to the expediency of such a step, we have no opinion to express at present.

Oat Flour.

The following article, by J. Towers, is from the London Farmer's Magazine, and may prove interesting to such of our readers as have lands capable of producing oats, and which refuse wheat. The late experiments in the preparation of Indian Corn, the various kinds of flour made from it by Hecker and others, convince us that the subject is worthy of investigation, as to all known grains; and as oats are easily raised in many parts of our country, it may be well to have the subject of oat flour fairly investigated. [Working Farmer.]

Several weeks ago—just before that critical period when the probability of a successful seeding of wheat might depend upon the weather for a very limited time—a letter was received from Scotland, mentioning the introduction of a new farina, which gave promise of becoming exceedingly valuable for many culinary purposes, particularly among the laboring classes. Our correspondent is an agricultural authority of such eminence, that merely to name him would prove a recommendation. Another note, per date 15th April, was sent as an answer to some inquiries, from which the following extract is given verbatim:—"The oat flour is really a good article, and for a pudding much superior to arrow-root, sago, and all such farinas. It has now been proved by chemistry that the oat is more nourishing to the human frame than the wheat; and this accounts for the brawny fellows to be found among the plowmen of Scotland; whose chief articles of food are oatmeal and milk."

When I resided in Berkshire, an attempt was made to obtain fine oat meal; but it failed because the millers were ignorant concerning the processes of kiln-drying, &c., employed in the north for the preparation of genuine oatmeal. One of them, however, on the Thames, ground some oats as a trial, and separated the flour from the husk or bran. It was white and glutinous as that of wheat, of a pleasant flavor, but perfectly different from that of Scotch meal. Still it was evident, that, had the quantity been sufficient, and the sample better dressed, fermented bread might have been made from it.

While pondering upon a subject worthy of communication, my correspondent arrived here, and thus some particular infor-

mation was obtained which may be acceptable on several accounts. Being favored by two packages of the Scotch flour, we have already proved its excellence. The sample has been found beautiful—pure in flour, and pasty when wetted. Fermented bread could doubtless be prepared by means of sweet yeast—or better, I think, (till hot weather set in) by the good and fresh German or Dutch yeast, now frequently sold and used by pastry cooks and bakers. But the present price of the new flour is too high for bread and so will remain until the manufacture be greatly extended.

It is perhaps to be regretted that Mr. Smith should have patented his flour.—The price has thereby been increased, and an obstacle to the preparation of bread-loaves created. At present it is sold in shilling-packets, weighing with the wrappers 2 lbs 3 oz. The label reads thus:—"This new preparation of what has long constituted the characteristic food of Scotland, is calculated more than ever to develop the healthful and nutritious qualities of our favorite cereal, and to give increased value to its production. Chemistry has proved that the farina of the oat supplies more nourishment of the muscles, bone, and blood of man, than any other known vegetable." The oat flour may be used as gruel, and also in the preparation of arrow-root, pudding of the lightest and finest quality, pancakes, manna, tapioca, &c.

The parcels were received here on Thursday, May 12th, and on the following day a pudding, according to the given directions, was made with *two table spoonsful* of the flour. It was sufficient for five persons—thus proving the fact of "a small quantity being requisite for the purpose."

I am given to understand that the oat is to a certain extent kiln dried, then husked, and ground into flour. The process is yet in its infancy; but however worthy and excellent as a *placebii*, it will never attain a prominent position till produced in quantity sufficient (and a price) to become fermented bread, as a substitute for wheat in loaves, at a time of deficiency or failure of crops.

Manure is to the soil, what bread is to the human system; its life, nutriment and strength.

HORTICULTURE.

Meeting of N. W. Fruit Growers.

FRIEND MILLER:—The Fair of your State Agricultural Society is appointed for the same time as the Chicago Meeting of our Northwestern Fruit Growers Association. This is unfortunate. Still I must request you to keep your readers advised of our time—October 4th to 7th, in Chicago. Perhaps some of your fruit men will wish to attend our Meeting, or at least send samples of fruit. We count on a large attendance, and a great show of orchard products from the East as well as the West.

Reports are expected from members and others, and interesting discussions, embracing all the hardy fruits not heretofore acted on, will occupy much of our time and attention; and yet other questions of interest to the fraternity are expected to come up, during the ensuing sessions; and as we hope to secure the services of a regular Reporter, to aid the Secretary, in preserving a record of our sayings and doings, it may be that our proceedings, when printed, will be found a valuable addition to our scanty western pomological publications. And to make our works of general interest the whole Northwest must be represented, and I would suggest, that those who cannot attend the meeting may send fruits and papers relating thereto—care of Dr. J. A. Kennicott, 96, Lake St., Chicago; or to the Prairie Farmer office; and one dollar as a member's fee, which will secure a pro-rata share of the published proceedings.

JOHN. A. KENNICOTT. President.

A GOOD SUGGESTION.—E. S. L. RICHARDSON of Kendall, Ill., in a P. S. to a letter to us, says "My hobbies are fruits and flowers, and perhaps when at leisure I will send you some notes on ornamental trees. Nur-

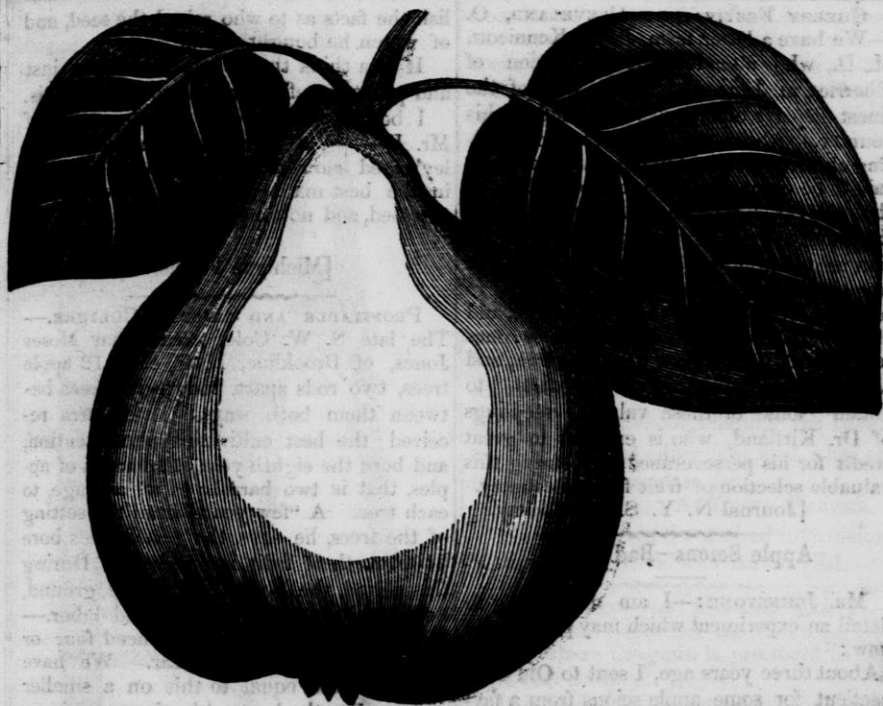
serymen in your region could do good service to the public by collecting and proving all their new seedling fruit, or such as may be claimed to be seedling, which are to be got within their reach. No doubt, western seedlings will yet be found which will be better adapted to the west, than most of the eastern or foreign fruits; more especially Pears, Plums and Cherries. Nurserymen in the west could also do much good by sending you samples of such fruit as they have fruited and found good, and giving, also the different names under which they are known, so you could figure and describe them, and give their various names."

Destructive Insects.

A Correspondent of the Boston Transcript, M. H. Simpson, of Saxonville, writes to that paper that he has discovered a new worm upon the apple, cherry, and plum trees, eating the leaves and fruit. It is very destructive to the tender shoots as well as the fruit, and the writer says that if all the worms go through their transformations, the next generation will be in such swarms as to destroy the trees. If the trees be shaken, the worms spin a fine fibre towards the ground, and remain suspended by it, ascending again, afterwards to commence anew their ravages. They are described as having three longitudinal stripes on the back; the center is fainter than the other two; and the head is buff colored and heart shaped. These destructive insects are spreading through Massachusetts. Already they have had two generations this season. As a means of destroying them, Mr. Simpson recommends the syringing of the trees with whale oil soap when the worm is first hatched.

PLUM GRAFTS BEARING THE FIRST YEAR.

—A co. respondent, R. J. A., sends us an account of plum grafts bearing full grown plums, the same season, they were set, and asks an explanation of the phenomena.—There is nothing very remarkable about it—the scions set had blossom buds upon them, and growing thriffully, produced fruit. [Ex.



Pear-shaped Quince.

Mr. Downings says "the pear-shaped quince is larger and of finer texture than the apple-shaped. It is rather tough when stewed or cooked, the flesh is less lively in color, and it is therefore much less esteemed than the apple-shaped variety. The fruit is of medium size, oblong, tapering to the stalk, and shaped much like a pear. The skin is yellow. The leaves are oblong ovate. It ripens about a fortnight later, and may be preserved in a raw state considerably longer."

Quinces make a much better preserve by being kept sometime before using. If kept a few weeks in a damp cellar before preserving, they will become more tender and delicious.

Look to the Grape Vines.

Besides the fall or winter pruning of grape vines, they require a careful attention during summer. It is well to go

among them every few days, and with a sharp blade, clip off any excess of new runners, that the strength of the vine may be thrown into those parts, where it is desired to ripen off fruit, or to harden a selected runner for the next years bearing.— It is well, a little later in the season, to head off the reserved runners, entirely, by clipping the bud at the end, so as to harden the wood, to preserve it from the effects of frost, the coming winter. This practice, of course, refers to vines trained upon a wall, or trellis.

Vines intended for *layering*, may be taken down at this season and covered with earth, either in a series of pots or in the ground. Choose for this purpose a vine of the present year's growth, detach it carefully from the wall or trellis, and fasten it down with wooden forks, covering the joints intended for cuttings with several inches of mellow soil, these joints will soon take root, and furnish good cuttings for propagation. [Selected.]

CHERRY FESTIVAL, AT CLEVELAND, O.

—We have a letter from J. A. Kennicott, M. D., who attended the exhibition of Cherries, in June, and it was one of the finest displays of cherries ever had in this country. About 40 distinct sorts of seedling cherries were exhibited, many of them said to be every way superior to the best of the old varieties. The Judges examined the cherries by Nos., without any designation as to varieties. The award of merit was unanimous in favor of what proved to be Dr. Kirtland's seedlings: "Delicate," and "Mammoth," were among the choice ones selected. A full report will be given, and an opportunity afforded, doubtless, to obtain some of these valuable seedlings of Dr. Kirtland, who is entitled to great credit for his perseverance in securing this valuable selection of fruit for our country.

[Journal N. Y. S. A. Society.]

Apple Scions—Bad Seed!

MR. JOHNSTONE:—I am now going to detail an experiment which may perhaps be new:

About three years ago, I sent to Old Connecticut for some apple scions from a favorite old tree that grew in my father's orchard. I directed my friend either to wax the ends and wrap them in paper, or seal them air tight in a two ounce vial. The latter plan was adopted. Owing to a mistake in directing to the wrong Post Office, I did not get until about three weeks after they were due. I thought they would not grow, and concluded not to take them out of the office. They were put away as dead letters, but being over looked, were not sent to Washington, and finally the Postmaster took them out and set them; and all but one lived and grew finely. They must have cut them from the tree as much as seven weeks before they were set.

There is an evil under the sun, viz: sowing garden seeds that *prove* to be worthless; is there no remedy? Suppose you go back to the merchant who sold you the seed, he tells you he bought them for good seed, and don't consider himself in anywise blameable, but *somebody* is to blame. Good seed under favorable circumstances, will grow. Now I would suggest as remedy, that every one who finds *too late*, that he has to do without his parsnips or onions or his ruta bagas for this year, should pub-

lish the facts as to who raised the seed, and of whom he bought them.

If you think this course would be just and prove beneficial, please so publish this.

I bought some *Dutch parsnip* seed of Mr. D——; at Paw Paw, marked "Riskey's seed warranted," I prepared my bed in the best manner, I knew how; sowed the seed, and not one plant came up.

S. A. BABBITT.

[Michigan Farmer.]

PROFITABLE AND SKILFUL CULTURE.—

The late S. W. Cole, stated that Moses Jones, of Brookline, Mass., set 112 apple trees, two rods apart, and peach trees between them both ways. These trees received the best cultivation and attention, and bore the eighth year, 528 barrels of apples, that is two barrels as an average, to each tree. A "few years" from the setting of the trees, he says, the peach trees bore \$400 worth of fruit in one year. During this period, the vegetables on the ground, nearly paid for the manure and labor. Many of the apple trees produced four or five barrels the tenth year. We have known results equal to this on a smaller scale, where the best cultivation was given.

[Albany Cultivator.]

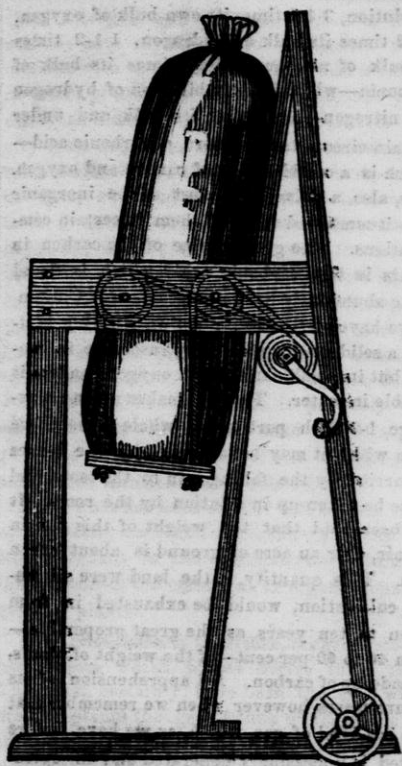
SAGE ROOTS—How to preserve them.—

Cut off the tops close to the ground in April. Treated in this manner annually, the plants are continually renewed, and become perennial. Seeding is prevented, and an abundant supply of leaves is produced. So says one who has pursued the practice successfully for fifteen years.

[Wayne Sentinel.]

TREES KILLED BY POTASH.—Medicine in excess becomes poisonous. The New England Farmer mentions the case of an orchard of one hundred sixty thrifty Baldwins, that were washed with a solution of a pound of potash in a gallon of water.—The owner found in two days that he had killed the whole of his beautiful trees.—Soap or ashes in water are strong enough. Guano is an excellent thing for trees, and salt is sometimes good, but it is one of the easiest things in the world to kill trees with them in excess.

Crush the caterpillar in the egg, and you will save much time and injury.



Sack Elevator.

This simple apparatus effects an important saving of human labor in warehouses and other situations, where heavy sacks are to be raised from the ground, and conveyed away on men's shoulders. It is in the lifting operation that the carrier's power is so rapidly consumed. A man will carry a heavier weight on his back than he can lift up to it from the ground, hence it is necessary to place a heavy bag on an elevation to lift it for carrying; this apparatus obviates the necessity of requiring extraneous help, to lift a heavy bag, or having it lifted and placed first on an elevation nearly as high as the breast, to place it properly on the back so as to carry it well the required distance. The engraving represents a side elevation. It consists merely of a timber frame, open at the front to admit the sack, which is placed against the inclined frame, and upon the lift board, suspended by four ropes from its four corners. These ropes pass over fixed pulleys, in the upper

cross-bar of the frame, and are thence passed round corresponding pulleys on a short horizontal shaft at the back of the frame. When a sack is to be raised, the board rests on the floor, and the sack being set upon it, the attendant turns the winch-handle on the back pulley shaft, and thus winds up the four supporting cords, and raises the sack to the required height, when it is held in the desired position, by a movable stop-pin.

[Scientific American.]

Toland Prairie, Wis., July, 1853.

EDITOR FARMER:—Will you please inform me, either by letter or through the columns of your Journal, where there is a Manual Labor School, offering the advantages of a liberal education; and what are the terms of admission, &c.

A. YOUNG FARMER.

We cannot give the desired information. Will some one do it who can? [Ed.]

WHEAT FOR THE ENGLISH MARKET.

An English paper has the following relative to where the grain is produced to support that country:

It is proved by the returns of the foreign corn trade, in the last few years, that a change is taking place in the principal sources of the supply of food. The U. S. and the Baltic, are no longer, by any means, our largest producers. Their yearly surplus falls short of our yearly wants, and it is from the fertile districts and fine rivers of Eastern Europe that we now draw our greatest and inexhaustible supply. In 1841, when the total imports of wheat into this kingdom was 2,240,000 quarters, only 230,000 quarters or about one-tenth, came from Russia, Turkey or the Mediterranean. In 1852 the total import of wheat (exclusive of flour) was about 3,200,000 quarters of which 1,700,000 quarters came from the ports of those countries, and taking the whole import of corn at 3,756,000 quarters, the supply from the East was 1,930,000 quarters.

AGRICULTURAL SCHOOLS IN VIRGINIA.

—Several enterprising planters in Loudon county, Virginia, have agreed to establish a model farm and agricultural school in that county. The land has been purchased and the building will be erected during the summer. Hurrah for old Virginy!

Written for the Wisconsin and Iowa Farmer.

Chemistry of Plants. No. 3.

UPON WHAT DO PLANTS LIVE—FROM WHENCE COME THEIR MATERIALS—WHAT IS THE EFFECT OF PLANTS UPON THE SOIL ON WHICH THEY GROW, AND THE AIR IN WHICH THEY LIVE.

BY PROF. S. P. LATHROP, M. D.

Having become acquainted, in the last number, with the several constituents of plants, the next subject for us to consider is, their source:

WHENCE DO PLANTS OBTAIN THEIR CONSTITUENTS.

This is an important question to farmers and a correct view of the subject is essential to correct practice in agriculture. The answer to the question above is, there are two great sources of the constituents of plants, and one important medium by which they are taken up by the plant. These sources are the air and the earth, and the medium water. It may be said, then, we have abundance of these every where. Very true. But it must be remembered that the peculiar constituents described, are not equally distributed through the earth and the air, being abundant in some portions of each and almost entirely wanting in others.

There are natural agencies at work, such as winds and waves, tides and currents, whose tendency is to equalize these elements. Man's agency, as a cultivator of the soil, is, to assist and direct, and co-operate with nature in this work.

The organs of plants, which take up the constituents from the air and soil, are the leaves and the thread-like rootlets attached to the main roots. The plant's nourishment must, therefore, be wholly in the gaseous or liquid form, for the leaves can imbibe air or vapor only, while the tissue of the rootlets is especially adapted to absorb liquids, and is incapable of taking in solid matter, however minutely divided. It must be in a state of perfectly limpid solution. Water, the almost universal solvent, becomes, therefore, the necessary medium of the plant's food. This must be ever present as a liquid. It consists of oxygen and hydrogen—the first two of the organic elements—(see Table II.) and, therefore, may and doubtless does, furnish these two essential ingredients of the vegetable structure. Yet pure water cannot furnish what it does not contain. Water, however, will dissolve and hold

in solution, 3 1-2 times its own bulk of oxygen, 1 1-2 times its bulk of hydrogen, 1 1-2 times its bulk of nitrogen, many times its bulk of ammonia—which is a combination of hydrogen and nitrogen—and 1 time its bulk, and under certain circumstances, more, of carbonic acid—which is a combination of carbon and oxygen. It is, also, a solvent of most of the inorganic constituents, and of all of them in certain combinations. The great source of the carbon in plants is the carbonic acid, which is found quite abundantly in the atmosphere. Carbon, as we have seen, (see carbon in No. II.) is itself a solid, and is absolutely insoluble in water, but its combination with oxygen renders it soluble in water. This gas makes up on an average, 1-2000th part of the whole atmosphere from which it may be absorbed by the leaves or carried by the falling rain to the roots, and there be taken up in solution by the roots. It has been said that the weight of this gas in the air, over an acre of ground is about seven tons. This quantity, if the land were all under cultivation, would be exhausted in from seven to ten years, as the great proportion—from 40 to 60 per cent—of the weight of plants, is made up of carbon. All apprehension of its failure ceases, however, when we remember that this is a kind of gas, which, as we have before hinted, is unceasingly generated and in extraordinary quantities by those chemical processes most universally diffused in nature, viz; the respiration of men and animals, the combustion of wood, coal, &c, and the putrefaction of animal and vegetable matter. It also streams forth from crevices of rocks in many regions of the earth. The atmosphere is also the source of some of the nitrogen—79 percent. of it consisting of this gas, and this being soluble to some extent in water, every rain drop that falls through the air, carries to the ground and to the roots of plants a minute quantity which they imbibe with the water. This accounts for the free nitrogen which is always present in plants. This, however, is but a very small portion. The greater part is received from the soil generally. But it is always in some form combined chemically with other bodies—generally oxygen or nitrogen—forming nitric acid and ammonia. This explains the great efficacy of these substances as manures. Both are soluble in water and can therefore enter the roots of plants without difficulty. When vegetable or animal matters decay, ammonia is formed from

their nitrogen, and carbonic acid from their carbon; both of these two substances then combine with each other forming what is called *carbonate of ammonia*. This is a volatile salt, and when formed, escapes as a vapor into the air, from which it is carried in solution by rains and snows to the earth, and there, with the water, absorbed by the plant. If these vegetable or animal substances are made to decay in the soil where plants are growing, the ammoniacal salt may be absorbed by their roots immediately after its formation. In such instances the soil would be the source of the nitrogen. In what manner the assimilation of ammonia takes place in the vegetable kingdom, is, indeed, not yet known, but it is probably the ammonia from which plants take the nitrogen requisite for the formation of the nitrogenized substances, mentioned in Table I No. 2.

From what has been said, it will be seen that *carbonic acid, water and ammonia*,—all more or less abundant in the atmosphere—contain in their elements the essential, or organic constituents of plants.

The atmosphere, is, therefore, the great storehouse from which plants derive their food. This must, certainly, have been the case with the first plants that grew, when no vegetable or animal substances, in decomposition, which now goes under the name of *humus*, existed in the soil. It is no less so now of large tribes of plants growing on the newly formed volcanic islands. The great portion of the vegetable kingdom, particularly of uncultivated or native plants, is just so much matter which the power of vegetable organization has seized from the atmosphere, and condensed into the form of meadows and forests.

It must not be concluded, however, from what has been said, that the soil serves only as a foothold for plants, and that all vegetables obtain their whole nourishment directly from the atmosphere. The races of plants that will grow at the entire expense of the air, are Lichens, Mosses, Ferns and certain succulent tribes of Flowering plants. None of the vegetables most useful as food to man or beast are able to thrive without the inorganic materials which are found mostly alone in the soil.—These are furnished to the soil by the slow decomposition of the rocks and earths that compose it. They are dissolved, in very minute proportions, in the water which percolates the soil, and with this water are taken up into

the roots of plants. However minute the quantity may be in any given quantity of water, the plant concentrates and accumulates it by the constant exhalation of the water from the leaves, which act as filters, till these inorganic constituents often form a pretty large per centage of the solid matter of the vegetable. As might be expected, the leaves contain much the largest portion in proportion to their weight.

These organic constituents, however, usually form so small a per centage of plants—from one to fifteen per cent.—that the earlier physiologists supposed their presence was wholly *accidental* and formed no *necessary* part in their organization. It was found, however, that this inorganic part of the same kind of plant was always of the same kind of material, whatever was the character of the soil upon which it grew. This evidently would not have been the case, were its presence wholly *accidental* and not governed by some fixed laws. It was also found that the composition of the ashes of different plants, grown upon the same soil, varied much in the number and character of their inorganic constituents. I was still further found that each kind of plant, in selecting for itself, nearly a constant weight of this matter, while it might choose the same kind or kinds of earthy material, that some other plants do to make up their composition, yet it was always in quantities peculiar to itself.

From the above facts it was inferred that the inorganic constituents are *necessary* elements of plants. This view was corroborated by the further observed fact, that plants will not thrive and come to maturity—properly perfecting their seed, straw &c.—in a soil destitute of the kinds of matter usually found to be present in their ashes.

How greatly these inorganic constituents differ, not only in different plants, but even in the different parts of one and the same plant, and also how greatly they vary at different seasons of the year in quantity and quality, may be learned, to some extent, from the following table, in which these elements are compared as they exist in certain vegetable ashes.

TABLE III.

In dried state.	Yielded.	Of which were soluble.
100 lbs grains		
of wheat,	2 to 3	lbs. ashes 1-2
" " wheat straw,	4 to 5	" " 1-9
" " potatoe tubers,	8 to 9	" " 4-5
" " potatoe tops	12 to 15	" " 1-20

" "oak wood	2 to 4	" "	1-3
" " oak bark	5 to 6	" "	1-12
" " oak leaves in spring	5	" "	1-2
" " " autumn	5½	" "	1-6
" " walnut wood in the spring	10	" "	1-2
" " in the autumn	3	" "	1-5
" " walnut bark in the spring	9	" "	1-2
" " in the autumn	6½	" "	1-12
" " walnut leaves in the spring	7 & 4	" "	1-4

These facts are the bodies of the true principles, which should guide every agriculturist in the management of his soils. Says Prof. Jas. F. W. Johnston, "It is difficult to conceive the extent to which the admission of the essential nature and constant quantity of the inorganic matter contained in plants must necessarily modify our notions and regulate our practice in every branch of agriculture. It establishes a clear relation between the kind and quality of the crop and the nature and chemical composition of the soil in which it grows. It demonstrates what soils ought to contain, and, therefore, how they are to be improved. It explains the effect of some manure in permanently fertilizing and of some crops in permanently impoverishing the soil. It illustrates the action of mineral substances upon the plant and shows it may be, and *very* is, in a certain measure, fed by the dead earth. Over nearly all the operations of agriculture it throws a new and unexpected light."

These bodies, as will be seen by reference to Table I., are of two kinds—*bases* and *acids*, and the chemist understands by the former, those bodies, which, if soluble, have an alkaline taste, that is, like wood-ashes, burnt lime &c.; and by the latter, those which in the state of solution have a sour taste. Potash and soda are also called *alkalies*; and lime and magnesia are called *alkaline earths*. Whenever these *bases* come in a chemical connection with any of these acids, they unite and form substances called *salts*, which exhibit, to no very great extent, the properties of either of their constituents. It is in this condition of a salt that we find these inorganic substances in plants.

These salts may be arranged in a table according to their solubility, which gives a good basis for determining their presence in the ashes of any plant.

TABLE IV.

I. *Those soluble in water*—the alkaline salts, or the salts of potash and soda.

II. *Those soluble in dilute Muriatic acid*—the alkaline earthy salts, or the salts of lime and magnesia together, with the salts of the oxide of iron.

III. *Those insoluble in water or acids*—the silicates, or those formed by the union of silica with other bases.

Whether any one or the other of the above class of salts predominates in the ashes of a plant may be easily ascertained by treating its ashes first with water, and seeing how much of the amount is dissolved, which will, of course, indicate the amount of potash and soda there is present; and, secondly, with dilute muriatic acid, which will indicate the amount of lime and magnesia there is present. The remaining portion belongs to the third class, or the silicates.

EFFECTS OF DEEP PLOWING.—The farmer and Mechanic, published at Lewiston Falls, Maine, say:—"A gentleman in Canton took us out the other day on two acres of land, which he had cultivated for a few years, and which he makes very productive. He told us that it was so wet when he commenced upon it that he could do but little with it; but some three or four years ago he put in a large plow, and turned it over to the depth of nearly one foot, following with the subsoil plow to the depth of nearly one foot more. Since then he has had no trouble with the wet or drouth. Everything he puts upon it flourishes finely. This process will pay on much of our land, whether the undermining will or not."

THE WAY TO PULL TURNIPS.—The Yankee grasps the root by the top and pulls it with his hand, and then cuts off the top with his knife. The Englishman has a better way. He sharpens his hoe, and passing along, cuts, with a single stroke the tops of the turnip; then with the same implement, strikes under it, so as to cut off roots, and brings it out of the earth. In cutting off the tops he guides his hoe so as to throw them into a sort of row, in one place, and digging he guides it so as to throw the roots together in another row. He will dig the roots about four times as fast as one Yankee with his pulling and knife.

RECIPES.

CEMENT FOR ROOFS.—Having had several inquiries made to us lately for some good material to put on leaky shingle roofs, such as a cement, we should state that red lead paint, oil and melted resin, into which is stirred a considerable quantity of dry sharp sand if put on thickly with a brush, then dusted with sand, ought to form an excellent cement for that purpose.

We have not tried it on old shingle roofs, but have done so to stop leaks in a tin roof, and have found it to more than answer our expectations. Good white lead mixed with oil and dry sharp sand, will answer as well, but the former composition is cheaper. It is a non-combustible as well as a water-repelling cement.

[Exchange.]

VALUABLE APPLICATION.—For wounds received from old nails, or cuts occasioned by broken glass, peach tree leaves, well steeped and applied to the wound, will give immediate relief. By thickening the liquid from which the leaves have been taken with meal or bran, a good poultice is obtained, which will keep moist for hours. In case the leaves cannot be obtained, a tea made of young twigs of the peach-tree, and thickened will do as well.

BLACKBERRY WINE.—A correspondent of the Southern Cultivator, gives the following recipes for making Blackberry Wine and Blackberry Cordial:

MR. EDITOR.—It may not be known to many of our young subscribers that they possess in the blackberry grown so unwillingly by them in their fields, the means, at once, of making an excellent wine and a valuable medicine for home use. To make a wine equal in value to Port, take ripe blackberries or dewberries and press them, let the juice stand thirty-six hours to ferment skim off whatever rises to the top, then, to every gallon of the juice, add a quart of water and three pounds of sugar, (brown sugar will do) let this stand in open vessels for twenty-four hours, skim and strain it, then barrel it till March, when it should be carefully racked off and bottled.

Blackberry cordial is made by adding one pound of white sugar to three pounds of

ripe blackberries, allowing them to stand twelve hours, then pressing out the juice, straining it, adding one-third part spirit, and putting a teaspoonful of finely powdered allspice in every quart of the cordial, it is at once fit for use.

This wine and cordial are very valuable medicines in the treatment of weakness of the stomach and bowels, and are especially valuable in the summer complaint of children.

CURE FOR "SCRACHES IN HORSES. Wash clean with warm castile soap suds, then anoint with this mixture, well rubbed together:—Equal quantities of fresh lard, gunpowder and spirits of turpentine.

SYRUP FOR PRESERVES.—An excellent syrup is made in the following manner: Take 8 pounds of bright, clear New Orleans molasses or sugar house syrup, and mix with it 3 pounds pure water, and 1 pound of coarsely broken clean charcoal. Stir and boil the mixture 15 or 20 minutes and strain while hot through flannel. Wipe the kettle clean, and boil again with the white of an egg, till the syrup would form a candy in cooling, then strain again and put in the fruit and cook as usual. Preserves made in this way have a peculiar pleasant flavor, and keep better than when made with sugar.

CURE FOR THE SUMMER COMPLAINT.—This syrup is said to be a specific for the summer complaint. In 1832 it was successful in more than one case of cholera. To 2 quarts of the juice of blackberry, add 1 ounce loaf sugar, $\frac{1}{2}$ oz. nutmeg and $\frac{1}{2}$ oz. of allspice. Boil all together for a short time, then strain it and when cold add a pint of 4th proof brandy.

Take from a tea-spoonful to a wine-glass full according to the age of the patient, until relieved. It will spoil practice but save life.

CURRENT WINE.—Let your currants be ripe, mesh them with your hands and to every quart of the pulp add three pints of water. Mix them well together, and let them stand till they have done fermenting, then strain them through a hair sieve, and to every gallon put four pounds moist sugar. When the sugar is perfectly melted, put the liquor in a cask with a little dissolved isinglass. To every ten gallons, add one pint of brandy; barrel it up, and let it remain one year, then bottle it up.

EDITOR'S TABLE.

WATER-TOWN CHRONICLE FOR SALE.—Mr. Hadley, the founder and proprietor of this establishment, now offers it for sale, on account of declining health. We regret the retirement of friend Hadley. He has labored assiduously to build up his establishment, and has been eminently successful. Here is a rare chance for a printer, possessing a small capital. We know of none better. It is a paying establishment, and located in one of the most prominent and prosperous inland towns in the State.

MINER'S DOMESTIC POULTRY BOOK.—This is a new work of 256 pages, by T. B. MINER, Geo. W. FISHER, Publisher, Rochester, N. Y.; to whom we are indebted for a copy. This work is intrinsically valuable to every breeder of poultry, from the fact of its being a compilation of practical experience, which the author has collected from his own and that of other practical breeders. It is the quintessence of all its predecessors, while it possesses very much that is new and valuable. It contains no extraneous matter—each contributor imparting what he has to say as clearly and concisely as possible. We have examined the work thoroughly—for we are one of the fowl men of the day—and have no hesitation in pronouncing it a most useful treatise upon the rearing of poultry.

NORTH AMERICAN REVIEW.—The first three Nos. of a publication with the above title have been received. The work is edited by G. W. Binckley, and published monthly, at Cincinnati, by Abbott and Bentley, at \$2 per annum. Its articles are well written, and manifest much ability and shrewdness on the part of the editor. Its object is "to examine the leading questions in Politics, Religion, Literature and Commerce." It does this without fear, but not always without a *Silver-greyish* squint. It is peculiarly severe on the "Uncle Tom Mania." The articles on Literature and Commerce, which we have read, are good. While the Review exhibits to a good degree the conservative spirit, it is evidently slightly radical. While it is plain in its dress and words, it is neat and dignified in its appearance. We shall look for its coming from month to month, with more than a common interest.

The population of Philadelphia has increased thirty per cent. during the last two years.

THE SCIENTIFIC AMERICAN.—This useful work commences volume IX on the 17th, of September. See Prospectus.

APPLETON'S MECHANIC'S MAGAZINE, for August is on hand. Every mechanic should take this work, and we are sure every one would if self interest was consulted.

MERITED.—The Albany Atlas contains a long and well merited notice of the Agricultural Implement and Machinery Establishment of Messrs. WHEELER, MELICK & Co., Albany. Messrs. W. M. & Co., do a very extensive business, and their Machines are gaining a wide spread reputation. They employ over 100 men, and turn out a large amount of work annually.

GREEN CO. AG. SOCIETY.—The citizens of Green Co. have formed a County Agricultural Society. The following are the names of officers elected:

E. T. Gardner, President.

Wm. McDowell,

Thos. Fenton.

Jacob Teneyck,

Wm. C. Green,

John Broughton,

Hugh McKibbin, Vice Presidents.

J. V. Richardson, Recording Secretary.

J. A. Bingham, Corresponding Secretary,

James Bintliff, Treasurer.

FINE WOOL.—Geo. O. Tiffany Esq., of Milwaukee, who is one of the farmers, has sent us a fine specimen of wool sheared from one of his sheep, accompanied with the following challenge: "If any friend or acquaintance of yours, can show as good a sample of wool under the microscope, I will give him my sheep and a copy of the *Farmer* during his natural life time."

We reckon our chances here, for a life subscriber, extremely problematical. [Ed.]

THE CANKER WORM.—The papers from all sections of New England speak of the terrible ravages of this unwelcome visitor. As far as our observation goes, the apple trees are dispoiled of their foliage, and the fruit almost entirely destroyed. The worm seems to have disappeared—whether permanently, or to renew its attacks another season, cannot now be known. We trust our farming friends will omit no efforts to learn its habits and its character, so as to discover a remedy for its devastations.

[Contopook Transcript.]

PROSPECT OF THE HOG CROP.—To most of our readers the prospect of the crop of hogs at the West is a matter of much interest, as upon that may depend the number fattened by small farmers in N. Y., and in other grain growing and stock raising States. In a recent issue of the Cincinnati price current, we find the following information with regard to the prospects at and near St. Louis, which is supposed to be reliable.

[Rural New Yorker.]

"The farmers are prepared for low prices for hogs this coming season. The crop will be larger than was ever known through Illinois, Iowa, and Missouri. I have heard of no contracts having been made as yet. Packers are of opinion the market will open here at less than \$4. The corn crop is good, and I am told by parties from different sections that hogs will be much cheaper than last year."

O. H. KELLEY, Secretary Benton County Agricultural Society, Minnesota, writes to B. P. Johnson, Sec. N. Y. S. Ag. Society:

"I notice some of the recipients of seeds from your Society, do not meet with success in raising the Wild Rice of Minnesota. The probable reason is, that you obtain it from the Indians, ready prepared for cooking, i. e., parched and hulled. When first gathered it has a hull, similar to the oat, or rather bearded wheat; it is then put into a frying pan and stirred over a slow fire, as we roast coffee, until dry enough, when they, (the Indians,) rub it in their hands, and blow the hulls away. I will try to gather some fresh seed for your Society in the fall, and at the same time give you an account of it. I see no reason why it can not be cultivated in the ponds in your parts, as at high water, during freshets, it is often washed out of the lakes, into the creeks and small rivers, where it takes root. It certainly needs no cultivation, more than to plant it."

CARROTS FOR DYSPETIC.—Young carrots are among the most wholesome of all vegetables and greatly assist digestion. French cooks, in many of their stewed dishes, introduce finely chopped vegetables, young carrots being the most important. Chemists have determined the carrot to possess a digestive stimulus which exists in a peculiar acid found in the vegetable.

The Farmers in Iowa say it is almost impossible to sleep at night on account of the racket made by the rapid growth of the corn. So says an Exchange.

EXTRAORDINARY HEIFERS.—The Journal of the New York State Agricultural Society for August, makes mention of two extraordinary Heifers, belonging to a Mr. Finlay of Saratoga. The heifers are 14 months old, nearly the size of ordinary cows, a cross of the Short horn and Dutch breeds. One of the heifers has quite a bag, and is giving milk: she has been kept upon the farm since she was dropped, and has had no access to a male. This is a very remarkable case, the like of which has seldom we believe, been noticed.

Boston is emphatically a railroad city. No less than one hundred and fifty-two trains leave there daily, viz:—17 by the Old Colony, 18 by the Providence, 25 by the Worcester, 26 by the Fitchburgh, 15 by the Lowell, 30 by the Boston and Maine, and 11 by the Eastern.

It is said that over three hundred thousand bushels of grain were destroyed by the fire in Oswego.

HOGS.—The Louisville Journal publishes a table of the number of hogs in eighty-eight counties of that State, over six months old, showing an aggregate excess on the number last year of 192,000 head. There is thirteen counties yet to hear from; the total increase in the State will therefore be about 215,000 head.

In Union College, Agricultural Chemistry will form an important department next winter, apartments being provided for it in a new building 80 by 50 feet, which also contains the finest apparatus room in this country.

SULPHATE OF ZINC.—TO FARMERS.—A correspondent of the New England Farmer, who was formerly a practitioner of Medicine makes some very interesting and useful remarks about the application of the sulphate of zinc in solution, as a wash for horses, cattle, sheep &c. He asserts that it is excellent for sore teats in milch cows, and mentions a few cases where its application was at once effectual and permanent. For washing all kinds of wounds and sores, we believe that the sulphate of zinc will be found in vantage by those who use it, superior to any solution with which we are acquainted. We have been acquainted for a number of years with its useful properties for inflammation of the eyes, for which a very weak solution should be used; also for washing all kinds of sores. So says the Scientific American, and other authority affirms what is here stated.

NEW ADVERTISEMENTS.—We call the attention of our readers to the advertisements of the MOUNT HOPE NURSERY, Rochester N. Y.—Messrs. Elwanger & Barry, proprietors; Catalogue of Agricultural Books—C. M. Saxton, Publisher, N. Y.; Ross' Conical Grist Mill—Joseph Sedgebeer, Agent, Geneva, Ashtabula Co., Ohio; L. Moses' Cabinet Shop, Janesville.

MOUNT HOPE NURSERIES.—We have received from Messrs. Elwanger and Barry their descriptive Catalogue of fruits for 1853—a very interesting and useful pamphlet of 28 pages. It contains a description of every kind of fruit, and of every variety of each, cultivated at the Mount Hope Nurseries, besides many useful hints to the cultivator. It may be seen at our office.

NEW MUSIC STORE.—We inadvertently omitted in the August No. to notice this new accession to the wants of our City. Messrs. Pease & Co. are prepared to supply any and all things in their line of trade, just as cheap and as good, and, perhaps, a little more so, than any other establishment in the West. See their advertisement.

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Mechanics, Inventors, MANUFACTURERS.

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VOLUME IX of the SCIENTIFIC AMERICAN commences on the 17th of September. It is chiefly devoted to the advancement of the interests of *Mechanics, Inventors, Manufacturers and Farmers*, by the diffusion of useful knowledge upon those important branches. It is edited by men practically skilled in the arts and sciences and is widely regarded as a sound and able journal. Nearly all the VALUABLE PATENTS, which issue weekly from the Patent Office, are illustrated with Engravings, and the CLAIMS of all the PATENTS are published in its columns; thus making the paper a perfect SCIENTIFIC and MECHANICAL ENCYCLOPEDIA for future as well as present reference. The SCIENTIFIC AMERICAN is very extensively circulated—its circulation of the last Volume exceeding 18,000 copies per week. It is in form for binding; each Volume contains several hundred Engravings, and over Four Hundred Pages of Reading Matter, with an Index. The practical recipes alone are worth to any family much more than the subscription price.

The Publishers offer the following valuable prizes for the largest list of subscribers sent in by the 1st of January next:—\$100 will be given for the largest list; \$75 for the second; \$50 for the third; \$45 for the fourth; \$40 for the fifth; \$35 for the sixth; \$30 for the seventh; \$25 for the eighth; \$20 for the ninth; \$15 for the tenth; \$10 for the eleventh; and \$5 for the 12th. The cash will be paid to the order of the successful competitor, immediately after January 1st, 1854.

TERMS:—One copy one year, \$2; one copy six months, \$1; five copies six months, \$4; ten copies six months, \$8; ten copies 12 months \$15; fifteen copies twelve months, \$22; twenty copies twelve months, \$28 in advance.

Southern and Western money taken for subscriptions.

Letters should be directed to MUNN & Co, Fulton street, New York.

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VOL. V. JANESVILLE, WIS. OCTOBER, 1853.

NO. 10.

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These terms will be strictly adhered to. The circulation of the FARMER is large, and the amount of advertising limited; which renders it a more valuable medium for advertising than if a larger space was appropriated to this department.

Short Horns.

We lately took a trip to the farms of Ex-Gov. Bebb and J. P. Reynolds, his son-in-law, of Elyda, Ill., for the purpose of examining their herds of Short Horns, &c. Mr. Reynolds gave us every opportunity to examine these cattle and to answer any and all our inquiries respecting them.

Gov. Bebb and Mr. Reynolds are from Ohio, and are well acquainted with the celebrated herds of Dr. Watson, Mr. Renick, and others, who have been engaged in the introduction of fine and improved stock into that State. These gentlemen have some very fine cattle of the Short-horn Durham stock, and from these they are now breeding a stock which will prove of immense value to this region. They have now two bulls—*Prince Albert 3d*, and *Col. Fremont*, and several cows, heifers and calves, thorough bred, together with several head of grades. These bulls and cows have taken the first and second premiums at the State Fairs in Ohio, and are doubtless the best animals in this region of country. We take great pleasure

in speaking of these cattle, as it has become high time that our farmers and those who design to raise stock, should take the subject into consideration and settle upon the kind of cattle which they will breed. We would offer for their consideration the breed known as the *Durham*, or *Improved Short Horn*, as being the best possible for them to raise, either for beef or milk, and especially so when they would combine the two objects. They also make good oxen though doubtless excelled by some other breeds, for this purpose. Under the term *Short Horn cattle* are included what are called the *Holderness* and *Teeswater* breeds. We wish to recommend that branch of these cattle bred by Mr. Charles Collings of England, from his cow, *Lady*—the mother of the *Improved Short Horns*. These cattle are of good size, and are beautifully mottled with red spots upon a white ground, sometimes a more intimate blending of colors, forming a beautiful roan.—Their backs are straight, head small, throat clean, neck fine, handsomely thickening towards the shoulders, chest deep and thick, carcass full and round, well ribbed home, quarters long, hips and rump wide and even, hair fine and silky, skin thin and soft to the feel. This breed of cattle in their early maturity, their good milking properties, and their readiness to take on flesh, surpass all others. All things considered, we are inclined to believe that this is the best breed for the farmers of the west, especially where they have good feed, as they have in most portions. It is important that farmers turn their attention to this subject.

The great demand for cattle for our markets at home and abroad, and especially for exportation to California and Oregon which is now very great, and destined to be vastly greater, urges this subject upon the consideration of our agriculturists.— We shall be pleased to notice any effort on the part of the farmers to improve the stock of the State. †

EFFECTS OF DRAINAGE ON THE TEMPERATURE OF SOILS.—All the rain that falls upon our fields must either be carried away by natural or artificial drainage, or having thoroughly saturated the soil on which it falls, be left on the surface to be carried off by evaporation. Now, every gallon of water thus carried off by evaporation requires as much heat as would raise five and a half gallons from freezing to the boiling point. Without going to extreme cases, the great effects of the heat thus lost upon vegetation cannot fail to be striking, and I have frequently found the soil of a field well drained higher in temperature from 10 to 15 degrees than that of another field which had not been drained, though in every other respect the soils were similar. I have observed the effects of this on the growing crop, and I have seen not only a much inferior crop on the undrained field, but that crop harvested fully three weeks after the other; and, owing to this circumstance and the setting in of unsettled weather, I have seen that crop deteriorated fully 10 per cent in value. So says B. Simpson, in the Journal of the Royal Agricultural Society.

In addition to the above arguments in favor of under-draining, says Professor Mapes, the lengthened season of growth may fairly be taken into account. A field in the latitude of New York, thoroughly under-drained is rendered thereby nearly as early as one in Philadelphia left in its natural state, so far as under-drains are concerned. We find corn crops on such fields ripen much earlier; and turnips and other late crops planted on thoroughly under-drained soils are not so soon arrested in their growth by winter frost.

In addition to this, we assert without fear of contradiction, that one third less manure of an organic kind will answer the purposes of a well under-drained acre, better than of one not so treated. [Plow.

Feeding Bees.

In No. 40, Vol. 8, of your valuable paper, I discovered you again state that bees make 2lb. of honey from 1 of sugar, and I have seen it stated by scientific men, and men of note in the world, that bees would convert sugar or molasses, &c., into pure honey. Now I wish to state that the idea is wholly erroneous. You have no need to "revise your chemistry," so far as quantity is concerned.

The best food for bees, aside from honey itself, is a thick syrup made of refined loaf sugar, a middling sized colony will remove from three to four lbs. in 24 hours, let this be done in the fall season, and three months thereafter examine the comb into which it is placed, and you will find pure grained loaf sugar instead of honey—and just the same result will be found by feeding your "six cent brown sugar." Take 1 lb of brown sugar and make of it a syrup, and when taken into the hive it will weigh two pounds heavier than it did before the feeding, but there is not two pounds, more honey, but two pounds of syrup placed in the comb, and upon examination three months thereafter it will be found to be grained sugar; but the same colony will not remove but little over half as much of this as they will of the loaf sugar. But the best feed is the honey itself. I have known a large colony to remove from 6 to 8 lbs. of honey from pans in twelve hours, thus you may see from the quantity taken up, it is impossible that it should undergo any considerable change in the stomach of the worker. A bee will fill its stomach from the pan in from 30 to 50 seconds, and empties it in less time, hence it is evident that the whole theory, with regard to the capacity of the bee to change the nature of the substance taken in the honey stomach or sack is false, and to show the confidence I have in the truth of the above statement, I will agree to give \$100 for a stand of bees that will convert sugar into pure honey, such as they get from white clover or flowers in general. H. L. EADES.

[Scientific American.]

A TRUE SAYING.—He who encourages a young man in the pursuit of agriculture, is doing a good work for the morals of society a hundred years hence.

Barns

We hardly think that our farmers generally are able to build barns of sufficient size, furnished with the necessary fixings for the storing of the hay and grain, which is raised in such vast quantities upon our extensive prairies, and especially in such seasons as the present, and at the same time give the proper stable room for cattle and horses. Yet, we are of the opinion that they are generally able to build much better than they usually have.—Some very good barns have been erected; we wish there were more. We think that it would be money well invested to build a good, substantial and roomy barn upon every farm. Farmers must not forget that the times with them are greatly changing and that, too, for the better, and that it will now well pay to house cattle and horses, and well store their produce, under suitable buildings erected for the purpose.

Farmers will remember, also, that cattle well housed, require much less food to keep them in a good condition, than when compelled to endure the severities of our winters unprotected. The saving of feed in this way is no small item of consideration. Again, the same amount of hay and grain goes much farther when well stored and fed from barns; and finally, good barns will add much, not only to the value of your farms, but do much to improve their appearance. Though we are not exactly of the opinion of most Dutchmen, so proverbially characterized as snug farmers, that the cattle and horses must *first* be furnished with a good barn, and afterwards the family provided for; yet we think most of our farmers are becoming too regardless of the value and importance of erecting good barns and sheds. At the present high price of lumber, no very extensive buildings can be erected. As many conveniences as possible must be made to cluster under one and the same roof. If possible they

should be built upon a side hill that it may be convenient to occupy the space under the barn as stables, hog pens, poultry house, &c., and at the same time have it easy to get into the upper portion with loads. †

MANUFACTURES ON THE MERRIMAC.—A correspondent of the New York Tribune, writing from New England says, "What is to be the destiny of New England? The question has forced itself upon me, and I turn to its consideration. To him who only looks at the rocks and the hard soil it seems to say, 'Work or die,' and in still stronger language it says to him who comes from verdant and blooming prairies, 'Work and die.' But such a fate is not for the hardy sons of the bleak hills of New England. The valley of the Merrimac is to be filled with a dense population. Commencing at the ocean in Newburyport, with a population of 13,000; ten miles up stream is Haverhill with its 10,000; six miles further up is Lawrence, with its 14,000, and a growth unparalleled in the United States or in the world. Ten miles further up the river is Lowell; with its 35,000; fifteen miles more gives us Nashua, with its 10,000; fifteen more Manchester, with its 19,000; and fifteen more Concord, with its 11,000. These are but the large towns—while between these are respectable villages of one, two and three thousand inhabitants. Here we have at least 150,000 inhabitants, supported directly by manufacturing, to say nothing of the farmers, who find their markets close at their doors. This growth is not to stop here. The Merrimac has not its equal for power in the world, when its length is taken into account. With the Winnipiseogee for a reservoir, its resources are almost boundless; and the sites are not half nor a third of them occupied."

A LATE French paper announces the exhuming of the body of a man who died 37 years ago, of hydrophobia. His remains were in a perfect state of preservation, when they were exhumed, while the shroud and coffin in which they were placed were entirely destroyed.—The same paper adds that "this is the third time within the last ten years, that it has been discovered that death from hydrophobia prevents decomposition."

For the Wisconsin & Iowa Farmer.

Hops.

DR. SIR:—Will you have the kindness to inform me whether leached, or unleached ashes are a good manure for Hops—and what the value, per load, of leached ashes is, compared with barn or house-manure for this crop. The soil being mostly loam, with a small portion of sand. Also on soil mostly clay, or loam surface, and clayish subsoil.

GEO. W. BISHOP.

Lake Mills, Jefferson Co., Aug., 1853

REMARKS:—Not having an analysis to which we can now refer for the constituents of the hop, and remembering only in regard to them, that the mineral, or inorganic portion, such as potash, soda and lime—the principle constituents of ashes—is comparatively small, and that it is *humus* forming substances that are more especially wanted for its highest perfection, we should be strongly inclined much to prefer a large quantity of the richest rotten manure—say 50 or 75 cubic yards to the acre—well incorporated with the soil, or deposited in the hill—to all the leached or unleached ashes that could be obtained.

Fresh manure should never be applied to hops. Well rotted barn-yard manure has in it all the essentials for the production of the hop, while ashes are destitute of the organic ingredients essential to the formation of the *supulinic grains* upon which the value of the hop depends.

For the Wisconsin & Iowa Farmer.

Raising Hops:

ED. FARMER:—I would like to hear more said in the Farmer about raising hops. It appears strange to me that so little should be said about a branch of farming, which I think must pay well at the prices which hops have brought for two or three years past. More attention should be paid to this business here in the west, and I think there would be, if the manner of cultivation was better understood. There

is one disadvantage here, I know—the scarcity of poles—but that is not insurmountable. In the March No. of the Farmer I read a short article on the subject, but would like to hear more from those who have had experience in the business.

Muscatine, Iowa.

ENQUIRER.

REMARKS:—“Enquirer” may find something in the following communication of interest. It was received last spring, but too late for the season. We give it now for the benefit of those who may wish to prepare for planting next spring.

For the Wisconsin & Iowa Farmer

Cultivation of Hops.

MR. MILLER:—I see frequent calls for farmers to write for their paper, and also a letter from Mr. Steen, on the cultivation of Hops. I will give you in my plain way, the method I practiced in tending my father's hop yard.

The soil selected was a sandy loam. I stuck stakes ten feet apart in lines each way to mark the hills—then with a hoe drew the earth from around them—making a hole large enough to hold three or four shovels full of well rotted manure; after the manure was placed in the hill and while it was moist, I scraped the earth up over the manure so as to make quite a mound—say from five to six inches above the natural level of the earth; I then took my roots—being cut so as to have too or three sets of eyes—and laying them upon the mound, with a forked stick pushed the butt-end of the root down into the manure, setting it upon its end—I put from four to five roots in each hill. They soon start growing and need no other attention the first season than keeping them clear of weeds and covering the hills with manure before frost. In the spring I raked the manure off the hill and around it, so as to bring it up to the vines in cultivating them in the summer. In the spring, after the vines start, I set the poles, which were from

twelve to sixteen feet in length—two to each hill—set about two feet apart in a direct line on the outside of the roots. As soon as the vines are large enough, two of the best are selected and tied to the poles—leaving two more for each pole for some time on the ground, for fear some accident may happen to those upon the pole; all others must be cut off as soon as they start. The best vine is not always the largest—select the thickest one, that looks like a stock of asparagus, and destroy those which put forth leaves soon after coming up. The vines on the poles should be kept from lopping over or crossing each other while running up the poles. If the poles are smooth they will require tying up oftener than if the pole is a little rough or knotty; woolen yarn is the best kind of string for tying up with.

In New York and Pennsylvania, hops blossom about the last of July, and ripen about the first of September, but in this State not quite so soon. As soon as the outside of the hop begins to turn a little brown, they must be picked—sooner than this is better than later. After being picked they should be dried as fast as possible and not scorch them, when they will fall apart, after being pressed hard in the hand, they are dry enough for sacking. They should then be taken from the kiln and laid in a room until a damp day—then pack them into sacks. They will pack better by being a little damp. They are packed in a box made of plank, two feet square and six or seven feet long. The cloth designed for the bag is put inside, then the hops put in and tramped hard. The most common way is to lay the box on one side—taking off the upper plank—but the proper and best way is, to set the box upon the end, then put in the bag and pack the hops. This mode of packing enables the brewer to take them off the end in layers and does not expose the rest to the air.

Always cover the hop hills with manure in the fall after picking. The third spring, and each succeeding spring, the runners must be cut off. This is done by taking a small pick and raising the white roots, and cut them off close to the main root—taking care not to disturb the brown or knotty one that runs down.

Rock Co., 1853.

OAK BUSHES.

Experiments

MADE WITH MILK-PANS OF VARIOUS MATERIALS, TO ASCERTAIN THE BEST SUITED FOR DAIRY PURPOSES.

According to the experiments of M. Hinneber, of Moisburg, (Germany,) one hundred quarts of milk yielded in

Tinned milk-pans	1.07	Hanover lbs. butter	
Glass	7.04	"	"
Wooden	"	"	"
not painted	6.96	"	"
Earthenware	6.92	"	"
Wooden, painted	6.67	"	"

According to the same experiments, there required for one pound of butter—

Of milk produced by stall feeding, with green clover 15.00 Hanover qts. milk.

Of milk produced by stall feeding, with tare and clover	15.67	"	"
by pasturing	12.84	"	"

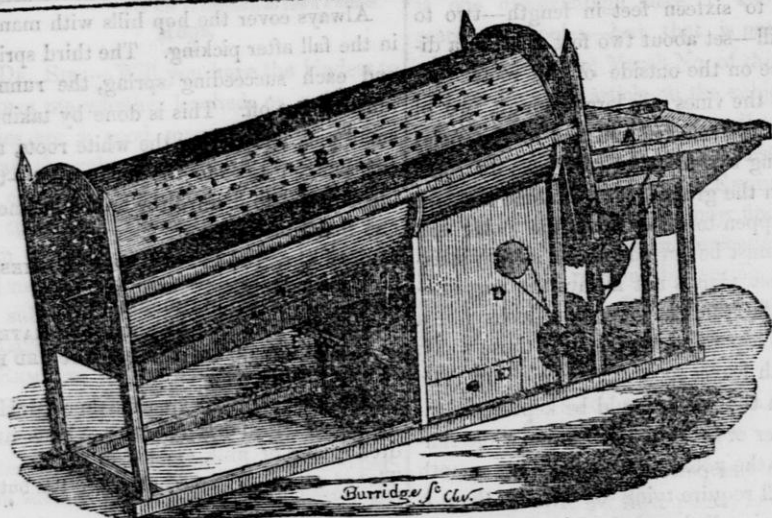
Showing that the milk obtained from cattle fed upon pastures, is richer in butter than milk got from cows which have been fed in the stable with one and the same kind of plants: even a mixture of tare and clover seeds, shows an increase over clover alone.

[Polytechnic Journal.]

Hops.—It is predicted that the hop crop will be one-third short the present year. Producers in Madison county, N. Y., having contracts to deliver large lots the present fall, have been obliged to go into the market and buy enough to make themselves good. They have paid as high as 30 and 35 cents. The English crop is expected to be light also.

The Canada crops to the northward of Montreal are very poor; the summer drought ripened the grain before the heads had filled; the hoppers have eaten the grass, and the cattle have been turned into the oats.

By an arrival from Nassau a great failure of the crops is reported at the grand Bahamas; and it was feared the inhabitants will suffer great privations.



BERGEY'S THRESHING MACHINE.

The above engraving is a perspective view of this Threshing, Separating and Winnowing Machine. A, is a case, in which revolves an ordinary threshing cylinder, having a teathed concave. B, a revolving perforated cylinder, which has an inclined position, and into which the straw and grain passes after it is threshed. C, a chamber or passage way, for the conveyor or apron. D, the fan box; E, the grain drawer; and F, the seive or vibrating screen.

The revolving cylinder B, by its motion and position agitates the straw, and works it off towards its lower end, where it is discharged in the direction of the arrow.

The grain as it emerges from the meshes of the cylinder, drops upon an endless apron or belt, and is conveyed by the travel of the belt, to a vibrating screen, F, where it is acted upon by the fan in the ordinary manner, the grain passing through the screen into the drawer E.

The advantages gained by this mode of sustaining and operating the cylinder, are, first, that it can be made entirely open at both ends, so as not to obstruct the passage of the straw through the same, by cross bars, central shafts, or other like obstructions, to be found in other machines, made with revolving cylinder screens; second, that it will not require so much power to operate it, as the screens heretofore used, because the separator which in other

machines is generally the heaviest and most cumbersome part of the machine, is, in this arrangement, made to turn upon the peripheries of anti-friction wheels, which themselves turn upon short axles, inserted in the frame of the machine; and, third, there is less gearing required in this arrangement than in others.

Any further information of this machine can be obtained by addressing Mr. S. S. Barry, Cleveland, O.

Vegetation of the Frozen Region.

The following extract is from Seaman's "Botany of the Voyage of H. M. ship 'Herald,' under the command of Captain Kellet," in search of Sir John Franklin. The accounts of the remarkable phenomena exhibited in these icy regions will be found new and exceedingly interesting:

"The soil is always frozen, and merely thaws during the summer, a few feet below the surface. But the thawing is by no means uniform. In peat it extends not more than two feet, while in other formations, especially in sand or gravel, the ground is free from frost to the depth of nearly a fathom, showing that sand is a better conductor of heat than peat or clay, and corroborating the observation of the curate J. D. Hooker, who, after a series of experiments in India, arrived at the same conclusion. The roots of the plant, even those of the shrubs and trees, do not pene-

trate into the frozen subsoil. On reaching it, they recoil as if they touched upon a rock, through which no passage could be forced.

It may be surprising to behold a vegetation flourishing under such circumstances, existing independent, it would seem, of terrestrial heat. But surprise is changed into amazement on visiting Kotsbue Sound, where on the tops of icebergs, herbs and shrubs are thriving with a luxuriance only equalled in more favored climes. There from Elephant to Escholtz Point, is a series of cliffs from seventy to ninety feet high, which present some striking illustrations of the manner in which Arctic plants grow. Three distinct layers compose these cliffs. The lower, as far as it can be seen above the ground, is ice, and from twenty to fifty feet high. The central is clay, varying in thickness from two to twenty feet, and intermingled with the remains of fossil elements, horses, deer, musk-oxen. The clay is covered by peat, the third layer bearing vegetation, to which it owes its existence. Every year during July, August and September, masses of ice melt, by which the uppermost layers are deprived of support and tumble down. A complete chaos is thus created; ice, plants, bones, peat, and clay, are mixed in the most disorderly manner. It is hardly possible to imagine a more grotesque aspect. Here are seen pieces still covered with lichens and mosses, there a shoal of earth, with bushes of willows; at one place a lump of clay with senecious and polygonums, at another the remnant of the mammoth, the tufts of hair peculiar to burial places, and evidently decomposed animal matter. The foot frequently tumbles over osteological remains, some elephants' tusks measuring as much as twelve feet in length, weighing more than two hundred and forty pounds. Nor is the formation confined to Escholtz Bay. It is observed in various parts of Kotsbue Sound, on the river Buckland, and in other localities, making it probable that a great portion of North-western America is under a solid mass of ice. With such facts before us, we acknowledge that terrestrial heat exercises but a limited influence upon vegetable life, and that to the solar rays we are mainly indebted for the existence of those forms which clothe with verdure the surface of our planet.

A curious fact is stated respecting the condition of the vegetable world during the long day of the Arctic summer. Although the sun never sets, while it lasts, plants make no mistake about the time, when if it be not night it ought to be; but regularly as the evening hours approach and when a midnight sun is several degrees above the horizon, droop their leaves and sleep even as they do in more favored climes.

"If a man," observes Mr. Seaman, "should ever reach the pole, and be undecided which way to turn, when his compass becomes sluggish, his time piece out of order, the plants which he may happen to meet, will show him the way; their sleeping leaves tell him that midnight is at hand, and at that time the sun is standing in the north."

The following Table shows how much one team and plow will perform in a day in acres and tenths:

Width of furrow in inches.	Acres and tenths.	Width of row in feet	Acres and tenths
5	1.1	2	4.7
6	1.2	2½	6.0
7	1.5	3	7.2
8	1.6	3½	8.1
9	1.8	4	9.6
10	2.0	4½	10.8
11	2.2	5	12.0
12	2.4	5½	13.2
14	2.8	6	14.5
16	3.2	6½	15.6
18	3.6	7	16.8
20	4.0	7½	18.0
22	4.4	8	19.2

The above Table is constructed on the presumption that the team moves at the rate of about 3 feet per second, or 2 miles per hour for 10 hours per day. Horses and mules in good condition will do this, and if you would keep them in good condition its enough for them to do. [Planter.

A VALUABLE TABLE.—The following table will be found exceedingly valuable to many of our readers:

A box 24 inches by 16 inches square and 28 inches deep will contain a barrel [5 bushels]

A box 24 inches by 16 inches square and 14 inches deep will contain half a barrel.

A box 16 inches by 15 1-8 inches square, and 8 inches deep, will contain one bushel.

A box 12 inches by 11 1-2 inches square and 8 inches deep will contain half a bushel.

A box 8 inches by 8 1-4 inches square and 8 inches deep, will contain one peck.

A box 8 inches by 8 inches square and 4 1-2 inches deep, will contain a gallon.

A box 4 inches by 4 inches square and 4 1-2 inches deep, will contain one quart.

Classification of Manures.

The following classification is taken from Stockhardt's Field Lectures. The best manures are given first.

I. MANURES RICH IN NITROGEN.

1. *Substances containing ammonia*, (very forcing.) Ammonical salts of all sorts, good guano, urates, root, putrid animal substances, such as blood, flesh, skins, &c.; poudrette, gas-water, putrid urine, draining compost, fermented stable manure, especially of sheep and horses.

2. *Azotized substances that are easily decomposed*, (somewhat quickly forcing.)—Horn-shavings, glue, boiled flesh, bones liquified by acid, steamed and highly pulverized, oil-cakes of all sorts, malt-grain and the refuse of beer-breweries, fresh urine, drainings, stable manure beginning to rot.

3. *Azotized substances that are decomposed with difficulty*, (slowly forcing.) Bonedust coarsely powdered, woolen-rags, fresh stable manure.

4. *Substances containing nitric acid*, (quickly forcing.) Nitrate of potash [ordinary saltpetre,] nitrate of soda or Chili saltpetre, nitrate of lime, or decayed stable-walls, rubbish of old clay walls, and old compost earth.

II. MANURES RICH IN CARBON: [forming humus.]

Stable-litter, straw, foliage, weeds, forest leaves, saw-dust, lawn and garden trimmings, rotten mould, turf, earthy brown-coal, and vegetable substances of nearly all sorts.

III. MANURES CONTAINING POTASH:—[strongly forcing.]

Potash, nitrate of potash, malt-grain from beer-breweries, urine of breeding cattle, wood ashes, foliage, stalks and leaves of all sorts, lawn and garden trimmings, building rubbish, street-sweepings, compost, burnt clay and loam, marl of many sorts.

IV. MANURES CONTAINING SODA: [less visibly operative.]

Common salt, refuse salt, Chili saltpetre, soap boilers' lye, urine, certain sorts of manuring salts, soda felspar, and some other kinds of stone, soap-suds, dish-water.

V. *MANURES RICH IN PHOSPHORIC ACID: (seed fermenting.)* Burnt bones, bone black, sugar refuse from refineries, phosphorite, and a few other kinds of stone, poor guano,

raw bones, bone dust, true guano, animal substances of all kinds, oil-cake, malt-grain, from breweries, solid human and animal excrements, stable-manures, urine of carnivorous animals, wood ashes, straw, leaves, &c.

VI. MANURES CONTAINING SULPHURIC ACID: (partly direct manures, partly absorbent of manuring substances.)

Gypsum, sulphuric acid, green vitriol, sulphur-coal, ashes of pit-coal, turf, and brown coal.

VII. MANURES RICH IN LIME:

Burnt lime, chalk, marl, gypsum, ashes of brown coal and turf, building rubbish, pond mud, and soap-boilers' ashes.

VIII. MANURES RICH IN SILICA:

Pit-coal ashes, as also ashes of all sorts, sand, straw, stable-manure, &c.

IX. MANURES THAT PULVERIZE THE SOIL.

Sulphuric acid, muriatic acid, lime, marl, humus, &c.

X. MANURES THAT IMPROVE THE SOIL:

Lime, marl, loam, sand, pond-mud, vegetable mould, turf, &c.

Here is a fine classification of the chief manures that are employed as fertilizers. They should be chosen and applied according to the nature and condition of the soil, as well as with reference to the crop, that is to be produced. Many of the manures are compounds—hence the reason why you find them repeated in the different classes. The farmer should preserve this classification and use it until he finds a better one.

Sorrel—How to get Rid of It.

A friend informs us that he has a field of five or six acres so completely overrun with sorrel, that nothing else can grow; and he wishes to know how it may be exterminated.

Had you informed us more about the relative location of your field as respects the surrounding land, we might have given you information perhaps, that could have been made more permanently beneficial. You inform us that the field in question is what is called "second bottom."

Lands of this description, if extending back from the "first bottom" to the high-lands surrounding, are sometimes affected by springs making from the higher grounds, rendering the surface too moist and cold

too long in the spring for the rapid growth of the grasses, and when the surface becomes dry and warm at a later period the plant in question will vegetate and thrive. Frost, upon lands of this description, will also produce its worst effects, by throwing out the grass roots and thus giving useless plants a better chance to gain the ascendancy.

If I have rightly apprehended the position of your field relative to the surrounding ground, the first step to be taken for permanent improvement of your field, would be to dig a ditch of sufficient size and depth to carry off all the water that may ooze from the adjacent hillside, and that accumulates from rains and snows at different seasons of the year. If, however, your soil is naturally dry and warm, the ditching will not be needed, as the *cause* of the evil will be different from that indicated above.

In the latter case we would advise that the whole field be deeply plowed—twelve or fifteen inches would be none too deep—making the dead furrows the channels for all the surface water.

As soon as possible, set about gathering up every available fertilizer—muck, if you have it on your farm, or if you can get it from the farm of your neighbor; deposits from the streams and along the highway, decayed leaves and vegetation from the low places in the woodlands; leached ashes from the ashery, or unleached if you have them, and to add to the above to apply to such a field as yours, you can *afford* to purchase a few bushels of lime, say ten bushels per acre, (slaked will answer and cost probably, only about \$3.00 for five acres.)

Let these substances be well mixed together and then use a top-dressing on the inverted sod, applying at the rate of twenty good wagon loads to the acre. Mix well with the soil by harrowing, and the last of August or first of September, sow your field thus treated, with wheat. Early in March ensuing, sow the field with red clover. After the wheat is taken from the field, dress the clover with leached ashes, using ten or twelve loads to the acre. Feed the clover but slightly, if at all, before the first of June ensuing, and then not too close; or if you prefer it, the clover may be cut for hay. The summer following, plow out your clover, and again sow with wheat,

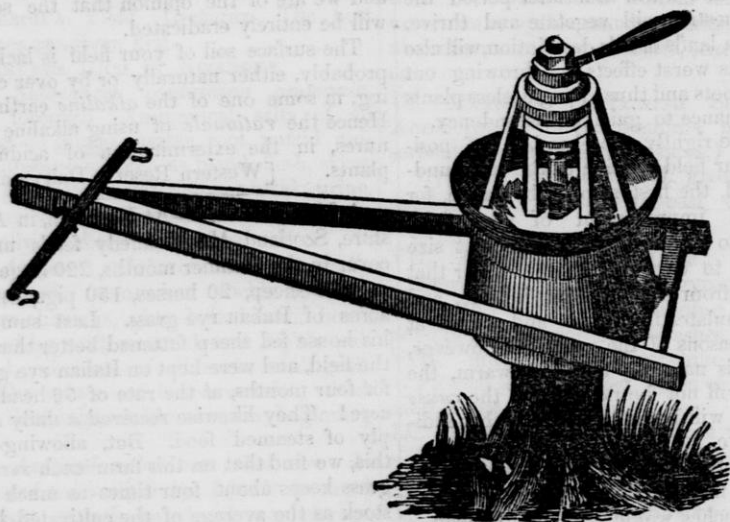
the next spring stocking down to clover, or to clover and timothy as suits you best, and we are of the opinion that the sorrel will be entirely eradicated.

The surface soil of your field is lacking, probably, either naturally or by over cropping, in some one of the *alkaline* earths.—Hence the *rationale* of using alkaline manures, in the extermination of acidulous plants. [Western Reserve Dairyman.

A MODEL FARM.—At Myremill, in Ayrshire, Scotland, Mr. Kennedy feeds under cover in the summer months, 220 large oxen, 460 sheep, 20 horses, 150 pigs, on 90 acres of Italian rye grass. Last summer his house fed sheep fattened better than in the field, and were kept on Italian rye grass for four months, at the rate of 56 head per acre! They likewise received a daily supply of steamed food. But, allowing for this, we find that on this farm each acre of grass keeps about four times as much live stock as the average of the cultivated land of a similar quality in England. Mr. Kennedy has attained this high state of fertility by the use of liquid manure, distributed over the farm in pipes, and applied to the surface by the force of steam in a jet, like a shower of rain. To use Mr. Mechi's graphic words, he can "increase his wet days" as he finds it necessary, and when other people's fields are parched with drought, his are glistening with perennial verdure. Having an unfailing supply of water, he can either mix it in his manure tank with a more enriching substance, and so shower it over the land, or he can sow guano broadcast over the grass, and then wash it in dissolved, or if nothing but moisture is needed, he applies that only.

A PARAGRAPH FROM GOETHE.—Goethe has written few passages more beautiful than this: "The year is going away like the sound of bells. The winds pass over the stubble, and find nothing to move, only the red berries of that slender tree, which seem as if they would fain remind us of something cheerful; and the measured beat of the thresher's flail calls up the thought that in the dry and falling ear lies so much nourishment and life."

WHITE WEED.—Capt. David Trefethen, of Dover, N. H., lately eradicated this troublesome weed from a field that was literally covered with it, by simply sowing his seed with salt when the weed was in blossom.



PORTABLE MILLS.

The above engraving represents an improvement in Portable Mills, adapted to the various grinding and crushing purposes of a farm, which are now required and found so profitable in the improved modes of feeding stock. It is the invention of Mr. Charles Leavitt, of Quincy, Illinois.

This mill differs from those of ordinary construction in having the relative position of the grinding surfaces reversed, that is, the external hollow cone or concave grinder is made to revolve on the inner or convex cone, which is stationary, and so formed with an internal cavity, that it may be readily and securely fixed on a post, or any tree stump which may stand convenient, and thus all exterior framing, as well as shafts or spindles, are entirely dispensed with; and the lever to which the horse is connected, for giving motion to the mill, is attached directly to the exterior cone, and moves it round about as exhibited in the engraving.

The adjusting screw apparatus, is also simple and effectual, and is worked from above without interfering with the operation of the mill. By it the mill is made capable of application to a vast range of purposes, as well as being made to grind coarse or fine, as desired.

Among the uses to which this mill is adapted, are the following, viz.: shelling corn, grinding and crushing corn and cob together, grinding meal from corn and other grains, crushing roots, grinding bark, mashing apples for cider, and other like purposes.

[Scientific American.]

Right Education of Horses.

That horses may be educated will not appear strange to those who have closely observed the intelligence often manifested by that noble animal. The present remarks are designed to give some information in relation to the rearing and treatment of young horses, not so much however with reference to their food and drink, as to their quietness and docility.

That there is a difference in the temper and disposition of different horses, is not denied; but at the same time it is averred that where a horse is so vicious and unmanageable as to render him unsafe in the harness, it is chargeable in almost every instance to the treatment he has formerly received.

The training of the colts should commence when they are about three months old, so as to have them become familiar with the family before they are taken from the dam. Some colts are inclined to use

their heels rather too freely; in such cases great care is necessary. They should be approached carefully, and caressed and curried, and they will soon submit to have their feet taken up and handled without resistance; and this will aid in quieting them while being shod, as the horse seldom forgets what he has, once learned.

A common method of weaning colts is to take them to some back lot, and place a heavy yoke or "poke" on the neck, which they are compelled to wear for several weeks until their spirits are completely broken, and they become more or less "ewe necked," from which defect they rarely wholly recover. Another method, but little less objectionable, is to shut them in the stable; but this does not learn them to respect a fence in the least. Now the better way and the one that the writer has practiced with uniform success, is the following—Prepare a yard, (if it contains an acre or more, the better,) having a strong, high fence, so high that the colt cannot possibly leap over it—from six to seven feet will be sufficient—and let the materials of which the fence is composed be the same as those enclosing the field where the colt is in future to be kept—either walls, boards, or rails, as the case may be—and place him there without attaching any artificial appendage whatever, and let him understand that *it is the fence alone that prevents his escape*. He should be generously fed, and also have a shed to which he can retire at pleasure. After he has been subdued in this way, he may be turned into any field *having a fence of the same kind*, and of ordinary height, and he will not attempt to break over. Even the most spirited horse brought up in this way, cannot be induced to leap a fence four and a half feet high.

The practical benefits of the above plan are great. In passing through the country one is pained to see so many noble looking horses shackled and hampered in every conceivable way that ingenuity can invent, much to their detriment in putting on flesh, to say nothing of the perplexity and trouble to the owner in adjusting the trappings every time the beast is turned out or taken up, and all for the want of a little care during the first year,—for it is eminently true in this case, that an ounce of prevention is worth a pound of cure.

There are many horses not "true" or re-

liable, in the harness, having the habit to stop, or balk, especially at the foot of a hill; this is caused by having been at some time overloaded, and perhaps unmercifully beaten. Neighbor A. has a beautiful span of bays three years old, that he has been breaking in, the past winter; he wishes to haul some rails from the farther side of the farm, and as the colts have become tolerably "handy," he puts on nearly a full load which they manage very well until they come to a "hard spot," and there stop. The driver looks at the load, then looks at the horses: they are nearly as large as the old team,—he *knows they can draw it*, and is determined they *shall*. So he commences beating and pounding the poor animals until he is nearly worried out, when he throws off his load and goes home with a loss of both time and temper, and the horses damaged to the amount of twenty-five dollars each.

Now it is quite probable that the horses had *strength* enough to draw the load in question, but they had not had sufficient *practice*; they did not know how to apply their strength, and did not work in concert. They should have been made to draw only light loads for a long time, and then by increasing the weight gradually, as their strength and experience increases, they can be made to do all the work they are capable of doing, and will always work kindly, and may be depended on under all circumstances. [Rural New Yorker. [c.]

THE HORSE TRADE.—The Horse Trade has of late years assumed an importance in Philadelphia and New York, which few persons attach to it. A fact is mentioned by the Lancaster Independent Whig, which shows this strikingly. It is, that a single forwarding house in this city, Messrs. Powl and Mishler, has, since the beginning of the present year, sent 1183 head of horses, by railroad, to Philadelphia. So exceedingly great has been the growth of this city as well as New York, that the number of horses required for us is immense, and constantly augmenting. Hard work, warm weather, disease causality, age, and other causes, diminish the number of our horses continually and the chief supplies to replace them, and to meet the growing demand, are derived from the interior of our own State and the great West. [U. S. Gazette.

HORTICULTURE.

Important Discovery in Grafting the Peach Tree.

BY PROF. CHAS. G. PAGE, M. D., WASHINGTON.

It is almost a universal practice with gardeners to bud the Peach Tree, and in nearly all treatises upon peach culture, budding is recommended in place of grafting, and grafting is spoken of as impracticable. In the year 1838, my attention was first turned to the subject. An old farmer of Fairfax county, Virginia, who boasted of his skill in grafting, informed me that he grafted one hundred peach trees and failed in every one. Upon trying the experiment upon a single tree, and with the utmost care, I failed also, and saw what appeared to me to be the true cause. My mind at that time being familiar with surgical subjects, I remembered that after a wound or incision was made, adhesion would not take place as the blood flowed or a discharge was kept up; that *coagulum* must be formed before union could be effected; that where the circulating vessels were too active or forcible, ligatures or mechanical means were employed to diminish the force of circulation. There appeared to me to be a close parallel between the conditions and practice in the surgical case and that of the Peach Tree.

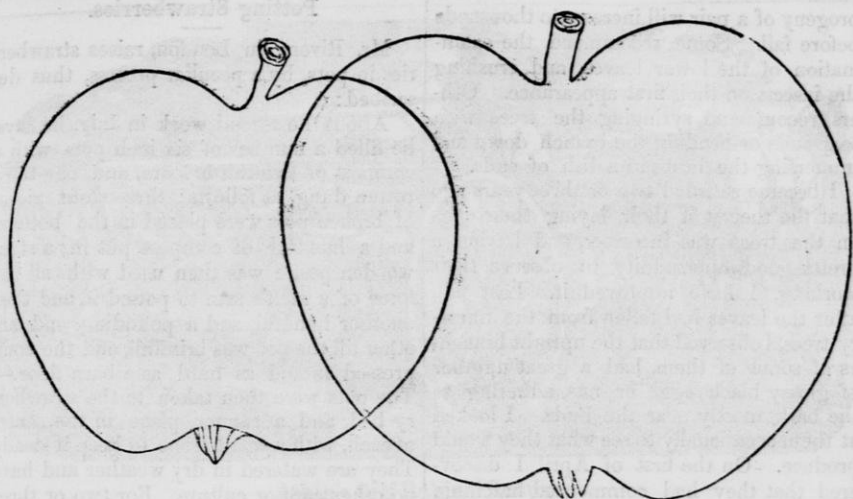
The Peach Tree is one of very rapid growth and active circulation. When an incision is made, or the tree headed down in the grafting season, there is an *overflow* of sap; when the scion is inserted in any of the usual ways, and the grafting composition applied, the excessive flow of sap prevents the formation of *coagulum* or *callos*, and thus interferes with the adhesion or union between the stock and the scion or graft. This flowing of the sap was to be stopped, and several ways suggested themselves readily. The first was to cut the tap-root. This was done by passing down a long and sharp knife and severing the root at a depth according to the size of the tree—for large stock going deeper than for small ones. The second was to head the stocks down, lift them from the ground, cut the tap-root, and re-plant the stocks, inserting the graft either before or after plant-

ing. Under both these modes of checking circulation, the grafts inserted—after the common mode of cleft grafting—took perfectly well. The proportion of grafts succeeding with this treatment was as great as with Apple Trees. I have even succeeded in grafting in this way in the month of August; and there is now upon my father's farm at Pageville, Fairfax Co., Virginia, a large and vigorous Peach Tree in the full prime of bearing which was grafted in the summer of 1839. There are also at the same place a number of Peach Trees grafted in the spring of 1839, which are in a healthy and flourishing condition, and which are, of course, now nearly fourteen years old from the graft, and fifteen from the seed. They look rather better than trees budded the same year: but this difference is perhaps owing to their better treatment. A remark may not be amiss here concerning the age of the Peach Tree. It is not naturally a very short lived tree as is generally represented and believed. The early failure of this tree in New Jersey, has probably given rise to this opinion, although it is true that elsewhere the tree shares a similar fate under unfavorable circumstances. We have seen Peach Trees here *two feet in diameter*, at the base of the trunk, and *fifty years old*.

The philosophy of the grafting operation is clear. The cutting of the tap-root, or a general shortening of the roots, checks at once the circulation of the sap; and if the tree be still kept in a growing condition, the *callus* will readily form, and the graft take kindly. There is some advantage in being able to graft this tree, although it buds so easily and during so long a season, (frequently it buds in this region, from the middle of June to the last of September.) The grafted tree is earlier in fruit, and, in case budding should fail, the stocks may answer for grafts in the spring.

APPLES.—Mr. Eben Bartlett, 2nd, has presented us with some apples which have the peculiarity of being very sweet on one side, and wholly sour on the other. We suppose the peculiarity was occasioned by the budding of two varieties. [Woonsocket Patriot.]

Charcoal, it is said placed around rose bushes, and other flowering plants, has the effect to add greatly to the richness of the flowers.



Early Red Apple of Indiana.

FRIEND MILLER:—The outlines represent the Early Red Apple of Indiana.—The specimens from which the outlines were taken, were the largest and smallest of about one half bushel of fruit grown on a tree of 8 years growth, from the root graft, standing in our grounds.

Fruit medium size, rarely large; round or roundish conical; color a beautiful deep red, striped and mottled on pale red or yellow ground, distinct stripes of pale red on yellow ground in shaded specimens. Stalk, short, set in a shallow even cavity. Calyx prominent, closed in a shallow, slightly uneven basin. Flesh white, deeply stained with red; sub acid, agreeable, fragrant; a good table fruit. Season, from 10th to 25th of August, here, succeeding Early Harvest. Tree erect, spreading; a free grower; shoots dark colored, glossy; leaves small crenate-serrate, upper surface uneven, glossy; under surface downy, edges slightly waved. The exceeding beauty of this fruit makes it desirable for early marketing.

Aztalan, August 1853.

J. C. B.

The best investment for a farmer is live stock and plowshares.

THE GOOSEBERRY RHUBARB.—On the 21st ult., the Cincinnati Horticultural Society, made the following report on the subject of this new variety of Rhubarb:

"This new variety, which has been named the Gooseberry Rhubarb, is a seedling from the Victoria, and is said to be like the namesake of its ancestor, remarkably prolific, and, although not so large as that of the Great Rhubarb, it excels each of them in its healthy appearance, and upon being brought to trial in due form, it was adjudged to be more agreeable to the taste; the acid of the plant in this variety being diminished without any diminution of the lively flavor, which constitutes its just excellence."

Aphides—when and where they lay their Eggs, and how to destroy them.

Every farmer and fruit grower is well aware of the injurious effects of aphides on most kinds of fruit trees. They are always found on the leaves and new growth of wood, where they live by sucking the sap. They often take so much sap from seedling nursery trees as to prevent their being budded for several years in succession. All writers on their habits, that has it been my lot to read, say that they ascend the tree, early in the spring, and deposit their eggs on the lower leaves; that they continue to increase through the summer, and that the

progeny of a pair will increase to thousands before fall. Some recommend the examination of the lower leaves, and crushing the insects on their first appearance. Others recommend syringing the trees with soap suds or bending the branch down and immersing the limbs in a dish of suds.

I became satisfied two or three years ago that the theory of their laying their eggs on the trees was incorrect, and having a pretty good opportunity to observe their working, I have improved it. Last fall, after the leaves had fallen from the nursery trees, I observed that the upright branches of some of them, had a great number of glossy black eggs or nits, adhering to the bark, mostly near the buds. I looked at them occasionally to see what they would produce. On the first of April I discovered that they had commenced hatching, and they were the green aphides. I cut some scions the latter part of the winter and placed them in my cellar, and in using some of them on the 7th inst., I placed one that had the above described eggs on it in the sun, and during the day they commenced hatching.

For the remedy take one lb. of sal soda (which can be obtained for five or six cents) dissolve it in four quarts of warm water, and let it cool. Take a sponge and fasten it to a stick for a swab; cut the sponge so as to admit the limbs, and apply the solution whenever the trees are infested with the eggs.

It can be done at any time after the eggs are deposited in the fall till they commence hatching, and it will destroy them. No one need fear any injurious effects to the trees from the wash, and it is equally as good as any soap wash to remove moss and other noxious substances.

[Middlesex Farmer.]

STRAWBERRY RUNNERS. These should be treated as weeds, and kept hoed from among the regular rows of strawberry plants. They have precisely the same effect upon the crop as the same quantity of weeds, and cannot fail to lessen the amount, as well as to diminish the quality. A writer in the *Gardeners' Chronicle* remarks:—"So convinced am I of the propriety of cultivating this fruit in separate and distinct plants, and of cutting off the runners, that I have this season taken out a plant between each of my plantations, thus making the distance between each plant four feet by three.

Potting Strawberries.

Mr. Rivers, in London, raises strawberries in pots, by a peculiar process, thus described:

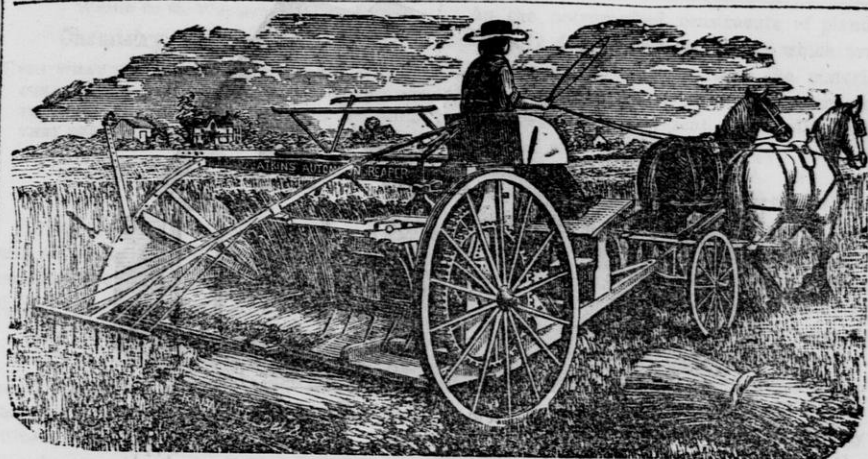
About the second week in July, he says, he filled a number of six inch pots with a compost of two-thirds loam, and one-third rotten dung, as follows: three stout pieces of broken pots were placed in the bottom, and a handful of compost put in; a stout wooden pestle was then used with all the force of a man's arm to pound it, and then another handful, and a pounding, and another till the pot was brimfull, and the compressed mould as hard as a barn floor.—The pots were then taken to the strawberry bed, and a runner place in the centre of each, with a small stone to keep it steady. They are watered in dry weather and have no other care or culture. For two or three years I have had the very finest crops, from plants after this method, and those under notice promise well. If the pots are lifted, it will be apparent that a large quantity of food is in a small space. I may add, that from some recent experiments with compressed earth to potted fruit trees I have a high opinion of its effects, and I fully believe that we have yet much to learn on the subject.

[Rural.]

The Earth, Plants and Man.

The plants disclosed in the ruins of Herculaneum, Pompeii, and Stabia, enable us to judge of the alteration in them during the long period of 1700 years. The remains of plants—the painted plants—those in Mosaic, remain to instruct us.—Many of those painted are fanciful. The Stone Pine, the Cypress, the Aleppo Pine, the Dwarf Palm, wheat, barley, millet, no Indian corn, no rice, broad beans, perfectly like our modern; asparagus in bunches, onions, radishes, turnips, a small gourd; the olive—a glass jar contained olives which retained their flavor; the oleander perfectly the same with ours; no lemon, orange, or citron; the citron was introduced into Italy in the third century, 200 years after the cities were buried; the orange and lemon still later, pears, peaches, apples, cherries, almonds, plums, medlars, pomegranates were there.

What ought to be done to-day, do it, for to-morrow it may rain.



Atkin's Self Raking Reaper.

Above we give a correct representation of Atkins' Automaton or Self-Raking Reaper and Mowing Machine.

By invitation, near the close of the last harvest, we visited the farm of Mr. Sears, to witness the operation of this machine in a field of oats. Our expectations of its capacity for performing its work were more than realized. It moved steady, cut the grain handsomely and deposited it in gables ready for the binder—and with one half the help required by other Reapers.

The general arrangement of this machine and its advantages are summed up as follows, in a pamphlet, handed us by Mr. Wright, the proprietor:

"It is unnecessary to compare this with other machines and claim for it superior excellence over all others. Of this each one must judge for himself. In some respects, however, the arrangement has great advantages.

The main driving wheel is large, being four feet in diameter, with a four inch felloe, giving steadiness of movement in passing over rough ground, and good support in soft. The grain wheel, too, is two feet in diameter, and may be increased if desired.

The frame-work is well braced and stiff, supported and strengthened with iron-wherever necessary.

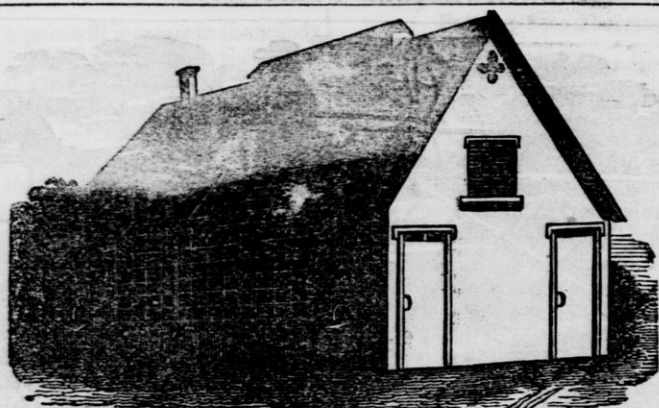
The gearing is compact and symmetrical, well boxed in and protected from the dirt.

The team is relieved of weight and of the side draft by resting the hounds upon a pair of front wheels, making it also convenient to turn a square corner, as will be learned by a little practice.

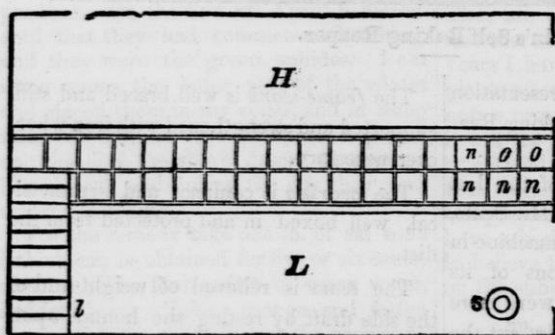
The driver's seat is elevated and easy, giving him good command of his team, while at the same time he can watch the operation of the knife, reel, and raker, and if necessary instantly throw the machine out of gear by the lever (*k*) at his right side.

The careful handling of the grain by the rake, saves a small per cent. over raking by hand. The height of cutting is regulated by a simple arrangement, and the knife may be set close to the ground.

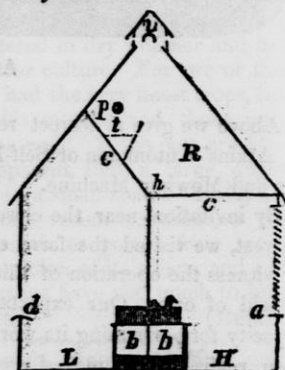
The draft is comparatively easy for a pair of horses, and is not perceptibly increased by the raker. The team, however, ought to be changed every two or three hours."



Perspective View of a Hen House Fig. 1.



Ground Plan.—Fig. 2.



Transverse Section.—Fig. 3.

Plans for a Poultry House.

In answer to many inquiries for the plan of a convenient and economical Poultry House we give the above, from the N. E. Farmer. It was published in the first volume of the Farmer, but will be new to a very large portion of the present subscribers. This plan may be modified in size and style, to suit the convenience of every one. This plan is a good one, but we have one or two more to give, as soon as the cuts can be prepared.

"Fig. 2, shows the ground plan of the above, in which *L*, denotes the laying apartment, *H*, the hatching room, each 6 by 29 feet; *n, n*, &c., nest boxes for laying 14 by 14 inches, and 10 inches deep; *n, n*, &c., nests boxes for setting hens, of the same size; *l*, a ladder or steps, leading into the loft, and *s*, a stove for warming the apartment, if desirable, when the weather is cold.

Fig. 3, shows a transverse, or cross section

of the building, from the bottom to the top with the internal arrangements. *L*, denotes the laying apartment, and *H*, the hatching room, divided in the middle by a partition; *n*, the nest boxes, resting on tables, three feet above the floor or ground; *b, b*, boxes, or troughs containing water, grain, brick dust, sand, ground oyster shells, and other materials for the convenience of the fowls; *d*, an aperture, or door, three feet above the ground or floor, for the ingress and egress of the fowls; *a*, a lattice window, three feet above the floor or ground, for the admission of fresh air to the setting hens; *R*, the roosting place or loft, shut out from the laying and setting apartments by the ceilings, *c, c*; *h*, a hole or opening in the ceiling for the escape of air below into the loft; *v*, the ventilator at the peak of the roof; *p*, the roosting pole, or perch; *t*, a trough, or box, for retaining the droppings, or dung."

Written for the Wisconsin and Iowa Farmer.

Chemistry of Plants. No. 4.

UPON WHAT DO PLANTS LIVE—FROM WHENCE COME THEIR MATERIALS—WHAT IS THE EFFECT OF PLANTS UPON THE SOIL ON WHICH THEY GROW, AND THE AIR IN WHICH THEY LIVE.

BY PROF. S. P. LATHROP, M.D.

Having spoken of the origin of the constituents of plants, it next becomes our duty to consider the effect which plants have upon the soil upon which they grow, or to show

THE RELATION OF CROPS TO SOILS.

It will be remembered that, in the first number of this series, we brought to view the fact that plants are composed of two classes of constituents—the *organic* and the *inorganic*, and that the organic may be divided into two sub-classes, according to their composition—either in their possessing or not possessing nitrogen, and accordingly called *nitrogenized* or *non-nitrogenized* constituents. It will be seen, then, that we have really three kinds of constituents in plants, to be furnished them from some source, or sources. In the last number the fact was brought to light, that the first of the two classes—the organic, including the nitrogenized and non-nitrogenized, may be derived wholly from the atmosphere, but more generally is derived from the vegetable matters decaying in the soil.

When such substances as straw, leaves, saw-dust, moss, turf, and bog-muck turn to putrefaction, their color becomes black, when they are converted into a substance called by the chemist—*humus*, or *humic acid*, of which we hear much in agricultural books, and composed chiefly of carbonic acid and water. The nitrogen, however, of the nitrogenized portion of the organic constituents is derived more especially from the animal matters decaying in the soil. As strict nutrients for plants, the non-nitrogenized portion of the organic constituents are subordinate in importance, because Nature labors under no deficiency of carbonic acid and water, and, as we have said, plants can readily absorb these materials from the moisture of the soil, as also from the air, in any quantity they may require, provided only that they are duly supplied with the necessary *nitrogenized* and *mineral*, or *inorganic* materials. Hence the importance (and this is the thing to be remembered by all agriculturists,) of *animal* and other *proper mineral* ingredients in every soil designed for heavy crops.

As the nitrogenized constituents of plants are mainly derived from substances which are applied as manures, and not from the materials which are usually, or naturally present in soils, we shall, for the present, speak only of the relation of crops to soils, with respect to their mineral, or inorganic constituents. We may, at some future time, speak more particularly of the necessity of a due supply of nitrogen to crops, in order that they may be properly furnished with the necessary elements to form the nitrogenized substances mentioned in Table I. No. 2. We may here remark that these nitrogenized constituents of plants are all important in the proper perfecting of grains which are designed as food for animals.

In order that all may readily see, and fully appreciate the relations of growing crops to the soil upon which they grow, we will give a Table of analysis of three kinds of soil by Jas. F. W. Johnstone,—one fertile without manure; another fertile with manure, and a third hopelessly barren—and a second table exhibiting the composition of most of our prairie soils; and a third table exhibiting the amount of each kind of inorganic material required for several crops named and usually cultivated, also showing the amount of this kind of material carried off from the field in each ton or from each acre, as the case may be.

TABLE V.

Materials in every 100 lbs. of soil	SOILS.		
	Fertile without manure.	Fertile with manure.	Barren.
Organic matter	9.70 lbs.	6.00 lbs.	4.00 lbs.
Silica	64.80 "	83.30 "	77.80 "
Alumina	5.70 "	5.10 "	9.10 "
Lime	5.90 "	1.80 "	.40 "
Magnesia	.85 "	.80 "	.10 "
Oxide of Iron	6.10 "	3.00 "	8.10 "
Oxide of magnesia	.10 "	.30 "	.05 "
Potash	.20 "	trace.	trace
Soda	.40 "	"	"
Chlorine	.20 "	"	"
Sulphuric acid	.20 "	.08 "	"
Phosphoric acid	.45 "	.18 "	"
Carbonic acid	4.00 "	.45 "	"

It must not be understood that every soil that is fertile without manure, or that is fertile with manure, or is barren, will always be found to be composed of exactly the above ingredients, or precisely in the above proportions. The table is simply an example of certain soils, which were found to possess the qualities given them by actual experiment and were afterwards analyzed to determine their constituents. They are simply indications of the composition of soil generally:

TABLE VI.

A mean analysis of 10 specimens of soil from Dane, Green, Lafayette and Grant counties made by Dr. D. D. Owen:

In every 100 lbs. of soil, there was—

Organic matter	10.90 lbs.	Potash and soda	2.30 lbs.
Lime, Magnesia, and Iron	.90 "	Silica	81.40 "
Water	3.70 "		

This table is to be regarded only as a pretty good indication of the constituents of our soil. The soil in the south-eastern portion of the State has probably more lime and magnesia, and less silica; while the potash and soda would not vary much from that given in the table.

TABLE VII.

CONSTITUENTS.

CROPS.	Silicates	7 Phosphates	3 Lime	4 Magnesia	1 Potash	2 Soda	9 Chlorine	8 Sul. acid	Alumina	Ox. Iron	Ox. Magnesia	Basis of Calculation	Total per ton or acre
Wheat per acre	92.00	5.70	8.64	2.31	3.97	4.47	1.05	1.86	3.09			25 bush 60 lbs.	123.09 lbs
Rye per acre	94.00	2.65	8.75	1.07	6.32	2.81	.80	7.10	.32	.58	.46	25 bush. 54 lbs.	124.86 "
Barley per acre	87.13	6.03	11.56	4.06	7.41	5.21	1.54	3.00	2.98	.25	.36	30 bush. 50 lbs.	129.53 "
Oats per acre	172.03	2.00	5.71	1.92	26.91	2.25	.31	2.58	.39	.50	trace	50 bush. 34 lbs.	240.60 "
Corn per acre	173.60	93.00	13.50	5.00	66.10	61.92	28.40	29.69		trace			466.21 "
Broom corn, ton	11.96	13.13	.15	.04	10.05	.87	.85					25 bush. seed only	27.05 "
Buckwheat per acre	.61	18.70	.95	4.99	6.70	.73	.09	.69				25 bush.	33.56 "
Beans per acre	7.23	7.88	14.56	6.98	38.64	14.71	1.54	2.28	.79	.16	.12	64 lbs 15 bush	94.89 "
Peas per acre	27.34	7.50	64.28	9.34	13.58	7.39	47	8.20	1.60	.56	.16	66 lbs 11-2 ton straw	140.42 "
Flax per acre	8.90	14.76	11.60	1.24	17.38	4.28	.06	7.81				15 b, 56 lbs	66.03 "
Potatoes per acre	3.06	21.42	6.00	9.66	50.40	18.00	1.26	10.40				6 tons tubers	120.20 "
Parsnips per acre	286.72	608.64	20.16	14.56	785.12	280.08						6 tons roots	2175.82 "
Timothy per ton	24.29	10.15	.12	.30	18.46	.61	1.49	2.48					5 9.90 "
Red clover per ton	7.22	1.14	55.60	6.66	39.90	11.58	7.24	8.94	.28				128.56 "
White " per ton	29.66	10.10	46.96	6.10	62.10	11.58	4.22	7.06	3.80	1.26			182.64 "
Red top per ton	25.16	8.25	6.00	3.98	2.75	5.77	1.20	4.38					57.67 "
Millet per ton	18.57	10.80	trace	trace	4.11	2.06	trace	.04		.60			35.58 "
Bl'd beet per ton	2.49	8.58	1.99	.72	2.96	.29	1.00	2.47					20.46 "
Cabbage per ton	.59	13.95	2.90	3.60	28.50	32.36	80	11.23					93.93 "
Carrots per ton	6.25	15.30	.04	trace	30.24	5.74	1.46	1.36					60.39 "

We have compiled the above table from the various and most reliable sources within our reach. We have given at the head of each crop the bases of our calculation, whether per ton or per acre, the number of bushels and their weight, so that if wrong in any case, any one can correct the error and make the calculation which he most desires for himself. It is not to be supposed that the table is wholly without imperfection, yet it is believed that it is substantially correct. The different varieties of the same kind of grain would furnish a slight difference

in the amount of the different constituents. It is hoped that the table, which has been prepared at much labor, will be found to be of much value to the farmer for reference, and that it may serve to guard him from robbing his fields of the elements necessary to their fertility, under a mistaken view of the relation which crops, cultivated on any soil, sustain to that soil. That he may the more surely guard himself against a course of constant cropping without proper manuring, or returning to the soil the peculiar ingredients which he removes in the crop, let him make an estimate of the weight of these several ingredients that he removes from his fields in his corn, oats and wheat, potatoes, &c., and compare that with the weight of the same materials in the manure which he puts upon his fields. The table will suggest the reason of the injurious practice of the continued cultivation of the same kind of crop upon the same field. By this practice, the particular ingredients which characterize the crops—as potash in potatoes—is wholly or almost entirely removed from the soil, and hence it is disqualified, *constitently*, for the production of the crop. This soil might bear other crops, which are characterized by other ingredients than potash—such, for instance as some of the grasses—which are more particularly abundant in lime.

It is asserted by good agricultural writers, that out of the twelve and a half millions of acres of land under improvement in New York, eight and a half are suffering deterioration at the rate of three dollars a year by parting with its elements of fertility. It is also said that the wheat lands of Ohio, are rapidly diminishing in value, for the raising of wheat, from the same cause. It must be equally so of the land of Wisconsin, which is being cultivated year after year, without manuring, and from which the same crop is removed so many years successively.

Here it may be well to bring into view an important fact, easily deduced by any one who should give his attention to the table—that plants may be divided into classes according to the inorganic elements which predominate in their composition. Leibig first proposed a division of this kind. The great difficulty known in the case, is, that different parts of the same plant, differ greatly in the kind of elements which may be found in their composition. See Table III., No. 3., Professor Norton has given in his "ELEMENTS OF SCIENTIFIC AGRICULTURE,"

a division of plants, which is of much value and which we here introduce. "There are three great leading classes of ash established: 1. *The grains*, where phosphoric acid predominates; 2. *The roots*, where potash and soda abound; 3. *The grasses*, where lime becomes quite important. 4. The various kinds of *straw* may, perhaps, be said to constitute a fourth class, when silica is from 1-2 to 2-3 of the whole weight. 5. It may be well, also, to mention a fifth class in trees, the ash from the wood of which contains, in very numerous cases, more of lime than of any other substance. There are particularly large quantities in the apple and other fruit trees."

Many deductions and of great importance to the agriculturist might be made from the above table, but we have not space for them here. It is true that in order that the farmer may make the best application of the principles involved, it is desirable that he should know the chemical composition of his soils, and "should it ever become possible through State patronage, or otherwise, for farmers to obtain reliable analyses of their soils, farming would become more of an exact science. The farmer would know what crop to put on each field, and with what manure to prepare the land. It would often happen that one dollar's worth of just what the land required for a particular crop, would benefit that crop as much as ten dollars worth of manure thrown on at random." The several tables, however, if duly considered, will enable the farmer to preserve the fertility of his soil at a comparatively less cost, and to adapt his crops to his fields, by a suitable rotation of crops. He will be induced to return to his fields as much as possible of the same materials that he has removed by the carrying off of his crops. In fact all his operations may be carried on more understandingly, and he will feel a deeper and a more enlightened interest in the management of his farm. In the next number we shall speak of the application of manures, and the philosophy of the application of their different kinds and properties, &c.

For hoven or bloat, caused by eating clover, give a teacup half full of saleratus dissolved in a pint of warm water, and turned down a cow from a junk bottle.—Perhaps an ox might need a larger dose. A few spoonful of tar, put in the throat by the aid of a smooth stick, will also give relief.

Preserved Milk, Coffee and other Extracts.

Gail Borden, jr., formerly of Texas, but now of this city, to whom was granted a Council Medal at the World's Fair of 1852 for his celebrated Meat Biscuit, has taken measures to secure a patent for some exceedingly valuable improvements in preparing and concentrating sweet milk in such a manner that incipient decomposition is completely prevented, and a concentrated extract produced, either in cakes or in a more fluid state, which will keep sweet in any climate for months and perhaps for years. We have kept a quantity of this milk for three months, and although it has stood in a tolerably warm place, it is as sweet to day as when we received it.

Mr. Borden by the same improvements, extracts and concentrates coffee, tea, and other useful dietary matters, and produces those extracts in such a form that the strength of a pound of coffee can be carried in a vessel no larger than a small tea cup, and it will keep fresh in any climate, and for a number of years. We have given samples of the coffee, prepared by Mr. Borden, repeated trials during the past four months, and cannot but speak the most favorable terms respecting its good qualities, and the real benefits which we anticipate from its introduction into public use. For persons going on sea voyages, or on long over land journeys, a few small tin canisters will be sufficient to equip them, with a little warm water, of a good milk and coffee beverage, properly sweetened, in the midst of the ocean, or in the depths of the forest.

For domestic use it will be the means of saving much in families, especially in warm weather, and at no time need there be any necessity for a person taking a cup of milkless coffee, even after a thunder storm, or a week of hot weather, with the thermometer daily at 97 degs., in the shade, as it has been in this city during the past week.

The means by which Mr. Borden prepares his extracts are new, ingenious and philosophical, but as measures are adopted for securing patents abroad, we can not describe them at present; suffice it to say that although milk and other vegetable extracts have been made heretofore, the new process is entirely different and very superior. The milk prepared by the im-

proved process of Mr. Borden, even after it is months old, will, when dissolved in warm water and left to cool, produce a beautiful and sweet covering of cream.—The coffee and tea have all their aroma preserved, and retain all their peculiar qualities. In large dairies at a distance from cities, large quantities of sweet milk can be prepared by Mr. Borden's apparatus, and sent down to be sold in every grocery, and it may yet become as common to ask for a cake of milk as it is now to ask for a quart. The mode of preparing these extracts is economical, safe and certain, and we believe it is one of the most useful improvements that has ever been discovered [Scientific American.

We have tried in our family, Mr. Borden's Preserved Milk and Coffee, and we are satisfied that the preparations are most valuable. [Journal N. Y. S. Ag. Society.

Chloride of Lime a Preventive of Smut In Wheat.

BY WM. E. STEELE, M. D.

An experiment, of which the following is a detailed account, with the view of determining the value of chloride of lime as dressing for wheat, was conducted in the Botanic Garden of the Royal Dublin Society, under my superintendence. In the spring of 1850, 4 lbs. of the finest and cleanest wheat-seed was procured, 1 lb. of which was set apart without any preparation. The remaining 3 lbs. I caused to be mixed with large quantity of smut or bunt, [Uredo caries] sufficient to color, the seed uniformly of a light brown color in order to infect the seed with the fungus. One pound of this infected seed I then steeped for hours in a saturated solution of chlorine of lime—common bleaching powder—and, in separating it from the solution, mixed it with some dry sand, in order to render it more easy to sow. The third pound was steeped in a saturated solution of Glauber's salt; and after two hours, it was taken out and dried by sifting some quick lime over it—a dressing found by the French Commissioners who reported upon this subject to be the best which they employed. The fourth pound of seed infected was not subjected to any further treatment. These four parcels of seed, thus differently treated, were then sown in four separate

plots of ground. No difference in the period of sprouting or germination of the seed was observed. But the result of the experiment, which was apparent while the crop was standing, is set fourth in the annexed table. Plot No. 1, sown with 1 lb. of clean undressed wheat-seed; No 2, 1 lb. of infected seed, steeped in solution of chloride of lime; No. 3, 1 lb. of infected seed steeped in solution of Glauber's salt, and dried with quick lime; and No. 4, 1 lb. of infected seed, undressed. One pound of the ears of the produce of each plot, cut close off, was counted, and the number of the sound and smutted ears recorded.—In the same manner, the number of straws in one pound, deprived of the ears was ascertained. The following are the numbers each.

Plot.	Total No. of Ears in 1 lb. weight.	No. of sound Ears in 1 lb. weight.	No. smutted Ears in 1 lb. weight.	No. of straws to 1 lb. weight.
1	336	336	none	234
2	364	362	2	260
3	632	352	320	278
4	700	360	340	330

Among the numerous deductions which the foregoing estimation warrants, one is quite obvious—that the chloride of lime dressing is far more efficacious as a preventive of smut or bunt in wheat than the dressing so highly recommended by the French Commissioners, insuring not only the grain from the attacks of the fungus, but preventing the deterioration of the straw, which this *Uredo* appears also to occasion. [London Farmer's Magazine.

Cocoa Nut Tree.

In 1813, it was estimated that, on the southwest coast of India, ten millions of cocoa-nut trees were growing. The trees begin to bear when about eight years of age. The nuts that are intended for planting are allowed to remain on the tree longer than others. They are taken off when thoroughly ripe, after having been put in a shed or out house, till all the moisture of the thick outside husk or bark is dried up, they are hung in pairs over the branches of some trees near the house, where they remain till the young plants shoot up with a firm leaf through the eyes of the nut. Instead of hanging them up in trees, some persons put them in their gardens three or four hundred together, and half cover them with earth. In this way the young plants

soon make their appearance. When the leaf is about three feet high—at which time there are long straggling roots hanging to them—holes are dug in the ground, about two feet deep and one and a half in diameter, into which the plants are put, about two yards apart from each other; a little earth is thrown in upon them, but not so as to cover the nut. For several years they appear to advance but little in height. During this time, however, their trunk is increasing in bulk: and from the fifth to the seventh year, or thereabouts, they grow to a considerable height. Soon after, a sheath containing the blossom appears, shooting out from the thick butt-end of the leaf; and when about a foot high and two inches in diameter the sheath bursts; and in a few days the different portions of the flower, consisting of innumerable seeds, attached to a long stake, bend down gracefully on all sides. After awhile a great number of these seeds fall off, and small nuts, to the number of twenty to fifty, on an average remain on one stalk. From the time that the flower bursts, to the time that the nuts are ready to be gathered, six months elapse.

The leaves of some trees are twenty-five feet long, and the small leaflets that hang down from each side of the thick middle fibre, four feet long. As the leaves are of this length, and are very heavy, it is necessary that some provision should be made for attaching them firmly to the trunk.—This provision is made, and consists of a very strong net-like substance, extending about a foot along the base of the leaf; and as the inner part of the butt of the leaf is *scooped out* in order to grasp and enclose the trunk more firmly, this netting holds it tight round the tree, and binds it fast till it has performed its office of acting as a support to the cluster of nuts that rest upon it. This net work is called "matulla," and is one of the most curious productions of nature. The threads and fibers are so regularly crossed and interwoven, that to one unacquainted with the article it would appear to be a species of coarse cloth manufactured in the loom. Without preparation, this material is well adapted for sieves and filters; and its natural texture renders it in the hands of the ingenious, an admirable substance for the formation of clothes. [Annals of Science.

EDITOR'S TABLE.

Stock at the State Fair:

MR. D. HALL, of Gaines, Orleans county, N. Y., writes us that he will be at our State Fair at Watertown, with a variety of superior stock—consisting of Cattle, Sheep, Swine, and Poultry—all of which he will offer for sale on the last day of the fair.

It will be remembered by those who attended the last Fair held at Milwaukee, that Mr. Hall exhibited at that time, some fine stock—among which were a fine Devon Bull and some French Merino Bucks, to which premiums were awarded.

WISCONSIN FRUIT.—The fears which have haunted the imagination of our farmers, and which we have often heard expressed—that the soil and climate of Wisconsin were not adapted to the successful growing of the commonest varieties of fruits, should be entertained no longer. The experiment may be now regarded as having been fully and fairly tested. From the day we became a resident of the State, we have watched the progress of this branch of Agriculture, with a high degree of interest. Our conclusions are—drawn from palpable, tangible evidences—that fruit can be grown here, as abundantly and in as great perfection as in Western New York. With most of our farmers—even the earliest settlers—the raising of fruit still remains an untried experiment. The few who did turn their early attention to it, have not only demonstrated the practicability of the thing, but are now reaping a rich reward in plenty of fruit. Among this class, the name of Mr. James Caldwell deserves to be noticed.

MR. CALDWELL'S ORCHARD.—Early in September, we paid a visit to Mr. Caldwell's Orchard, which is about six miles north of this city. Mr. Caldwell purchased his place—then in a state of nature—in 1843, where he commenced a nursery and orchard in 1845. He has raised from the root, a fruit orchard which bears a favorable comparison with many of the best orchards to be met with in the East, according to its breadth. It occupies about ten acres, contains about two hundred plum trees in bearing, from which have been gathered this season nearly 100 bushels, embracing the most approved varieties. We noticed several trees of *Coe's Golden Drop*, bended to the ground with fruit. Mr. C. uses the wild root for

grafting in preference to the tame, for several reasons. The trees are dwarfed—come into bearing earlier—are more hardy, and will stand transplanting better, when the soil is, either excessively wet or dry. Besides Plums, Mr. C. has about 300 Apple trees—a goodly number of which are in bearing,—an acre in Strawberries, and Grapes, Gooseberries, and other small fruits, in great abundance. The whole are tastefully arranged and exceed any thing of the kind we had expected to see in Wisconsin for ten years to come. Our thanks are due Mr. Caldwell, for a fine collection of fruit, among which were some twenty varieties of plums.

FINE APPLES.—Mr Henry Tuttle, of Clinton, has presented us with some fine specimens of Apples. They are a choice variety, whether seedling or grafted. Mr. Tuttle says he purchased the tree, with others, from a pedlar and does not know the name of it. We have consulted Thomas, Cole, Barry, and Downing without finding anything like a correct description. We will give a correct outline of the apple in the November No.

THE FAMILY CIRCLE.—The last No. of this popular Magazine completes the Vol., and announces its union with the LADIES WREATH, under the name of the "Ladies Wreath and Parlor Annual." It is an excellent work,—finely illustrated, and made up of original matter: \$1 per year. Address Burdick, Reed & Roberts, No. 8 Spruce street, N. Y.

THE LADIES CHRISTIAN ANNUAL.—A Monthly of some 40 pages, neatly printed. From a hasty perusal of the No. before us, we judge it an excellent Journal. Its readings are of a high moral tone. Address James Challen, Philadelphia: \$3 per year.

THE PARLOR MAGAZINE.—Vol. 1, No. 3, 64 pages, \$2 per year: Jethro Jackson, Cincinnati. This Magazine is exceedingly neat in its appearance. The publisher says, "It will be our aim to blend valuable information and sound morality with the gratification of a literary and imaginative taste." The No. before us gives evidence that such is the character of the work. It is conducted with decided ability, and is richly worth the price of its subscription. It is sent to clubs of five for \$9,—ten for \$17—twenty for \$30—thirty for \$40—and fifty for \$50.

It is stated that a passenger has never been killed on the Hudson River Railroad.

WESTERN HORTICULTURAL REVIEW.—No exchange comes to our table with a more cordial greeting than this. It is emphatically, a Western Horticultural Magazine—adapted to our wants. We say to every one trying to raise fruit, subscribe for it. Now is the time to subscribe. The 4th Vol. commences with October. Address Dr. John A. Warder, Cincinnati. Single copies \$3 per year, from which a deduction will be made to clubs.

Kossuth Mills.

We were lately shown through the Paper Mill of Messrs. Wright & Merrill, at Rockton, Ill., by the former of these gentlemanly proprietors, and we feel in duty bound to say that we there found a manufactory of paper, conducted on the most skillful and refined principles of science and mechanics. Let any one who doubts the value of education to the mechanic and manufacturer, go there and observe closely the various processes carried on, and the skillful arrangements for accomplishing the desired ends; and witness how completely and successfully the attainment is made, and we think his doubts will soon evaporate into "thin air." Probably no mill at the west is so well, and few at the east are better, furnished with the most finished machinery for doing the work in the best possible manner. This is a four engine mill, wide machine. [56 inches.] There are invested in it, \$16,000, and to carry on the operations there are employed nine men, two boys, and seven girls. At this mill all kinds of paper except writing paper, are made—book, printing and wrapping paper—and that of the most approved qualities. We were shown some, in the composition of which, flax is introduced, and we think the article cannot be easily surpassed. We invite the attention of dealers in all kinds of paper to the merits of the article manufactured here.

The manufactory of paper is one of the processes by which the waste material of earth is again renewed—rejuvenated and sent on a new, a higher, and a holier errand of mercy to the millions of earth's inhabitants. Ragged schools are not the only means of saving the rags of a worn out and ruined community. We would like to look into the faces of those never-to-be-forgotten ones—Robert Rakes and John Spilman—and see in which glowed most brightly the hopes of the new resurrection. We commend the ends of creation to Wright and Merrill.

EDUCATED WHEAT.—A singular discovery has been made in France, by a M. Fabre an humble gardener of Ayde, but of some local note as a botanist. The herb *agilops*, heretofore considered as worse than useless, grows abundantly on the shores of the Mediterranean. It produces a species of grain resembling wheat in form, but much smaller. In the year 1839, M. Fabre sowed a quantity of this grain, and he was struck by observing that the produce of it seemed to bear a close affinity to wheat. That produce he sowed the next year, and the yield was still more like wheat. He went on sowing the yield year after year, and each year found a marked improvement in the produce, until at last he had the satisfaction of getting as fine a crop of wheat, and of as good a quality, as could wish to be seen. At first he produced his crops in a garden, but his latter sowings were made broadcast in the open field. Thus, then, a wild and mischievous herb, which is particularly destructive to barley crops, can be educated into excellent wheat. [Literary Gaz.

The cattle train down on the Boston, Concord and Montreal Railroad, on Tuesday night numbered one hundred and ten cars. It was drawn by three engines.

The Washington Monument is now 132 feet high.

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VOL. V.

JANESVILLE, WIS. NOVEMBER, 1853.

NO. 11.

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Soils.

It is stated in one of our exchanges, that Dr. Dana, of Lowell, Massachusetts, in the course of some years chemical experience, collected the results of more than four hundred analyses of soil from the northern part of this country. By these analyses it appears that the rich soils of the Scioto Valley, Ohio, which gave without the least difficulty, from seventy to eighty bushels of corn per acre, do not differ materially in their inorganic or mineral constituents, from those which in Massachusetts, are distinguished for their sterility.

It would seem then, that if there was no difference in their inorganic composition, that the organic parts might easily enough be furnished from the barn-yard; yet, twenty barn yards might be emptied on one field, and the Massachusetts lands could not be made to yield the Ohio quota of corn; or, in other words, soils of the same composition precisely, so far as analysis can decide, will *not* produce the like crops. The chemist must be sent for!

We find the above article in the PRAIRIE FARMER for August, and as we think it has a tendency, whether designedly or no, to give a prejudicial view of the value of chemical research in its bearings upon Agriculture, we wish to say a few words in regard to the matter, and, as we hope, put it in a true light.

The history of the case is just this: In 1851, Mr. David A. Wells, of Cambridge, Mass., a competent chemist and analyst, was employed by the Board of Agriculture of Ohio, to examine and report on the nature and composition of the soils of that State. In the July No, 1852, of Silliman's Journal of Science and Arts, will be found a paper by Mr. Wells, respecting the soils of the Sciota Valley, in which he uses nearly the language of the first paragraph above, with an *important addition*, viz.: "In what, then, is there a reason for their difference in value to be found?" and replies—"It cannot be in the attributes in which they agree, which are their mineral constituents—but in the attributes in which they differ; and these are the *amount* and the *condition* of the organic matter contained in the soils, and the *fineness of their elementary particles*. The first, and perhaps most interesting fact noticed in the examination of these soils, was the *remarkable degree of fineness of their constituent particles*." "This remarkable combination of the particles of these soils gives us at once a clue to the secret of their great fertility. With this *fineness* an increased power is given to a soil for the absorption, retention and condensation of moisture, carbonic acid and ammonia, an opportunity for the free formation of at-

mospheric air, a facility to the roots of plants for extension, and a consequently increased facility for receiving and appropriating nourishment." From the above extracts from Mr. Well's paper it is easy to see why "twenty barn yards might be emptied on one field," and yet "not be made to yield the Ohio quota of corn."—The simple fact that food for the plant is *present* in the soil, is not sufficient to secure the growth of the crop. It must be in a *condition* to be reached and to be taken up by the plant. Cattle *may* grow poor on shief-oats, but will certainly thrive on oat meal.

It has long been a well-known fact, that two soils which contain exactly the same constituents, may, and *will always*, differ in the amount of crop produced, if one of them is reduced to a finely divided powder, while the other remains as a coarse gravel or lumpy clay. It is not sufficient to put a horse and his hay in the *same* barn, in order that he may get in good condition.—The relation must be more intimate. Cohesion is one of the obstacles to chemical union. In order that substances should combine they must be reduced to powder. Take two pieces of crystalized nitrate of copper, roll one of them up in tin foil; grind the other to powder and wrap it in a piece of the same metal, drop a little water on both as they are rolled up. In a few minutes that which was pulverized will burst into a flame by combining with the tin foil, while the other will not be affected. This is one of the first principles of chemistry.

It is altogether too late in the day to doubt the value of chemistry to agriculture; "in other words, soils of the same composition precisely, so far as analysis can decide," and in the same condition, will produce like crops. Otherwise, like causes will not produce like effects—a first principle of nature. The chemist has been sent for.

†

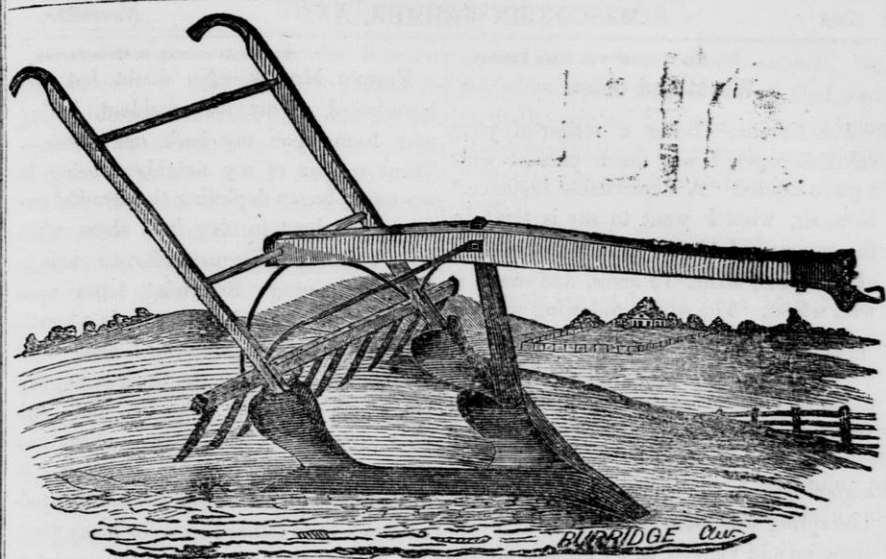
CHAMOMILE.—A few roots of this plant should be in every garden. Not only are its medical qualities highly valuable, but its presence among vegetables is supposed to be an *Aegis* of protection against many diseases to which they are subject. It should be transplanted into warm and rich soil, early in the spring, and be assisted, during its early development, by copious manuring and frequent pressure. When plants, late in season, exhibit symptoms of decay or general debility, the planting of a small root of chamomile in their vicinity is frequently the most efficacious remedy that can be applied. The odor, or aroma, diffused by this plant, is also known to be highly repellent to many kinds of aligerous insects, and its presence among those species of plants and vegetables infested by such enemies, will protect them more effectually than almost any other agent known, and at comparatively small expense.—[Scientific American.]

Salt for Horses.

A person who kept sixteen horses made the following experiment with seven of them which had been accustomed to eating salt with their feed. Lumps of rock salt had been laid in their mangers. These lumps, previously weighed, were examined regularly, to ascertain what quantity weekly had been consumed, and it was repeatedly found that, whenever these horses were fed on hay and corn, they consumed only two and a half or three ounces per day, and when they were fed with new hay they took six ounces per day. This fact should convince us of the expediency of permitting our cattle the free use of salt at all times; and it cannot be given in so convenient a form as rock salt, it being much more palatable than the other in refined state, and by far the cheapest. A good lump should always be kept in a box by the side of the animal without fear that it will ever be taken to excess.—[Boston Cultivator.]

A SHARP FLY.—A London paper speaks of a fly in South Africa, whose bite kills horned cattle. Two or three of them caused the death of a large ox.

The population of Washington on the fourth of January, 1853, was 51,371.



Ball & Post's Premium Cultivator.

The above cut represents a new Cultivator which was exhibited at our late State Fair. We witnessed a trial of it, and from the manner in which it stirred up the earth, consider it peculiarly adapted to the purposes for which it is designed. *The Farm and Shop*, published at Indianapolis, Ia., says: "A new Cultivator has been introduced this season by Messrs. Ball & Post, of Michigan. The novel appearance of this implement has made it for some time an object of curious examination by the farmers of our community. The backwardness of the season has not admitted a fair trial of its merits until recently. We are now informed by those who have tried it, and seen its operations, that it is a reliable article, doing more efficient service in passing between the corn rows, than any other implement they have known, designed for that purpose. Our farmers can well rely on it as a most valuable farm implement, coming well up to the recommendations of its inventors."

It is impossible to make some people understand their ignorance; because it requires knowledge to perceive it.

MATERIALS FOR MILK PANS.—According to the experiments of M. Hinueber, of Moosburg, Germany, one hundred Hanover quarts of Milk yielded, in tinned milk-pans, 7.07 Hanover lbs. of butter; glass, 7.04; wooden (not painted), 6.96; earthenware, 6.92; wooden (painted), 6.67. According to the same experiments, there is required for one pound of butter, of milk produced by stall-feeding, with green clover, 15 Hanover quarts of milk; produced by stall-feeding with tare and clover, 15.67 quarts; by pasturing, 11.84; showing that the milk obtained from cattle fed upon pastures is richer in butter than milk got from cows which have been fed in the stable with one and the same kind of plants: even a mixture of tare and clover shows an increase over clover alone.—[Polytec. Jour.]

TO HAVE LARGE CURRANTS.—The Horticulturist directs that currants be pruned in winter, manured in autumn, every alternate year, and the soil be kept clean and mellow till after bearing. To which we may add, that if all old wood is kept cut away, and young shoots constantly spring, in its place, something like the renewal system of pruning grapes, but not so close; good cultivation will give heavy crops of fine large currants from the same bushes for a life-time.

For the Wisconsin & Iowa Farmer

Wheat and Chess.

MR. EDITOR,—Being a reader of your valuable paper, I was much pleased with a piece headed "A Remarkable Instance." Now, sir, what I want to say is this: In the summer of 1845 we cleared off a piece of new land, about 15 acres, and sowed it with wheat. The winter following was very unfavorable, it being cold and dry. As we supposed, our wheat was all killed, so much so, that having occasion to draw some wood, it being a little nearer, we made a road across our wheat lot, and trod it up a good deal in the course of the winter.—The spring was more favorable; the wheat came on and yielded us 20 bushels to the acre, nor was there any chess there, in the road nor elsewhere. Why? Because we did not sow any. I have known a good many people that thought they sowed clean seed, when, to take a handful, you might find two or three kearnels of chess. Now, there are a good many handfuls in a bushel. Let the wheat winter-kill, the chess, being a hardy plant, will live and spread wonderfully; or, if the wheat grows thick and rank, chess will grow spindling. If any one doubts about chess' growing, let them sow some and see. I do not believe in wheat turning to chess. Perhaps that is the reason why it does not turn on our farm, as I try to get clean seed.

Now, sir, this is a practical thing. If any of your readers believe that such a process on wheat will make it chess, why not take a piece of new ground, make a small bed, pick over their seed, and go to making chess—they might put a horse on it, and *pumice* it all up—and then give your readers the result of the experiment. I would, if I did not believe in the good book, and that says, "every seed shall bring forth of its kind."

A LISTENER.

WAUKESHA, Sept. 13th, 1853.

For the Wisconsin & Iowa Farmer,

FRIEND MILLER,—No doubt but you have heard of my bad accident, having now been upon my back one month.—Three or four of my neighbors being in my room, began deploring the dreadful certainty of wheat turning into chess, when your welcome *Wisconsin Farmer* came to hand, containing "STRAW's" letter upon the subject. Then breath two in a breath, who is right about chess? I shall strive to convince them that the thing is impossible, which I believe it to be; and, with your permission I will endeavor to convince my brother farmers of that error; but to overthrow a prejudice which has been handed down from father to son for many years, requires something more than mere opinion, therefore I shall take strength from both Holy Writ and Natural History.

In the creation of the world, God said, "Let the earth bring forth grass; the herb yielding seed *after its kind*, whose seed shall be in itself, and it was so. And the earth brought forth grass whose seed was in itself, after his kind. And God saw that it was good." Again: "That which thou sawest is not quickened except it die; and that thou sawest is not that body that shall be. It may be thou sawest wheat, or some other grain, God giveth it a body as it pleaseth him, *but to every seed its own body*." That old original types have been impressed upon every species, both of plants and animals, at the moment of their creation, does not admit of a doubt; and, although great the variations may seem, upon superficial consideration, after a more cautious investigation they will be found, in reality, to be confined within very narrow and well defined limits. I know that the horticulturist can modify the secretions of plants, and that an extraordinary development of one part may be obtained at the expense of another; he may transform the stamin into petals; cause a single flower to become double, &c., &c.

Here let us pause and see the immutable tendency of each species to resume its original form; and if the plant does not die, it will of itself return to its own specific type and form, after all our attempts to annihilate it; and the whole arrangement forms that beautiful system of Nature's laws which changed them all, though all remain the same.

Now, if wheat and chess were of the same family or species, there might be a doubt in some men's minds; but they are not, they are perfectly *distinct*. *Chess* is a *grass*, has its seed within itself, has the power to produce its like to all generations.—Farmers, see to it that it does not produce its like on your farms. It may sleep for many years, but he is a thirsty fellow, and will not grow without much wet. Starve him out.

Wheat is at the head of his family—*Cereal Tretuum Hibernum*—supposed to have been cultivated by the Sodomites.—Homer says, that it was found at Nysa, on the plains of Jordan by Isis, and also by Osiris. Jacob sent his sons to buy it in Egypt.

The French Naturalists who went with Napoleon into Egypt, found the bodies of animals, also wheat, barley, plants, and more than fifty different seeds of grasses, which were found perfectly identical with the living species now seen in that country. Those specimens had been embalmed with the bodies, and were found in close vessels in the sepulchers of the kings of Egypt, having been embalmed more than three thousand years. So, wheat was wheat from the beginning, and will remain wheat to the end of time. If otherwise, if it was possible that wheat could, from any cause, be turned into chess, that same chess, by the unerring laws of Nature which govern the universe, would again return to wheat. If it was otherwise, whole families and species would become blended togeth-

er, and one or both become *extinct*. No, sir, when the all-creative fiat of God went forth, the original type was impressed upon every species, both of animals and plants. "Was, and is, and will be unto the end of time."

Your obedient servant,

C. LOFTUS MARTIN.

Turtle Grove, Beloit, Sept. 15th, 1853.

For the Wisconsin & Iowa Farmer.

New Breed of Hogs.

MR. EDITOR,—You cry, "Write, write, communicate about new breeds of animals, or about any thing useful or interesting to the farmer." Now, I write what is literally true; about its being useful or interesting, you must, Mr. Editor, leave the reader to judge for himself.

There is a breed of hogs near Brice's Corners, in the town of Chester, Dodge Co., Wis., which, if we recollect aright, neither Buffon, nor any other writer on Natural History, treats of; in fact, they have remained unnoticed by the Savans amongst ourselves, until the other morning, when just as the corn got ripe enough to arouse the gastronomic feelings of epicurian hogs. This *rara natura* was discovered by the unconscious owner, who, to his amazement, found four of his hitherto common hogs stuck into his neighbor's fence, and choked dead, by their necks being fixed firmly between the rails, while their posterior portion hung ingloriously out into the highway.

The good-natured and waggish owners of the corn-field soon came along, of course, to see "what was up," and to express their astonishment at the suicidal nature of neighbor S.'s hogs. They "would be darn'd—they would, if ever they see such a breed of hogs as them was—to have such a tarnal propensity as that 'ar. It quite went beyond their universal ideas of *compus mentus*, and they'd be all fired

crazy if ever they kept such a breed of pigs as could n't go the whole hog."

The remainder of S.'s hogs are now kept away from F.'s lots, and their corn remains now undisturbed by any breed of hogs.

Waupun, Sept., 1853. SCOTIA.

From Minnesota.

The first meeting of the Hennepin county Agricultural Society, (incorporated by act of the Legislature of Minnesota, approved February 26, 1853,) was held at the Court House in Minneapolis, Wednesday, September 7th, 1843, and called to order by Dr. A. E. Ames, who was elected President for the day, and J. H. Canney, Secretary.

The meeting being duly organized, was appropriately and eloquently addressed by E. L. Hall, Esq., to whom a unanimous vote of thanks was tendered.

I. Atwater, J. H. Stevens, J. N. Barbur and R. B. Gibson were appointed a committee to draft a Constitution and By-Laws.

The meeting was entertained by remarks from Judge Chatfield, J. W. North, Capt. Dodge and others.

A Constitution and By-Laws were adopted, after which the following gentlemen were elected officers of the Society for one year:

President—Rev. J. W. Dow.

Secretary—J. H. Canney.

Treasurer—E. Case.

Executive Committee—J. H. Stevens, N. C. Stoddard, Wm. Chambers, W. Getchell, Stephen Hull.

Adjourned till to-morrow at 5 o'clock P. M.

On motion of Mr. Stoddard,

Resolved, That this Society deems it expedient that there should be a Convention held at St. Paul, on the first Wednesday of January next, to form a Territorial Agricultural Society, and that Delegates be now appointed to attend said Convention; and that other Agricultural Societies in the Territory are respectfully requested to send Delegates to said Convention, and accordingly,


N. E. Stoddard, A. N. Hoyt and Wm. Chambers, were appointed delegates to said Convention. J. W. Dow, Pres't.

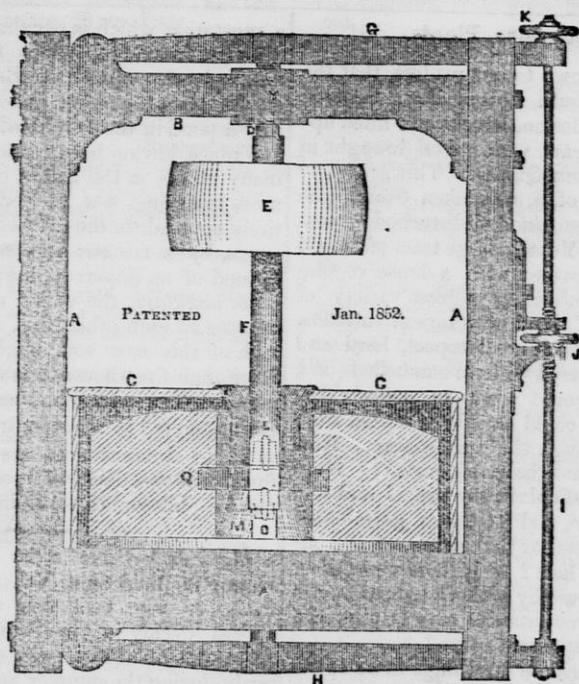
J. H. CANNEY, Sec'y.

Texas as a Grazing Country.

The beneficence of her climate, operating upon a soil of unsurpassed fertility, must render Texas the garden spot of our favored country. In Kentucky, Tennessee, Missouri, and the vast Northwest, nearly two-thirds of the year is devoted to an unremitting effort to provide the necessary food for the live stock during the winter. This effort involves an immense capital, severe and constant labor, and frequent exposure in the cold season to attend to the stock. These energies are bestowed, too, upon lands which cost from twenty to seventy dollars per acre, whilst Texas presents the beautiful picture of eternal pastures, which a beneficent Providence has prepared to her hands, and which needs not the labor and the capital necessary to put the woodlands of the Middle States into grass. "The cattle on a thousand hills" roam over these natural meadows, and require no care save that of salting, and herding in a period of northers. It is not possible to exaggerate the importance of Texas in her grazing capacities; for, while her lands are *rich and cheap*, her prairies are ever green, and mules and cattle may be reared at a price that would seem to be incredible to the grazier of the Middle States. The cotton and sugar lands on the coast, as well as the States on the Lower Mississippi, furnish a safe and profitable market for the mules and cattle reared in the table lands, that may readily be purchased at one to five dollars per acre, and which, in their deep soil and mellow climate, are crying aloud to the rich as well as the poor of other countries, *come and occupy*.—[De Bow's Review.]

THE WHEAT CROP OF OHIO.—The wheat production of Ohio is estimated to average 25,000,000 bushels per annum, of which 13,000,000 are surplus. It is said that only about one-fifth of the land in the State is under cultivation. While some of the premium crops exceed 50 bushels to the acre, the average yield of the State will not exceed 16 bushels.

 An immense deposit of guano has been discovered in the Indian Ocean, between Mauritius and Calcutta, the island being twenty miles long by seven broad, and thus forty times the size of Ichaboe.



PORTABLE FLOURING MILL.

The above is an engraving of E. F. BUTLER'S Patent Portable Grist Mill, described as follows, to wit:

A A A, represent the frame of the Mill with the bedstone set in the lower part which forms the husk. B is a cast iron cross head. O C, the curb. D is a standing point resting in the top end of the spindle F, to prevent the stone from rising. G and H are levers connected together by the side rod I and hand wheel K, and brought to bear on each end of the spindle, and by the lighter wheel J will prevent the runner stone from moving up or down when at work. L is a vibrating point bearing on the top edge of the driver Q, which driver is wedged solid in the centre of the stone, and rests upon a stationary balancing point. M is the eye of the runner stone. O the lower step in the eye of the runner stone, which supports the runner stone and spindle. E the pulley, 18 inches diameter, 7 inch face for a 30 inch stone.

Past experience has fully proved that better flour can be produced from small

stones than larger ones. To accomplish the amount of work with a 30 inch stone, that is accomplished with a 54 inch stone, a much greater speed is required; consequently, the tendency of the stone to rise when at work is vastly increased, and it becomes necessary to so construct and attach the spindle to the stone, and other parts of the mill, that the stone cannot vary at all from its position while at work—a point which the inventor of this Mill claims to have reached.

S. S. BARRY & Co., of Cleveland, O., are Agents for the Western States, to whom application for Mills, &c., may be made.

55 Fifty thousand bushels of onions were raised last season in the vicinity of Westport, Connecticut, within a tract of country not exceeding thirty square miles. The average yield per acre was about 500 bushels.

Spontaneous Plants.

It is well known to our readers, that the marshes on South Boston Bay, between Roxbury and Boston, have been "filled up" within a few years, with gravel brought in railway cars from Quincy. This gravel, or a large portion of it, was taken from a hill, where it had remained undisturbed for many centuries. Yet this large tract of "made land" is now covered with a dense vegetable growth, embracing a great variety of plants, most of them of common varieties, the seeds of which are compact, hard and heavy, and covered with an enamelled shell, all of which would seem to prelude the idea that they could have been wafted from a distance through the atmosphere. How could these plants have originated? Were the seeds deposited in the gravel and soil, many ages ago, and have now germinated on being exposed to the action of the atmosphere and heat? or is there some other process of nature by which vegetation, under certain circumstances, may be produced without any apparent cause?

Indeed, there are few things more extraordinary, or have been a greater puzzle to naturalists, than the appearance and development of certain plants in certain circumstances. It is sometimes the case that when a deep pit or well is dug, the earth is thrown up from a great depth, fifty or a hundred feet, and which has been for many ages buried far beneath the surface of the earth, on exposure to the atmosphere and the heat of the sun, will give forth myriads of plants, of a certain description, and which perhaps have not been seen in that vicinity for many years. It is stated on good authority, that after the great fire in London in 1666, the entire surface of the destroyed city was covered with such a profusion of cruciferous plant, the *Sisymbrium Irio* of Linnæus, that it was calculated the whole of Europe did not contain so many plants of it! It is also a well ascertained fact, that if a spring of salt water makes its appearance in a spot, at a great distance from the sea, the neighborhood will soon be covered with plants peculiar to maritime locality, which plants, previous to this occurrence, were entire strangers to the country!

When a lake happens to dry up, the surface will almost always be soon covered by

a vegetation which is peculiar, and entirely different from that which flourish on its former banks. In M. de Brebisson's work on the useful mosses, this botanist states that a pond in the neighborhood of Falain, in France, having been rendered dry during many weeks, in the height of summer, the mud, in drying, was immediately and entirely covered, to the extent of many square yards, by a minute, compact, green turf, formed of an imperceptible moss, the *Phaëum auxillare*, the stalks of which were so close to each other, that upon a square inch of this new soil, might be counted more than five thousand individuals of this minute plant, which had never previously been observed in this country!

These circumstances are singular, and furnish a vast field of speculation for the natural philosopher.—[Maine Farmer.

MANURING SAND WITH CLAY.—Judge Dewey of Maidstone, Vt., applied twenty loads per acre, beat fine when dry, and spread evenly in the spring, on a sandy piece of land. The grass came on luxuriously during the summer, and where he before obtained half a tun of hay, he got one and a half tuns. Since that a good crop has been annually produced. The best soils are composed of 5 per cent. alumina to 35 per cent. of sand. These together make what we call a good loam, which has retentive power enough to hold manure and moisture. Clay on a sandy soil may well be called the best dressing which can be applied, because it is the most durable of any.

A REASON.—"I say, Sambo, does ye know what makes de corn grow so fast when you puts de manure on it?" "No, I don't know hardly, 'cept it makes de groun' stronger for de corn." "Now I jist tell ye. When de corn 'gins to smeli de manure it don't like de 'fumery, so it hurries out ob de groun' and gits up as high as possible, so's not to breathe the bad air."

THE MADISON JOURNAL mentions that the woolen factory at that place has commenced operations. The steam engine used in the building was manufactured at Madison.

List of Premiums Awarded at the Wisconsin State Fair.

Cattle—Short Horns.

James McGoorty, best 4 years old bull,	\$5
Wm Harsh, Milford, 2d best year do.	3
Geo W Green, Beaver Dam, best 4 years old bull,	5
Martin Webster, Fox Lake, 2 year old bull,	5

Native and Crosses.

F B Cook, Johnstown, best 3 year old bull	5
Rufus Laberee, Watertown, (discretionary) 3 years old bull,	2
D M Aspinwall, Farmington, Jeff. co., (discretionary,) 3 years old bull,	2
Wm Knight, Black Hawk, 2d best 2 yrs old bull	3
F B Cook, Johnstown, best 6 mos old bull,	3
H E Coon, Palmyra, best 3 years old cow,	5

Wm Knight, Black Hawk, 2d best cow, 7 years old,	5
do do do best heifer, 9 mos. old	3
T B Cook, best heifer, 2 years old,	5

Working Oxen.

John T Bailey, Watertown, best yoke 9 yrs. old oxen,	5
L A Cole, Watertown, 2d best, 6 and 7 yrs. old steers,	5
R Crangle, Watertown, best yoke of 2 yrs. old steers,	3
Wm Jones, Watertown, 2d best yoke 3 yrs. old steers,	2
Solon Hall, Concord, 2d best yoke 1 yr do	2

Horses for all Work.

A F Pratt, Waukesha, best 9 yrs. old stallion	Certificate.
Daniel Blodgett, Beloit, 2d best stallion, 5 years old,	3
Nelson Fryer, Cold Spring, best do 3 yr old	5
G W Williams, 2d best stallion, 3 yrs old	3
Jared Patrick, Delafield, best 2 yr old stal.	3
B Pinkney, Rosendale, 2d best 3 yr old stal.	1
G C Gunn, Beaver Dam, (discretionary) stallion 5 years old,	3
B Caldwell, Oak Grove, (discretionary) stallion 7 years old,	Volume of Transactions.
J Ferguson, Pierceville, Dane co. (discretionary,) stallion 6 years old, Vol. Transactions.	Volume of Transactions.
D Blodgett, Beloit, (dis) stallion 4 years old,	Volume of Transactions.
W Hokrik, Waupun, (dis) stallion 16 years old,	Volume of Transactions.

Matched and Draught Horses.

I Howland, Janesville, best matched pair,	Diploma and 5
Robert Fargo, Lake Mills, 2d best do do	5
C R Taylor, Berlin, best pair draught horses	Diploma and 5
J H Woodruff, Winnebago co., 2d best do do	5
Isaac Howland, best gelding,	Diploma.
W W Robinson, Ripon, 2d best gelding.	5
H W Robinson, Lake Mills, best mare 7 yrs old,	Diploma.
Jacob Wertzel, Brookfield, 2d best mare, 7 years old,	3

W C Spalding, Watertown, best mare 4 yrs old,	Diploma.
P Hardin, Watertown, 2d best mare 2 years old,	3
H W Bronson, best mare 1 year old,	3
N R Clapp, Kenosha, best pair of mules,	5

Swine.

L. Thayer, Concord, best boar, 2 years old,	4
James Revell, Watertown, 2d best boar, 2 years old,	2
W Knight, Black Hawk, best boar 1 yr old	3
H E Coon, Palmyra, 2d best boar 1 yr old	1
J W Gray, Oak Grove, best breeding sow 2 years old,	4
S B Edwards, East Troy, best pair Suffolk pigs, 6 months old, imported,	2
S B Edwards, 2d best pair Essex pigs, do.	2
L Thayer, Concord, 2d best 2 sows and pigs,	1
J W Gray, Oak Grove, best 5 pigs, 2 months old,	2
H E Coon, Palmyra, 2d best 5 pigs, 3 mos.	1

Sheep—Long Wool.

N B Clapp, Ken, best Southdown buck, 2 years old,	4
do do Leicester buck, under 2 yrs	3
do do best 3 ewes, Southdown, 2 y's	4
do do " 3 buck lambs, S'thdown	3
do do 3 best ewe lambs, do	3

French Sheep.

McAllister & White, Albion, N.Y., best buck 2 years old,	4
G H Canfield, Summit, 2d best buck, 2 years old,	2
Horace Scovell, Lowville, best buck 1 yr old	3

Spanish Sheep.

Geo Paddock, Waterville, best buck, 2 yrs old,	4
J B Jessup, Summit, 2d best buck do	2
G Paddock, do best 1 year old buck	3
Edgerton & McCarter, best pen 3 buck lambs,	3
J Ferre, Oconomowoc, 2d do do do	1
Edgerton & McCarter, best pen ewes, 3 yrs,	4
H Scovell, Lowville, 2d do 3 ewes, 2 yrs,	1
E Perrin, Oconomowoc, best pen 3 ewes, 1 yr	3
do do 2d do 1 year old,	1
Edgerton & McCarter, 2d best pen 3 ewe lambs,	3

Cross Breeds.

John Ferre, Oconomowoc, best buck, 2 years,	4
H Scovell, Lowville, 2 best buck, 2 yrs old,	2
G H Canfield, Summit, best buck, 1 yr old,	1
H E Coon, Palmyra, best pen 2 buck lambs,	3
McAllister & White, Albion, N. Y., best pen 3 ewe lambs,	4
G H Canfield, Summit, best 3 ewes, 1 yr old,	3

Poultry.

James B Judd, Waupun, best lot Shanghai fowls,	2
Charles Smith, Waupun, (discretionary) best lot Crosses Shanghai and Chittagongs,	2

Plowing Match.

Lewis Lewis, Summit, best plowing with horses,	Silver Medal.
E Herrick, Hustisford, 2d best plowing with horses,	Bronze Medal.
Edgerton & McCarter, Summit, best plowing for stiff soil,	Bronze Medal.

Richard E. Ela, Rochester, Wis., best corn plow, Bronze Medal
 John W. Spencer, Watertown, best center draft plow, Bronze Medal.
 Richard E. Ela, Rochester, best green sward plow, Bronze Medal.
 Thomas Oliver, Waupun, best plow, with improvements, Bronze Medal.

Farm Implements. No. 1.

A F Cady, Watertown, best milk pan strainer, Volume of Transactions.
 Richard E. Ela, Rochester, Badger State Fanning Mill, Bronze Medal.
 J Grover, Center, Rock co., dash churn and butter tubs, Volume of Transactions.
 Joseph Sheffield, Brookfield, Waukesha co., 1 double farm wagon, Bronze Medal & Trans.
 John Post, Saline, Michigan, 1 corn cultivator, Bronze Medal.
 R Brown, Utica, Dane co., revolving horse rake, Bronze Medal.
 S Ford, Watertown, 6 hay rakes, Vol. Trans.
 J M Riker, Janesville, one set silver plated buggy harness, Diploma.
 Sewell Keyes, Watertown, manure and hay forks and hoes, Bronze Medal.
 M A Hackley, Bellville, best cheese press, Volume of Transactions.

Farm Implements. No. 2.

W D Bacon, Waukesha, railroad horse power, Certificate.
 do do do separator, winnow and Thrasher, Diploma.

Dairy.

E Herrick, Hustisford, best single churn, Set of Transactions
 J Cory, Bachelor's Grove, Rock co., best 25 lbs. June butter, Silver Tea Spoons.
 J Cory, Bachelor's Grove, best 40 lbs. fresh butter, Silver Mug.

Flour, Honey, &c.

E B Quiner, Watertown; 80 lbs. honey, Bronze Medal.
 J A Carpenter, Waukesha, bee-hive, Vol. Transactions.
 L A Cole, Watertown, 1 bbl. flour, Diploma.
 L Coleman, Summit, 1 sample Sole's wheat, 1 do Canada Club, do. best, Set Trans.
 H B Hawley, Milford, Connecticut seed and Cuba leaf tobacco and cigars, Silver Medal.
 James J Walkin, Eagle Center, sample Indiana corn, Set of Transactions and \$1
 Simcon Ford, Watertown, sample of winter wheat, Volume Transactions.
 Charles Avery, Concord, 1 bale hops, vegetables, Set Transactions.
 M Pumerville, Watertown, best 6 heads of cabbages, Volume Transactions.
 W R Smith, Mineral Point, 1 peck Bermuda potatoes, Volume Transactions.
 Edgerton & McCarter, 12 ears seed corn, Volume Transactions
 Mrs Eliza Tuch, Oak Grove, sample of seed corn, Volume of Transactions.
 R M Meigs, Ottawa, 1 Lima squash, V. Trans.
 D M Aspinwall, Farmington, Imperial seed potatoes, Volume of Transactions.

Walter Pease, jr, Watertown, orange carrots 1st Volume Transactions

Domestic Manufactures.

Mrs Sophia Schuehardt, Delafield, 10 knots woolen yarn, \$2
 Mrs J W Cole, Watertown, 10 yds. rag carpet, 2
 S Ford, Watertown, (discretionary) 3 varieties woolen yarn, needle, shell and wax work, 2
 Miss E M Hayes, Palmyra, best Ottoman cover, 1
 Mrs Stoppenbach, Watertown, best variety of worsted work, 1
 Mrs McNaughton, Waukesha co., best worked collar, 1
 Mrs Paynim, Watertown, best worked hdk'f, 1
 Mrs Atwater, Oak Grove, best patched quilt, 1
 Mrs Surdam, Watertown, best white quilt, 1
 Mrs A Ainsworth, Watertown, best silk bonnet, 1
 Ellen M Hays, Palmyra, best lamp mat, 1
 Mrs N Bird, Madison, best pair of wrought slippers, 1
 Mrs Wm McNaughton, Waukesha co., best knit tidy, 1
 Miss Poignan, Watertown, best crotchet w'rk, 1
 No. 75, ornamental shell work, 1
 F Warden, Watertown, best specimen wax flowers, 1

Flowers.

Mrs John W Cole, Watertown, best collection of house planis, 2
 Mrs E A Gilman, Watertown, 2d best do 1

Fruit.

John Bell, Gardiner's Prairie, best variety of apples, Silver Medal.
 Mr Clapp, Milford, 2d best 10 varieties, 2
 Theron Plumb, do best 5 varieties, 4
 P Cahoon, Kenosha, 2d best 5 varieties, 3
 E R Adams, Ixonia, best seedling, Trans.

Pears.

John Bell, Gardiner's Prairie, best 6 varieties, Silver Medal.
 S B Cahoon, Kenosha, best 3 varieties, 3

Peaches.

J C Howard, Milwaukee, best exhibition.
 M L Burdick, do do do 3

Plums.

G P Pfeffer, Pewaukee, best and largest variety, 3
 E B Quiner, Watertown, 2d best do do 2

Quinces.

John Bell, Gardiner's Prairie, best 12 2

Grapes.

Mrs E W Edgerton, Summit, best exhibit, 3
 D Blodgett, Beloit, 2d best exhibition, 2

Melons.

F Weld, Palmyra, 2d best melon, 2

Paintings.

Miss E J Moseley, Oak Grove, best crayon, 1
 A M Morrison, Ft. Atkinson, best oil painting, 1

Stoves, Cutlery, &c.

A F Cady, Watertown, National No. 7 cook stove, Bronze Medal.

A F Cady, best parlor stove mirror, B. Medal.

Discretionary Department.

Heber Smith, Watertown, best specimen of rapeseed lamp oil, \$2
 A Day, Detroit, M. Lewis' screw cutter, Dip.
 G H Canfield, Waterville, model wool press, 2
 J Crow, do best wash tub, 1
 Jonathan Piper, Ixonia, 1 box saleratus, 2
 H P Lester, Oconomowoc, child's coffin, 1
 Grange & Williams, Watertown, 1 box of candles, 2
 D Van Deren, Milwaukee, Hinkley's patent elastic superior bed bottom, 2
 J P Hamard, Madison, 1 double barrel shot gun, Diploma
 Rufus King & Co., Milwaukee, specimens of printing and printing materials, Diploma.
 H Neidecken, Milwaukee, specimen blank book, Diploma.
 J W Spencer, Watertown, 1 saw arbor, 1
 Chas Davis, Chicago, Atkins' Reaper, Diploma.
 J B Powers, 1 case lightning rod points, Volume Transactions.
 Ebenezer Brigham, Blue Mounds, 1 counter bridge frame block, Volume Transactions.
 J H Buckingham, Janesville, 1 pair boots, Bronze Medal.
 D Kellogg, Saline, Mich., 1 portable cider mill, corn sheller, cheese press and wool packer combined, Diploma.
 Charles Jennings, Aztalan, 1 family carriage, Diploma.

CURING HAMS, BEEF AND VENISON.—A particular object in curing hams, should be to have them sufficiently salt for the table, and not so salt as to need freshening. With a brine made according to the following recipe, I have cured tons of hams, and have found it invariably safe. To every one 1000 lbs. of hams, take 8 oz. salt nitre, 2 qts. molasses, and 2 qts. of salt. Mix them with sufficient water to cover the hams when packed rather closely in a barrel. After the brine is made, let it stand and settle for two or three hours, turn off carefully, and throw away the sediment at the bottom of the brine. Cover the meat with the brine, and repack once a week, changing the position of the hams. In from four to six weeks the hams will be properly cured, and may be smoked at any time as may be most convenient, as the hams will keep any time in a cool cellar. After smoking, they may be replaced in the brine and kept through the summer, if desired, without increasing or diminishing their saltiness, and perfectly safe from flies. I have also kept hams very good and sweet in a stone smoke house, suspended about a foot from the roof. Beef, venison, and mutton hams may be cured and kept precisely in the same way.—[Ex.]

☞ The following story is singular, if true: In Patterson, N. J., recently, a girl was standing at a window, before which was a young maple tree. After a brilliant flash of lightning, a complete image of the tree was found imprinted on her body. This, it is said, is not the first instance of the kind.

Diseases of Cattle—Inoculation.

Within the past ten years disastrous losses have been met within some parts of Europe, by dealers in cattle, from a comparatively modern disease named pleuro-pneumonia; it is most prevalent in the marshy districts of Holland, but is not confined to them. The symptoms of it are like inflammation of the lungs, but remedies ordinarily used for that disease have failed to be of any use in this. How this disease came to be first introduced is difficult to tell, but from what we have read upon the subject we are of the opinion that it was first caused by bad ventilated stables, and feeding a great number of animals in a small space, for fattening, on the refuse grains, &c., obtained from German and Dutch distilleries. The hot-beds of the disease are the distillery and beer districts of those countries.—No less than 10 per cent. of the cattle bought to be fattened for market, in some parts of Holland and Belgium, die of this disease. We have heard no word of it attacking cattle in our country, still such a disease may not be unprevalent among stall-fed cattle in some districts; it should be looked after with zeal by those whose duties require of them a watchful care for the public health. Inoculation has been resorted to in Holland to try and arrest it. The virus for this purpose is taken from the lungs of a diseased animal, and inoculation is performed on the tails of live animals to prevent them taking it. The operation is said to be somewhat successful, and the practice is about to be introduced into England as a preventive.—[Scientific American.]

☞ A tomato weighing two pounds was recently presented to the editor of the *Angelica* (N. Y.) Reporter.

☞ The £1000 left by Franklin to the city of Boston, to be let on interest to young unmarried artisans, in sums not exceeding £100 sterling, now amounts to \$15,280.55. Franklin estimated that it would reach \$531,640 in one hundred years, but owing to losses it will probably reach about \$100,000. One provision of the will was, that when the fund should amount to \$531,640, half a million of dollars should be appropriated to some public work, which should be judged to be of the most general utility to the inhabitants of Boston. The loans are now rarely applied for at all, and it is proposed that the fund be deposited in the Massachusetts Hospital Life Insurance Co., and in the Savings Bank of Boston.—*Scientific American.*

HORTICULTURE.

Pomological Association.

The great abundance of fruit this year, of all kinds, has most satisfactorily settled the question as to Wisconsin, and many other portions of the Northwest, with regard to their capacity, as it respects climate, soil, &c., to produce the several varieties of fruit. Nearly every kind of apple and apricot, of pears, peaches and plums; of cherries, currants and gooseberries, &c., &c., have come to the most complete perfection of size and sorts, quantity and quality. Probably better or larger peaches than have been grown in Wisconsin, were never produced even in the celebrated peach orchards of New Jersey, Western New York or Northern Ohio.

The conclusion, seems, therefore, legitimately established, that Wisconsin, Iowa, and Northern Illinois, are yet destined to equal—though they may never surpass—some of the older and justly renowned fruit-growing districts above mentioned.

Much, however, remains to be done to increase and extend our knowledge of the varieties which can be most easily, surely, and profitably cultivated among us; to study the best methods of preserving our trees from injuries arising from meteorological influences, the ravages of insects, and the devastations of "blight"; to learn the best and most improved, as well as approved, methods of gathering, storing, preserving, cooking and feeding of fruit.

This great amount of work, so important to be done rapidly and effectually, can be accomplished only by the combined efforts of all interested. And in this enterprise all should be interested. Time, an important element in the consideration of every enterprise, is in this more than doubly so. Many have already been in the West a sufficient length of time to see now around them thriving orchards of numerous varieties of fruit trees, bearing an abundance of precious and delicious fruits, of a well-timed and early planting; while others, who have resided here equally long, are—alas! for their negligence and procrastination—still trusting to the future.

We were, therefore, highly gratified to have our attention called, at the time of the last State Fair, to the importance of forming a Pomological Association. A preliminary meeting

was held by the friends of the enterprise present on the occasion, preparatory to a future meeting, which is to be held at Whitewater on Friday, the 18th of November, for the perfecting of the organization, and to transact any other business deemed important.

It is to be hoped that a large number of the friends of such an enterprise, and the lovers of fruit generally, will be present to lend their aid in a cause of so much importance.

The following were the proceedings of the above meeting, as reported by the Secretary:

The meeting was organized by calling Prof. S. P. LATHROP, of Beloit, to the chair; and, on motion of Mark Miller, E. B. Quiner was appointed Secretary. The object of the meeting was stated at length, when it was

1. *Resolved*, That it is expedient to form an Association for the purpose of carrying out the objects stated.

2. *Resolved*, That a meeting be appointed at Whitewater on the 3d Friday of November, to perfect the organization of a State Fruit Grower's Association.

3. *Resolved*, That the Secretary be authorized to correspond with gentlemen throughout the State, interested in the subject, and invite their attendance at Whitewater on the day of meeting.

4. *Resolved*, That papers throughout the State be requested to publish the proceedings of the meeting, and call attention to the objects of the Convention.

S. P. LATHROP, Ch'n.

E. B. QUINER, Sec'y.

MAY APPLE.—The May Apple, an East India fruit, is now raised at Vicksburg, Mississippi. Its scientific name is *Eugenia Iambosia*. In the East Indies, the native clime of this fruit, the tree grows to the height of twenty feet; at Vicksburg it is only five feet in height. The apples are about the size of a small peach, with a similar color, fragrant smell, and have the taste of a very sweet common apple, with one seed in the centre, of the size and color of a chesnut.—[Madisonian.]

ALIGATOR SKINS.—Mr. J. W. Benedict, of Galveston, has manufactured some of the most beautiful boots and shoes that we have ever seen, with leather made of Alligator skins. These skins are tanned and prepared so that they resemble the finest calf skin in pliability, and are beautifully mottled, like tortoise shell. He intends to send a pair of boots to the World's Fair in New York. He certainly merits a premium for changing the skins of these huge, ugly monsters to forms of beauty and usefulness.—*Texas Register*.

Wisconsin State Fair.

We have just returned—Oct. 12th—from the third annual State Fair, which came off at Watertown last week, from the 4th to the 7th inclusive. With the impressions of the event fresh upon us, we would jot them down for the benefit of our readers who were not present, either to experience the pleasures of the occasion, or to receive its convictions and profit thereby. To us, personally, it was an occasion of much pleasure. It gave us an opportunity of seeing many of our patrons, and forming several very desirable and pleasing acquaintances with those interested in different branches of Horticulture, Agriculture, and the improvement of stock. Among these we cannot forbear to mention the very worthy President of the State Society, and his excellent coadjutors—the members of the Executive Committee. If these gentlemen ever err in any matters concerning the management of the Society, it must be regarded as an error of judgment, and not of purpose. We commend them to the sympathy and to the confidence of the Agricultural portion of our commonwealth. We also had agreeable interviews with E. B. QUINER, of the Watertown Register, who knows well how to appreciate the excellencies of horticultural and agricultural pursuits; with MARTIN WEBSTER, of Fox Lake, who knows something of the pleasure of breeding fine stock; with N. B. CLAPP, of Kenosha, somewhat given to the breeding of the beautiful South Down Sheep; and with S. B. EDWARDS, of East Troy, of exquisite *swinish* propensity, as manifested in the breeding of the best of hogs—the improved Suffolk and the Essex. We also made the acquaintance of JOHN BELL, of Gardner's Prairie, who was there in all the glory of a fine exhibition of his fruits—especially apples. We trust all these gentlemen will reap a rich reward for

themselves in their several honorable enterprises.

The people of Watertown are worthy of great commendation, for their excellent and ample arrangements for the Fair. No pains or money seemed to be spared to make these every thing that could be desired.—The grounds were near, and, for aught we know, within the city limits, easy of access to all, and beautifully fitted up. Three large and splendid tents were spread upon the ground, within which were suitable fixtures for the reception of articles for exhibition. These externals of the Fair must be acknowledged by all as very complete and successful. No sinister motives seem to have actuated the managers of these arrangements.

Notwithstanding, however, these very excellent provisions, on the part of the people of Watertown, we are compelled to say, that they were not as properly responded to on the part of the farmers and mechanics of our State, as we had hoped and fondly anticipated they would be. The truth is, and it escaped from the lips of all, the exhibition in most, if not in every branch of industry, was by far too scanty. Some branches were not at all, and others very meagerly, while few were fully represented. There was a want of material.

This all important and essential element of a State or County Fair, was withholden, unjustly withholden, by us, the people. Fellow farmers, we personally plead guilty to this charge, and often have wished that we had done our duty and carried up our offering. Doubtless, you will readily offer the same plea and render the same excuse which has fallen, not only from our own lips, but from those of many others—that we thought it hardly worth while—somebody has got something better than ours—it won't pay for the trouble. Now, this is all wrong, and we ought not to have said or done so. True, the premiums offered were

not large—perhaps not as large as they ought to have been, or as we hope they will be in years to come. But, we must remember that our State Society is yet young, and wishes to be cautious and keep out of debt, &c., &c. If we had all contributed our quota, to render this annual Farmer's Festival both interesting and profitable, there would have been ten times the amount of material for exhibition. We do not say ten times as good, but ten times as large; and yet, we are of the opinion that it would have been ten times as good—for we do know that all of our best material was not there. There is scarcely a county south of the Wisconsin river, but that can equal the exhibition of the last State Fair, in nearly every branch. This we know for a certainty.

We speak particularly and earnestly on this matter, hoping to stir up in the pure minds of our agricultural friends, a just appreciation of their duty, and to awaken in them a proper attention to the subject. We repeat the remark, that nothing was wanting but *material*, to have made our Fair equal to the wishes of the most sanguine, and of this the State is in possession in abundance. Some counties were not at all represented, and others but poorly; and yet these same counties have had good, and some of them fine exhibitions.

Friends, this ought not to be so.

The Fair, however, was a pleasant one, and in some respects a good one. The weather was fine, the arrangements perfect, and all present seemed in good spirits, kindly affectioned one towards another, and all passed off as merry as a marriage bell.

CATTLE.—The number of animals exhibited was small, though some of them good. A Devonshire bull, owned by Martin Webster, of Fox Lake, pleased us much; also, an own brother of this animal, owned by Judge Green, of Beaver Dam. These are both fine animals, and well bred. A

bull, exhibited by F. B. Cook, of Johnstown, a cross of the Durham and Devonshire, is a fine animal, and a successful cross of these two breeds. Mr. Cook also exhibited a good 2 year old heifer, with which we were much pleased. We saw a good yearling short-horn bull, thought to be thorough bred; also a full blood of the same breed. The names of the owners, however, we have forgotten.

There were but two yoke of working oxen, and these not particularly superior.—There were but three milch cows exhibited, and these, though perhaps good, yet not anyways remarkable.

SHEEP.—There was a better exhibition of sheep than of any other kind of stock, unless it was of hogs. There were some fine sheep exhibited by the President, E. W. Edgerton, of Summit, of the Spanish Merino variety; and, also, by Geo. Paddock, of Waterville; by Canfield Jessup, of Summit; by John Ferre and Elijah Perrin, of Oconomowoc, and Scoville, of Lowville. A very excellent Leicester buck, and a beautiful South Down buck; also, some South Down ewes and lambs, by N. B. Clapp, of Kenosha. These were all very good sheep, and well worthy the notice which they seemed to attract from all observers. The President furnished us with some statements of his own experience in wool growing and sheep raising, which establish the fact of the profit to be realized in the business. We never saw handsomer sheep than the South Downs of Mr. Clapp; in fact, they *clapp* the climax.

HOGS.—The show in this department, though not large, was comparatively good. Some improved Suffolk and Essex pigs pleased us much. These are, to us, the *beau ideal* of a hog; and, in truth, a hog should show himself in no other form.—These were exhibited by S. B. Edwards, of East Troy, who is doing much to improve this kind of stock. We saw some fine

crosses of the Suffolk and Leicester, exhibited by H. E. Coon, of Palmyra. There were others, but we were not their admirers, though much approved of by some good judges.

HORSES.—The show of horses was somewhat numerous, and probably superior to any other branch in this department of the exhibition. There were several fine horses, among which we would mention two owned by Daniel Blodget, of Beloit, of beautiful bay color; the "Badger Boy," a fine grey horse, owned by Mr. Pratt, of Waukesha; a 2 year old Black Hawk, owned by Mr. Sawyer, of Burlington, and a Yorkshire Morgan, from Cold Spring.—Mr. Howland, of Janesville, exhibited a very fine pair of matched horses. There were also some brood mares and colts, but we are unable to speak particularly of them.

POULTRY.—The exhibition in this department was decidedly meagre. There were two or three pairs of good fowls, of the Shanghai and Chittagong varieties.—We observed one Shanghai pullet, for which we would have given more than for all the other members of this *fowl* exhibition.—We cannot mention the name of the owner. Jas. B. Judd, of Waupun, exhibited a lot of good Shanghais.

DAIRY PRODUCTS.—There were but five or six cheeses, and three or four kegs of butter. To the cheese we took no particular fancy. Of the butter, we know that some of the samples were good, as they were made by J. Cory, of Bachelor's Grove. There was not generally sufficient care to protect the samples exhibited from dust, and, by the time we observed them, they were quite screened from the most penetrating eye. Exhibitors in this branch should study the best plans of presenting their articles to view at such times. One has a peculiar horror of dirt, in the eating line. We are sorry that our dairymen and dairy maids were not properly represented at our

Fair. We have seen as good cheese and as excellent butter made in Wisconsin, as any State in the Union can boast of. Our farmers have now every facility for complete success in this department of industry. It is to be hoped that they will never again suffer themselves to be so poorly, at least so scantily, represented in this so important a branch.

AGRICULTURAL IMPLEMENTS.

—Here, again, was a meagre show. A Threshing Machine, a Reaper, with Atkin's Automaton Raker attached; several Plows, a Cultivator or two, and four or five Fanning Mills, make up most of the roll. A Cultivator exhibited by Post & Northrup, attracted our attention, and of which we are inclined to think favorably, though we did not see it work. We were much pleased with Kellogg's combination cider mill, corn sheller, wool and cheese press, which was exhibited. This was truly a "*horse* for all work," and promises to do it well, also. The Reaper we perceived was *Wright* in all respects. The Plows were of good model, and seemed to be exhibited mostly by Ela, of Rochester, Oliver, of Waupun, and Spencer, of Watertown. The Fanning Mills looked well, and, for aught we know, could raise a fine breeze, and do a *clean* business. There were, in addition to the above, a fork or two, with their stails sawed off, and a model horse-rake, and a model cheese press, both of which should have grown into proper size before exhibition; one churn and three stoves; a patent screw cutter, and a patent elastic bed bottom—the last two articles being worthy of some considerable commendation. In the same tent with these last articles mentioned, we noticed a very superior and splendidly finished Double Harness, made and exhibited by Mr. Riker, of Janesville. We never saw so finished an article in this line, west of the Lakes. Near by, in a fine case, a beautiful pair of Boots, by Buckingham, of

Janesville, worthy of the Earl of the same name.

We now come to the articles of Floral Hall—the seat of the greatest attraction, and that justly. It was arranged under the supervision of Mr. Hyslop, of Milwaukee. Here were exhibited fruit and needle work, domestic manufactures, paintings, pictures, printing, &c. As to paintings and pictures, there was not one worthy of notice, and some not fit to be seen. There was more of interest in the countenance of either Hyslop or Alex. Smith, whom we saw arranging them, than in all of the pictures put together. There were some good specimens of printing, &c., exhibited by Gen. Rufus King & Co., of Milwaukee, and some of the best samples of book binding, blank books, &c., by Henry Neidecken, of Milwaukee, that we ever saw, without exception. These are books such as are books. We were much pleased with a hair basket, a black hair boquet, a worsted wreath, a wax boquet, and a fish skin wreath. We do not know who was the exhibitor. We venture, however, that it was none other than a German. The articles, from book binding downwards, showed a perfection of mechanical skill characteristic of the German mind. There was a number of finely wrought quilts of patch work worthy of commendation; also, some good worsted work, which gave us some pleasure. Some fine plants graced the Hall by their green foliage, and perfumed the air with their fragrance. Some beautiful Canaries charmed us by their sweet songs and innocent hops and skips from swing to swing. We were sorry, however, to see that Jack Frost, who was in at the "State Agricultural Ball," and did not go home till morning, nipped some of the buds and blossoms of the *greens*, taking the starch out of their collars, giving them slouched hats, and a kind of a down-at-the-heel look during the remainder of the Fair.

Jack was too bad, but he had a ticket, and was there.

Now for the *Fruit* of the whole affair, and we are done; and here, we must confess, was the greatest chance for the display of *taste*, and every one, especially the ladies—impelled by a kind of natural love for the apple—looked most wishful for an opportunity of so doing; and, now and then, we noticed the reverse of that which transpired in the garden of Eden, taking place—the man was giving the apple to the woman, and she did eat. We trust neither friend Quiner or friend Bell will think us personal. But to the fruit. This was one of the *best* things of the Fair, and had every one of our Nurserymen done their duty as well as John Bell, of Gardener's Prairie, the Pomological Convention at Chicago, which took place on the same days, would have been, certainly, a *fruitless* concern. The fruit was very finely arranged on plates, upon a long table or counter, and were easily to be seen without handling—though it was not so easy to keep the hands off. The principal exhibitors were Bell, of Gardener's Prairie, Clapp, of Lake Mills, and Adams, of Ixonia.—Two or three others exhibited specimens in less abundance. We noticed some large peaches, exhibited by Dr. Castleman, of Delafield, and a variety of grapes, by Daniel Blodget, of Beloit; also, some Isabellas, by Edgerton, of Summit; all of which were fine.

We tasted some very nice Blackberry Wine, made and exhibited by our friend Quiner, of Watertown. This must be very excellent in many instances of sickness—and we found it not bad when we were well; even. No spirit was mingled with it for preservation. It is the pure juice of the blackberry, sweetened. We also tasted some good wine exhibited by Mr. Dennis, of Watertown.

The exhibition of nearly all kinds of fruit, settles the question of our capacity to raise fruit in Wisconsin.

The sweetest thing of the whole exhibition was a kind of transparent honey, exhibited by Quiner, of Watertown.

But our limits forbid further particularising. We will say, however, that the Plowing Match came off according to appointment, on Thursday—our Cincinnati of a President, after doffing his coat and hat, leading off in a most commendable manner. We felt like giving him three round cheers, but we feared it would be considered rather too personal for the occasion, and we restrained our enthusiasm.

Suffice it to say, that we found many a text for future sermons, in what we saw at the Fair. We wish to say again, that, bating the facts already mentioned, of the scantiness of material, our last Fair was decidedly a good one; and the reason of its not being able to be ranked among the superlatives in its line, is due alone to those of our farmers and mechanics who withheld more than was meat.

We say, with a will, success to these annual festivals; and may the Executive Committee of our State Society have the wisdom necessary to dictate the best course to pursue, and means to be employed, to increase their interest and enhance their value.

CAREFUL USE OF HORSES.—An acquaintance lost his horse a few days ago, in a manner that would suggest an habitual caution in driving. The horse, a valuable one, well kept, in good spirits, and in perfect health, was taken from the stable and driven. He had ascended a long and hard hill within the first mile of driving, and as soon as the summit was reached, the driver, as is the habit of many, touched him with the whip; he sprang, stopped, staggered and fell, and by the time the driver could alight from the carriage, he was dead. An examination showed that a large blood-vessel near the heart had been ruptured.—[Farmer and Planter.

Timothy Grass—Its Culture.

I know that every man, to be successful, must have learning, and that none of us know any thing but what we have learned in some way, and as I have been intimately acquainted with the management of Timothy grass for the last 45 years, I will briefly state the process that should be observed in its culture: First, the quantity of seed required—one peck to three acres is sufficient. Secondly, the time to sow—when you sow your turnip seed, if you sow in new ground; then you will have a good crop of seed the next summer; or, if you choose, you can sow in September with your wheat. Should you prefer to sow with oats, after harrowing your oat ground sow your timothy seed, then harrow or brush lightly. Never mow your timothy until the seed is maturing. Timothy meadows should never be pastured until the first white frost, then you may pasture until the first of March—not sheep and geese and hogs, but cattle and horses. Meadows thus managed will endure for a term of years. I know many in Virginia that have never been renewed since my earliest recollection.

[Loudon (Tenn.) Free Press.

MEASURING CORN IN THE CRIB.—As the season is approaching when our farmers will be shelling their corn for market, perhaps a rule for ascertaining the quantity they may have, in an easy and expeditious manner, may be of service to them. We find the following in an exchange:

"After leveling the corn, multiply the length and breadth of the house together, and the product by the depth, which will give the cubic feet of the bulk of corn; then divide this last product by twelve, and the quotient will be the number of barrels of shelled corn contained in the house or crib. If there be a remainder after the division, it will be so many twelfths of a barrel of shelled corn over."

As an example of this rule, a crib, 12 ft. long, 11 ft. wide, and 6 ft. deep, contains 792 cubic feet. This amount divided by 12 will give 66, as the number of barrels of shelled corn, or 330 bushels, (as we see the writer allows five bushels to the barrel.) We give this rule for what it is worth, and our readers can test it for themselves.

Chemistry of Plants. No. 5.

UPON WHAT DO PLANTS LIVE—FROM WHENCE COME THEIR MATERIALS—WHAT IS THE EFFECT OF PLANTS UPON THE SOIL ON WHICH THEY GROW, AND THE AIR IN WHICH THEY LIVE.

BY PROF. S. P. LATHROP, M. D.

To every one who properly studies the Table of the composition of plants, given in the last number, the enquiry naturally arises—How is this great amount of material, so essential in the formation of plants, to be restored to the soil?

Under the processes which are carried on by nature, in the administration of her own laws, when she is not interfered with by the intervention of man, this material of the plant is soon restored to its parent earth, carrying with it, such of the elements which it has incorporated into its own existence from the atmosphere.

There is also another process of much interest to the agriculturist, which is carried on by the growing plant, which, though it does not tend to enrich the earth as a whole, yet exerts a great influence in modifying its surface. This is a transfer of elements of plants from the soil lying deep beneath, to the surface. The roots of plants, especially of certain kinds, penetrate deep into the subsoil, and by their thousand fibrils seize hold of the elements of their being, and through their many channels conduct them to their upper portions, which, when they perish upon the surface of the earth, are mingled with its soil, and there serve as a rich pabulum for future generations.

Thus the great mother of all is enriched by the myriads of the offspring which she has nourished upon her bosom. But the agriculturist, unless guided by a proper consideration of natural laws, becomes a disturber of the balance of nature, though, happily, beyond a certain limit he cannot go. By constant cropping without manuring, or returning, in some form, the elements of crops to the soil he greatly impoverishes his land, and beggars his successors in the ownership of the same. The economical farmer—the true cultivator—however, is as much pained to find his land diminishing in value by this kind of impoverishment, as he is to find that his stock of fat cattle, from which he expects to realize a handsome income at the hands of the butcher, has diminished in flesh and lost in weight by some kind of mismanagement. It is as evident to the skillful farmer,

that his land, disembowelled of all its elements to produce corn, wheat, oats, &c., is of no more comparative value to him for further cultivation, for further profit, than is an ox for beef, out of whose carcass has been worked all the tallow and muscle by an unmerciful master.—Some farmers, however, act upon the principle of exhausting their farms, and, as they say, of raising crops at the least possible expense, intending in the end to sell them, and with the proceeds to purchase others to treat in the same manner. This practice is not unlike the man who works his horse or his ox without supplying them with food; he has the products of the labor thus meanly obtained, to pay for the purchase of another to treat in the same manner.

Now, every one knows that this would be a ruinous process. The price for the labor thus obtained from the animal, or for the grain thus raised from the farm, must be vastly above the ordinary one to render it ever safe to adopt such a practice. And yet we fear that this is the practice adopted by many of our farmers at the West. They seem to think it impossible ever to use up, or even to diminish by any possible means, the great fertility of this western soil. It is true, that a fat horse may be able to endure service without food longer than a lean one; but who ever saw a horse so fat that by any possible amount of driving, without feed, could not be made poorer? Now, it is no more impossible to diminish the amount of fertile ingredients in the soil, by constant cropping without manuring, than it is to lessen the amount of flesh and strength of the horse by working without feeding. The process in the latter case may be more rapid and manifest to the inexperienced and thoughtless mind than the former, but none the more certain.

The horse or ox is an instrument by which the owner can convert hay or oats into labor, which is of more pecuniary value to him than hay and oats. It is in this way that he is of any profit; and the greater ability he has of increasing the difference between the value of his food and of his labor, the more profitable is he to his owner. There is such a thing as his being so poor as not to be able to labor sufficient to pay for his food, much less to pay for his food and the interest of the money invested in him, and the trouble of taking care of him; and he is the more rapidly approaching this state as his food is the more diminished.

The only way to make him of any profit is to restore him to a good working condition as soon as possible, by proper feeding—and the best of all is to have kept him from the first in that condition.

So with our farms, they are our most valuable instruments or means of converting the seed, labor, manure, &c., which we expend upon them, into products of more value to us than all that which we have laid out upon them.

If naturally, or by any treatment of ours, they are unable to do this, they are just so far unprofitable and valueless. They must be kept in their original fertility, or, if unfortunately they have already lost it, they must be restored to it as soon as possible. The more fertile and profitable they now are, the more important is it that they be kept so. It is a matter of regret, that thousands of acres in New England and some of the Southern States which were once fertile lands, have been so impoverished by injudicious management, that it would cost more to restore them to their pristine fertility, than they would be worth for a lifetime.

In corroboration of these views we here quote from the *Genesee Farmer* for October, the following remarks, taken from the *London Farmer's Magazine*:

"Of the 12,000,000 acres of improved lands in the State of New York, 1,000,000 are so cultivated as to become richer from year to year—being in the hands of 40,000 farmers who read agricultural journals, and nobly sustain the State and county societies of that commonwealth. Three millions barely sustain their fertility, and are cultivated by a class of farmers who read not, but do their best to follow the practice of the last. 8,000,000 acres are in the hands of 800,000 cultivators who follow the old practice of exhausting the soil, which has fallen from 30 to 5 bushels of wheat per acre—Albany county, in 1845, producing only 7½ bushels per acre; Dutchess county, 5; Columbia 6; Rensselaer 8; Westchester 7, &c.; while Albany, in 1775, produced from 20 to 40. The 300,000 persons that cultivated those 8,000,000 acres, produce each annually 25 dollars less than they would have done had the land not been exhausted. There is no escape from this oppressive tax of 7,500,000 dollars, but either to improve the land at an expenditure of 100,000,000 dollars, or run off and leave it. It is calculated that Maryland, Virginia, North and South Carolina, and Georgia, have lost the equivalent of 500,000,000 dollars by exhaustion of land."

It is to be hoped that our western agriculturists will give due heed to this point, and be led to take a proper view of the matter, and

thus save themselves from a course so ruinous to their highest interests.

It is the object of this number to contribute to this end.

Let us, then, endeavor to answer the inquiry—How can our land be preserved in its present fertility?

To this inquiry it may be very comprehensively replied—that it is only by returning to it, so far as the inorganic materials are concerned, just what has been taken off in the crop, and as much of it. This is the *immutable law* of farming, to which there are no exceptions; and it is like the law of the Medes and Persians, which changeth not in all its requirements. The owners of land hold it only on the condition that they will put on as much as they take off, and of the same kind. The land does not agree to furnish the *raw material* out of which the crop is to be manufactured. The farmer has only the choice in what form the material is to be supplied, and in what crops it shall be returned. He can supply it in the form of manure taken from his barn-yard, worth a mill per pound, and receive it back in wheat worth ten times as much per pound; or he may supply it in the form of well composted manure, worth from three to four mills per pound; or in the form of concentrated pou-drette, guano, phosphate and super phosphate of lime, and receive in return several pounds of wheat, or many pounds of beats, carrots, turnips and potatoes.

The same, or analogous principles, by which you are guided in restoring your impoverished animal to good condition, or in preserving him in this condition when he is already so, should guide you in the treatment of your farm. It is well known to every one who has been accustomed to feed working animals, that they require different treatment from those which we desire should accumulate flesh or lay on fat alone.

If we wish to employ the animal in labor, we need to feed him upon that material which will give him strength of muscle and firmness of bone. It is only when he is so fed that he can be of service and profit to us. If no labor is required or desired of him, he may be turned out to shirk for himself, and generally under this treatment will grow fat.

So with our farms, if we wish to use them in the raising of crops of different kinds, we must feed them or furnish them accordingly. If we

wish to raise a crop of potatoes, we must furnish the soil with lime for the vines, and potash and soda for the tubus. If we wish to raise wheat, we must have not only silica, and lime for the straw, but phosphoric acid, so important to the perfection of the kernel, for the grain. Being always guided by this principle, that we are to give to the land as much and of the same kind, as that which we remove, it is evident that we shall not rob her of any of her just rights. Our mother earth is a kind old mother, but of stern integrity. She holds out fair and liberal promises, which she invites us to accept and be enriched thereby. She offers to take all our waste, and even offensive matters; the more the better—and which to us are only a stench if suffered to accumulate about us, or to spend their “sweetness on the desert air”—and convert them into golden corn and rich harvests of fruits, giving us many fold for our generous allowance. But no where and at no time does she encourage slothfulness on the part of her sons, or inattention to her requirements.

But it may be asked, then, what is the profit of owning a farm, or in cultivating the same? We reply—the same in kind as that of owning a paper mill, or of working one. You have a means of using the waste material, which is constantly accumulating about you, and that in spite of you, and which will literally cover you with rags, unless properly disposed of; and out of it of obtaining the means in renewed and varied forms for supplying all your wants.

The whole philosophy of manures, or the art of reclaiming a worn out farm, or maintaining one in heart, depends, therefore, upon two considerations: First, a knowledge of the constituents of the crops to be raised—organic and inorganic. These we have given in the previous numbers. And, second, a knowledge of the ingredients of the soil, likewise organic and inorganic. As there cannot be given for every farm, by us, unless by a critical examination, the general composition of soils which we have given, in a previous number, will have to suffice.

Till by some means, such as State patronage, or our own wealth, we are enabled to have an examination or chemical analysis of our soils, we shall be obliged, of course, to be governed by general principles in the manuring of our land. It is a happy circumstance, however, for the farmer who raises a variety of crops and properly rotates them upon his fields, that he

will loose but little by acting on these general principles. For, if the material put upon his land in the manure which he uses, is not taken up by the crop of this year, it may be by that of the next. But when we come to raise special crops upon the same land for consecutive years, then we must have special manures. We would guard our farmers against paying much for common yard manure, and carting the same. It will pay better to purchase guano, poudrette, phosphate of lime, super-phosphate of lime, bone dust, &c.

Farmers, however, must, first of all, husband their home resources well and faithfully. For inland farmers to let their muck remain untouched, and leave the urine of their cattle to run into the ground, or the nearest brook, and suffer their barn-yard manure to lie exposed to the alternations of showers and sunshine, year after year—things which together, properly composted and managed, would make as good manure as guano, though more bulky, while he pays from thirty to fifty dollars a ton for foreign fertilizers, certainly is injudicious.

A fact of much importance to be remembered by our farmers at the West, is that of the two kinds—organic and inorganic—constituents of our soils, although the latter, as a whole, are by far the greatest in amount; yet some of them, and the very ones which may be regarded as of great importance as any, are very limited in amount.

This is particularly true of the compounds of phosphoric acid. It is probable, therefore, that the element is as soon exhausted as any in the soil. The manures which furnish this in some considerable quantities, are those substances which are well saturated with urine—bone dust, guano, super-phosphate of lime, &c. It may, therefore, in many cases become desirable to take special pains to saturate muck, plaster of paris, or any good absorbent, with the urine of our stables; and, perhaps, add to these substances so saturated, guano or super phosphate of lime, to use upon our fields which have been for some time under cultivation.

PRODUCE GOING ACROSS THE ATLANTIC.—The quantity of flour shipped from New York for the week ending 2d of Sept., was 28,531 bbls., and from Philadelphia, 17,426 bbls.; total 45,957 bbls. The shipments of wheat for the same period are 151,960 bush., and from Philadelphia 26,877 do.; total 178,827 bush.

EDITOR'S TABLE.

TO SUBSCRIBERS.—If the October number has failed to reach any of our subscribers, we wish to be notified of the fact, that the deficiency may be supplied. Being from home, the mail was made up by a new hand, and we fear some mistakes may have occurred. A part of the covers were worked off through the neglect of the printer, before changing the date from September to October—in fact, we apologize for the whole appearance of the October No., for every thing about it was shabbily done.—Its like shall not go from the office again while we have control of the paper, if we never attend another State or County Fair. The issue of the present No. has been delayed a few days, in order to give the proceedings of the State Fair at as early a day as possible.

ACKNOWLEDGEMENTS.—Several of our friends have laid us under obligations for very fine specimens of Wisconsin fruits—apples, plums, peaches, grapes, and so on. We return thanks to our friends, most heartily, for their remembering us, and their just appreciation of our taste.

JOHN BELL, of Gardiner's Prairie, for ninety-five varieties of grafted apples—all splendid specimens, and raised by him from the root. If there is a man in the West who can beat Mr. Bell on apples, we wish he would send us the evidence to prove the fact.

J. C. HOWARD, of Milwaukee, for fine specimens of peaches. Mr. H. informs us that he has raised, the past season, nearly two hundred bushels of this delicious fruit. With an experience of some years, he feels assured that peaches will do well in this climate.

H. M. HAYES, of Paimyra, for four varieties of grapes—Isabella, Alexandria, York, and Lafborough—all fine specimens. Mr. H. informs us that the York has proved, with him, the most hardy and prolific of the four.

H. J. STARING, of Whitewater, for twenty-five varieties of apples—grafted fruit,—and some fine clusters of Isabella grapes. We have never seen finer samples of fruit. Mr. S made a fine show of both fruits and flowers at the Rock Co. Fair, and which carried off some premiums.

B. F. MACK, of Shopier, for a very liberal donation of fine apples, embracing so large a variety that we could scarcely enumerate them.

Mr. M. exhibited at the Rock Co. Fair one hundred and forty varieties of grafted and seedling apples, all of which were picked from his own orchard. Mr. Mack is deserving of much praise for his efforts in raising both fruit and forest trees.

E. B. QUINER, of the *Watertown Register*, for a bottle of Blackberry Wine, of his own manufacture—and a most delicious beverage it is, too, as many of our friends will attest. Mr. Quiner presented at the State Fair specimens of blackberry wine, honey, and tomato figs.—The figs were delicious, and, of course, the honey was. Friend Quiner takes a lively interest in every thing pertaining to Horticulture.

WE'VE SEEN GOTHAM.—By the politeness of the gentlemanly agent, Mr. Norton, we have been favored with several viewings of that very remarkable, entertaining, and instructive work of art—"Bullarn's Panorama of New York City." We had seen very flattering notices of this work, and were anticipating much pleasure when the opportunity should occur for us to look at it. Our largest anticipations were fully realized.

Though this is not a work which is intended to awaken the higher emotions of the imaginative and artistically cultivated mind like the great works of the masters, yet it is the perfection of the practical in art. It is a work of great merit of its kind, exhibiting much skill in the designing, patience and perseverance in the working, correctness of observation, truthfulness in representation, and perfection in coloring. We here see the streets alive with the busy throng, carriages, stages, and hacks with their drivers beckoning you to get in and ride to any part of the city for a sixpence; the beer pedlar and the ice seller's carts; the butcher's cart and the coal cart; the b'hoys and their horses; the military companies and funeral processions. As we pass along, we read the signs on the stores, we look at the goods exposed at the windows; we recognise old friends and familiar faces, and almost receive their salutation. In fact, we were inclined to try to do some business, to make some purchases, and to pay up old debts as we met our creditors; but we were *short*, and as our creditors said nothing, we didn't. Here are hotels and churches, beautiful parks and bubbling fountains, green grass and shady walks, with the cautions to "keep off the grass" high on the trees, &c., &c. We say to our friends,

this is worth seeing. It is better than fifty circuses or Barnum's Museums. It is well conducted and worthy of patronage.

PRICES OF PORK.—Heavy speculators in produce are always ready with their predictions a few months before a new crop is in market.—Editors of newspapers are often made their unsuspecting tools. Statements and statistics are published to show that a large surplus of the old crop is on hand, that the new yield will be unusually great, that the demand will be much too limited for the supply, and consequently (and this is the drift of their efforts) coming prices must necessarily be very low. Such information for the enlightenment of farmers, has this season been mainly confined to the article of pork. The foreign demand was to advance the price of vegetable produce but not effect swine flesh. And there has been so much of such industry as really to make the impression prevalent in the West, that the prices for average lots of hogs would be from \$2.50 to \$3.00 in Cincinnati, Louisville and St. Louis. But—"taint so." The greatly increased demand in Europe, Australia, and California, is not confined to grain, and even if that were so, the prices of edibles generally would still be advanced at home. In opposition to all speculating prophecies it is pleasant to make quotations of actual sales like the following:

St. Louis, Oct. 24th.

Hogs.—Sales at \$4.50a5.00; average over 200 lbs.

The variance is always very slight in pork, between St. Louis and our principal river towns.—*Progressive Era.*

MAY WHEAT.—We saw, both at the Rock Co. and the State Fairs, a beautiful specimen of Wheat by the above name, presented by Daniel Blodget, of Beloit. Mr Blodget informs us that he imported this wheat from Missouri; that it ripens three weeks earlier than other winter wheat; that it is not liable to rust; that the straw is light, &c. It weighs 64 lbs. to the bushel, and yields 31 bushels to the acre. We think this will be a good variety of wheat for our farmers to make a trial of. The early period at which it ripens is a great consideration on several accounts.

GUANO.—There are now on their way to the United States, from the Guano Islands, on the coast of Peru, eighty-two vessels with cargoes of this manure—said to be 60,000 tons.

BETTER-GROWERS in the north of France anticipate a good crop of sugar this season.

NEW MODE OF BENDING TIMBER.—A patent has been obtained for the bending of all kinds of timber by end pressure. The patentee, Mr. Thomas Blanchard, bends straight timber to all the required forms, without abridging the capability tubes of wood. He confines the outside of each stick to its original length by pressure, forcing the fibres into a new figure, without rupture, and retaining all the original strength of the wood, nor can these bent timbers be again straightened. The bending is performed while the vegetable albumen is softened, and thus, much of it must exude; improving the lasting properties of the wood.—The invention is of undoubted advantage, especially in ship building and strengthening the fabric and reducing the cost. Whenever any part is required to be of a circular, curved, or oval form, this machine will produce the desired form, from the straight stick of timber, no matter what may be the size of the stick to be used; and it accomplishes this with great economy in time and expense.

CURE FOR GARGET.—The following is Dr. Eben Wright's method of treating Garget:—Put 10 grains of hydriodate of potash, dissolved in water, into a mash of shorts and meal, and give three times a day till a cure is effected. If the case prove stubborn, a resort may be had to tar ointment, applied to the udder, composed of 20 grains iodine to 1 oz. of hog's lard.

We think more of this method than of any other of which we know.—[Ed.]

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**Wisconsin Wholesale Drug
WARE HOUSE.**

ESTABLISHED IN 1844.

S. JOHNSON, JR.,

Wholesale Dealer in Drugs, Medicines,
Paints, Oils, Dye Stuffs, &c. General Agent
for most of the popular Patent Medicines sold
in Wisconsin.

Proprietor of Johnson's Chemical Hair In-
vigorator, Johnson's Cherry & Liverwort, and
the famed Bone & Nerve Liniment.

151, East Water St., Milwaukee.

MAY'S STEEL PLOW.

FARMERS will please remember that this
favorite Plow may still be had, cheap for
cash, at the old stand in the rear of T. & J.
James' Marble Factory, in this city.

Also, at Fisher's, Beloit; M. S. Banker's,
Clinton; Best & Dinsmore's Summerville; D.
K. Spooner's, Johnstown; Goodrich & Co.'s,
Milton; and West & Pinney's, Monroe, Green
Co.

Other Agencies will be established soon.
Janesville, Nov. 1, 1853.

**GREAT ARRIVAL OF
HATS, CAPS, FURS & FINDINGS**

OF every style, quality, and material for the
Fall and Winter trade, at the

SIGN OF THE BIG HAT,

on the West side the River, where can be found
every thing in the line, and at prices that defy
competition.

Gents' Furs:

Tippets, Fur Gloves, Over-coats, Over-shoes,
Buffalo and Fancy Sleigh Robes, an extensive
assortment.

LADIES' DRESS FURS:

Muffs, Victorines, Wristlets and Gauntlets
made of Martin, Fitch, Lynx, Ermine Bear,
Siberian Squirrel, Genet, Russia and Turkey
Fox, Astrican Seal, English Coney Furs, and
Swan's Down, a variety of colors.

Gent's Findings.

Under Garments of all kinds, Stocks, Cravats,
Suspender Braces, Hosiery, and the most ex-
tensive assortment of Gloves and Mittens in
the state, bought direct from the heaviest man-
ufacturers at the East for Cash.

Trunks and Carpet Bags constantly on hand.
Hats and Caps made to order.

Janesville, Nov., 1853.

T. LITTELL,

WHOLESALE AND RETAIL DEALER

IN

Agricultural Implements, Seeds, &c.,

109, East Water-st.,

MILWAUKEE,

Is prepared to supply Dealers and Farmers with
any kind of PLOWS, manufactured by Ruggles,
Nourse, Mason & Co., at manufacturers prices,
adding only cost of Transportation. The
new Series of Plows, comprises the most desir-
able patterns that have ever been introduced.

Their EAGLE PLOWS, are already too
well known to need one word said in their favor.

And is also prepared to furnish Extra Points,
Mould Boards, Land Sides, or any part of the
Plow that may be wanted. Wherever their
Plows have been introduced, they have received
the highest commendation.

I am prepared at all times to supply Hay
Cutters, Harrows, Cultivators, Corn Shellers,
Road Scrapers, Thermometer Churns, (and all
other desirable patterns,) Fan Mills, Seed
Sowers, Corn Planters, Meat Cutters, Field
and Garden Seeds. Also Wholesale Dealer in

GROCERIES AND PROVISIONS,

Agent for the sale of **Dupont's Cele-
brated Powder.**

5n3



GENTLEMEN! FARMERS!!

Here we are on the

WEST SIDE OF THE RIVER, AT THE SIGN OF THE

MAMMOTH BOOT

Ready to serve you with any thing in our line as CHEAP AS ANY OTHER ESTABLISHMENT in the city.

WE DO NOT PROFESS TO SELL AT COST,

Nor do we pretend to have *more* Boots and Shoes on hand than can be found in all the stores and shops in town; but we think we *have* got as many as you will want this fall, and we will try to have a *few* left in the spring, provided we can find GOOD WORKMEN enough in the state to make them for us. Having received the

FIRST PREMIUM

At the late Rock County and State Fairs, we make bold to say, that, in *quality*, our work

CANNOT BE SURPASSED

by any of our neighbors. But do not rest satisfied with our *say* so—come, ONE and ALL, and TRY a pair or two, and *know by experience* that what we say is TRUE. We will not enumerate the different kinds and styles of work on hand. Suffice it to say, we have *every thing* in our line, from the

BEST CALF BOOT, WORTH \$6,50, TO A TWO SHILLING CACK!

Also, a fine assortment of RUBBERS and OVER-SHOES, and the best lot of LADIES' GAITERS in the city—warranted.

All kinds of Work made to order with neatness and dispatch.

At the sign of the BIG BOOT, next door to COOLEY & BABCOCK, west side of the river, Janesville, Wisconsin.

November 1st, 1853.

BUCKINGHAM & RICHARDSON.

WISCONSIN & IOWA FARMER, AND NORTHWESTERN CULTIVATOR.

VOL. V.

JANESVILLE, WIS. DECEMBER, 1853.

NO. 12.

PUBLISHED ON THE FIRST OF EACH MONTH, BY

MARK MILLER.

TERMS:

50 Cents a Year in Advance;

Five copies for \$2, if directed to one Post Office, and at the same rate for a larger number. All subscriptions to commence with the volume. Back numbers supplied to new subscribers.

ADVERTISING;

One page per year, \$50. Half page, \$30. Quarter page, \$15. Eighth page, \$10. One square, (twelve lines or less,) 1 year, \$3.50. (Less than one year,) for first insertion, \$2.00. For each subsequent insertion, 50 cts. And at the same rate for a larger amount.

These terms will be strictly adhered to. The circulation of the FARMER is large, and the amount of advertising limited; which renders it a more valuable medium for advertising than if a larger space was appropriated to this department.

Our Fifth Volume and our Sixth.

The present number completes the Fifth Volume of our paper. We have much reason to be pleased with its reception and the favor with which our efforts have been attended during the year now drawing to a close.

Our subscription list has steadily increased, and the paper has constantly been gaining friends from its commencement till the present.

Encouraged by these manifestations of regard, the determination which we have ever cherished, of furnishing a good agricultural paper to our farmers, mechanics and the public generally, is now more than ever unwavering and fixed. With the November number we sent to our patrons the Prospectus for the coming year, by which it will be seen that we have perfected new and more extensive arrangements by which we expect to be able to furnish to our readers an agricultural paper of supe-

rior merit, and which will be an *approach* towards our idea of an agricultural journal.

We therefore feel strengthened for the new year and shall press forward with new resolution, towards that high mark and perfect work which we have prescribed to ourselves.

Our aim, as we said at the commencement of the year, is to contribute to the diffusion of useful knowledge, to convey to the minds of our readers as full and complete information on all the various branches of agricultural science and domestic economy as we may possess, or can collect from the works of thoroughly practical writers, keeping in view useful facts and practical results, rather than speculative theories. While we hope never to be discarding the application of science to agriculture in any of its branches, yet we mean to be duly conservative for the highest practical interests of our readers. We shall spare no pains within our reach to make the NORTHWESTERN CULTIVATOR one of the best and most reliable agricultural papers of the day. We count, therefore, on the continued and even increased assistance of its friends in extending its circulation. Let clubs be formed in every school district throughout the whole Northwest and that *immediately*. Friends, please look over our Prospectus for the year 1854; study the contents and imbibe the spirit of the January number, till your own face reflects its beautiful image, then put it and the prospectus under your arm, see every man in your neighborhood and get his name *in full* and the money to

boot, and forward them to us at the earliest possible date, when the *CULTIVATOR*, with its plump and smiling face shall early in each month of the year, visit your homes, dispensing from its condensed folds treasures of knowledge, virtue and happiness.

We also invite you to tell us your experience. Nothing does a true man and his brethren of the same craft so much good as to review his own efforts and their results, either successful or otherwise.—Our columns are open for you. It is no matter if you all speak at once, they will all come out right and properly arranged. *Mark*, we have for a *Miller* one who knows how to give each customer his proper grist. Now, friends, will you join your efforts with ours; so do, and at the work we go.

BREAKING OXEN.—The editor of the *Massachusetts Farmer* recommends the following method of breaking oxen:

"When you first put a yoke on your two year old steers, coax them with an apple or an ear of soft corn (soft corn is allowable in this case.) Then they will hold up their heads and be glad to follow you. No whip will be needed at the first yoking. Let the yoke and the soft corn be associated in their minds, and they will never be shy of the yoke; but if you make use of force alone, they will hold down their heads to keep them out of the way of blows. After you have taught them to follow you around in the yoke, and that it will not injure them to carry it, you hitch them on before the older oxen, and make them take the lead. The driver should go beside them occasionally, with a switch or a light short whip, but should have no need to beat them, except in extreme cases."

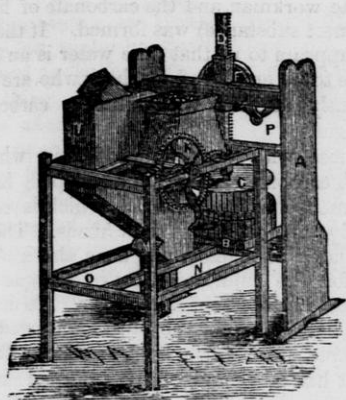
HOW TO COOK SWEET POTATOES.—Boil two large sweet potatoes, rub them through a sieve, then add a piece of butter the size of an egg, a little salt, one pint of buttermilk, a tea cup of sugar, a table spoonful of saleratus, dissolved in warm water. Bake in an earthen dish. Serve up with cream.

We take the following *little bit* of our friend Geo. W. Tiffany of Milwaukee, from the *Genesee Farmer* for October. It is decidedly a hit. Friend Tiffany give us more of 'em:—

Happening to take up a June number of the *Genesee Farmer*, I was so well pleased with the independent and healthful remarks, editorial, in regard to the management of pastures, and also the management of "two-penny lawyers," who have inflicted such vast injury by being legislators, par excellence, upon all subjects, that I wish to take your paper, although I now take several agricultural works. When will the farmers of the United States awaken to a true dignity of their station; the importance of their calling? When will they assert the supremacy of their strength, and direct it to the supplying of their wants by legislation, as well as in agriculture?—Throw off the yoke which binds you to believe, or rather to acquiesce, in the idea that a "two-penny lawyer" is the only man capable of delivering your annual addresses before State Agricultural Societies, over the United States. Are you always to be dependent upon the dealer in quinks, quiddities, and certioraris, for your annual addresses? As well hire some celebrated hatter, or shoemaker to enlighten you in your profession. It is a virtual confession that you are sadly ignorant of either your profession or your dignity of station, to permit such a course any longer. Let 1853 mark a new era, and let no clap-trap lawyer, or other *professional gentleman*, be forced upon you with his address drawn up with "soft-soldier," for political popularity and hope of office. Rise! control your own business, appoint practical farmers to deliver your annual addresses, and to fill your halls of legislation. If they are incapable, the sooner that it is made to appear the better. From all the taxes you pay, how much is appropriated to the study of the qualities of the soil, from which these taxes are drawn? Sleepers, awake! the Philistines are upon you. GEO. W. TIFFANY.—*Mil. Wisconsin.*

Of the seven \$100 premiums awarded at the Springfield Horse Exhibition, Vermont took five and 'the rest of mankind' only two.

Fig. 1.

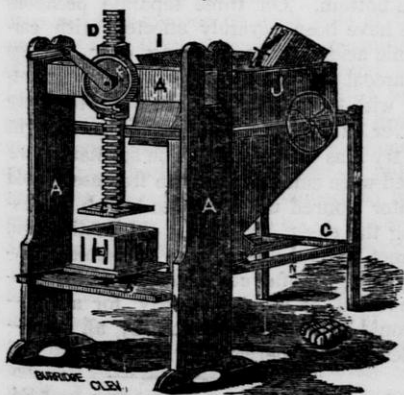


Kellogg's Combination Mill.

The above cut (Fig. 1.) represents a Combination Press and Mill, for grinding apples, shelling corn, pressing wool, cheese and cider. This mill may be propelled by hand, or horse, or steam power, yet may be moved about with ease by two men.

This machine can be detached at any time desired by the operator, by taking four bolts out of the back side of the press, when it can be used for shelling corn, pressing cheese or wool, as shown in

Fig. 2.



This machine was exhibited at the last State Fair held at Watertown, and received the Diploma of the society. The price of this machine is \$3.

D. Kellogg, Salina, Washtenaw Co.,

Mich., is the patentee from whom any information desired concerning it may be obtained.

Laying off Surfaces.

A few simple rules are oftentimes convenient to those who are not conversant with surveying operations, and a writer in the Western Horticultural Review has communicated to that work some very good ones, some of which we copy, and to which we add a few others.

TO LAY OUT AN ACRE IN A CIRCLE.—First fix a centre, and with a rope as a radius, seven rods, three links and three-eighths long, one end attached to the centre, and kept uniformly stretched, the sweep of it at the other end will lay out the acre.

For one quarter of an acre, a rope *three rods and fourteen links* will be the right length.

For one-eighth of an acre, a rope *two rods and thirteen links* will be enough.

TRIANGLES.—If you wish a triangle to contain just an acre, make each side nineteen rods, five and a half links long.

A triangle whose sides are six rods and twenty links long each, will contain one-eighth of an acre.

TO LAY OUT AN ELLIPSE OR OVAL.—Set three stakes in a triangular position. Around these stretch a rope. Take away the stake at the apex of the triangle, which will be where the side of the oval is to come—move the stake along against the rope, keeping it tight, and it will trace out the oval.

A square to contain an acre, or just one hundred and sixty rods, should have each of its sides just twelve rods, ten feet and seven-tenths long.

TO DRAW AN OVAL OF A GIVEN SIZE.—The long and the short diameter being given—say twenty feet for the shorter, and one hundred for the longer—divide the short diameter into any number of equal parts—say ten—and from each point draw a line parallel to the long diameter; then divide the long diameter into the same number of equal parts (ten), and from each point draw a line parallel to the short diameter. Then draw a line from point to point where each corresponding line cuts the other, on the outside, and this connecting mark will describe the oval or ellipse required.—[Maine Farmer.]

Lime Water—Cure for Carbonic Acid Gas

A correspondent, (Wm. Collier,) of the London Mining Journal, imparts a piece of valuable information respecting the beneficial effects of lime water to cure persons affected with carbonic acid gas. He states that two of his workmen were employed to clean a "carbonator"—a large iron cylinder, 15 feet deep, and 8 feet in diameter, which was used at his chemical works, and through which a current of carbonic acid gas passed from a neighboring lime-kiln. This current of gas should have been shut off while the men were at work, but in this instance, by some neglect, it was not, so that when one of the men went down to the bottom to work, he dropped on his back, and could not answer the man at the top who was to assist in the operation. The latter made the alarm, and said, "the other had dropped down like lead." Mr. Collier immediately directed a man to go down and lash a rope around the body of the man at the bottom of the carbonator, who was then hoisted out, but life appeared to be extinct. He was at once carried to the fresh air, and some fresh lime water was procured, but it was difficult to get his teeth apart, as they were firmly set. At last Mr. C. got his mouth open so as to introduce two tea-spoonfuls of the lime-water, which began to exhibit some effect. A little more was applied, which went down his throat, and he immediately, but imperfectly, began to breathe. A third time the lime-water was given, as he was now able to drink, and he then began to breathe freely. He was then lifted up, and made, with some assistance, to walk round about. In half an hour afterwards he walked home and went to bed, and slept, and next morning felt nothing the worse, except his having a slight headache.

This is an important fact in chemistry, as it relates to life, its dangers and preservation. It is well known to chemists that lime water has a very great affinity to carbonic acid, and whenever it comes in contact with that gas, it immediately absorbs it, forming a precipitate of the carbonate of lime, or if the lime water is kept still in a large vessel, the carbonate forms in a thick scale on the top, such as on bleachers' lime and dyers' vats. In the case herein described, the lime-water no doubt com-

bined with the carbonic acid gas inhaled by the workman, and the carbonate of lime (an inert substance) was formed. It therefore appears to us that lime water is an antidote to be employed for those who are injuriously affected with inhaling carbonic acid gas.

Those who work at lime-kilns, where much carbonic acid gas is developed, have a remedy in the material which is constantly passing through their hands. Those who labor at charcoal pits have also a remedy for the injurious effect of the gas of the coal in a bottle of lime-water. To make good lime-water for the purpose, it must be prepared from fresh burned lime. Take about half a pound of fresh burned lime, and pour about five quarts of clear soft water upon it; stir up the lime quickly, cover up the vessel, and set it aside for about two hours. The clear should then be poured out into clean bottles and well stoppered, so as to exclude all the air. Hot water is not necessary for this purpose, as lime is as soluble in cold, and a quart will hold about 32 grains of lime in solution. Those whose business leads them to work much over a charcoal fire, will find it for their advantage to have a bottle of lime-water always at hand. It would be well for a person who is about to descend into a well to clear it out, first to throw down a few pailful of fresh lime-water, in order to absorb any free carbonic acid gas which may be at the bottom. On three separate occasions we have been severely affected with carbonic acid gas, by working over a large charcoal fire, and although we are acquainted with the affinity of lime-water for it, we never on any of these occasions thought to try it as a remedy. The substances we used were emetics, with the free use of cold water poured upon the head, and by chafing the chest. We hope this notice will direct general attention to the subject; every thing useful connected with the preservation of life—a remedy for an ill—should be known and read by all men.—[Scientific American.]

SOME PUMPKINS.—Daniel Pease, of Edgartown, Me., has raised during the present season, from a single seed, twelve pumpkins, the eight largest of which weigh fifteen pounds apiece.

Diseases in Animals, &c.

PNEUMONIA IN HOGS.—Several of my hogs last winter became suddenly sick, and seemed to suffer with great difficulty of breathing. I had two among my fattening hogs affected in this way, which I killed, and upon examining them I found the lungs (lights) engorged with blood, and in one softened; in a word, showing all the pathological marks of Pneumonia in the human subject. I attributed the disease to their sleeping in a wet bed, the weather being very cold and wet, and the hogs shut up in a close pen. After they were let into the horse lot, where they slept under a dry shed, the disease ceased. How much better it would have been to have provided the shelter for them at first. Yet I frequently have seen hogs shut up to fatten in little pens, where, in wet weather, they had to eat and sleep in mud up to their bellies.

My wife's favorite old turkey hen was taken, a few days ago, with a singular disease, which I cannot find mentioned in any of the books in my reach. It was a swelling of all the erectile cellular tissue about the head and neck, which was distended to a puff from the top of the head low down the neck, obliterating all the loose folds under the throat. This whole tissue seemed to be filled with air, simulating an emphysema, and was very hot to the touch, and was evidently inflamed. I made a deep and free incision on each side of the swelling near the throat, which permitted the escape of a quantity of blood and air. In a few days the swelling subsided, and she is now well. Last fall there was a great and simultaneous fatality among the horses in our neighborhood. The disease, judging from the symptoms detailed to me, must have been the same in all of them.—I lost a valuable horse of the disease.—When the horse was taken from the stable he appeared weak, had general tremors of the muscles, could not walk straight, but his eye looked clear and natural. I bled him and gave him sage tea, which seemed to afford temporary relief. Also, a purge, but could get no action of the bowels. He died that night.

On a post mortem examination, I found the upper portion of the stomach had been highly inflamed, so that the inner or mucus

coat was entirely destroyed for about half the length of the stomach, while the other part was paler than natural, and had a very few botts attached to the healthy membrane. There was no sign of disease around where the botts were attached. The stomach was full of undigested food. I concluded that his death was caused by inflammation of the stomach, probably caused originally by eating rotten peas, of which there were a great many during the warm wet weather last fall; but I supposed my hogs had eaten them all before I gave my horses the run of the field.

In conclusion, when will the diseases of our domestic animals be treated on rational principles, instead of the arrant empiricism of ignorant farriers?—[Southern Cultivator.

Experiments on Animal Grafting.

Mr. Bransdy Blake Cooper, in delivering lately an oration at the Royal College of Surgeons, in memory of the immortal genius, John Hunter, gave the following amusing illustrations of Hunter's peculiar views respecting the blood of animals:

"Hunter had more clearly recognized the great importance of this fluid than any physiologist who had gone before him.—His views with respect to the importance of the blood to the animal economy, led him to the belief that the blood was endowed with a life of its own, more or less independent of the vitality of the animal in which it circulated. The following experiments seemed to have been instituted with the view of establishing the fact, that the blood of a living animal could, even under the artificial stimulus induced by the introduction of the part of another animal into itself by engrafting, nourish and support it, so as to convert it into a part of itself. Hunter transplanted a human tooth to the comb of a cock, where it not only became fixed, but actually became part of the organic structure of the cock's comb; he proved this by injecting the cock's head, and, on dissection (as the preparation on the table illustrated,) the blood-vessels filled with the coloring matter of the injection were trace into the capillaries of the living membrane of the cavity of the tooth. The most striking instance of this incorporation of a foreign organic body with a liv-

ing tissue, was shown by the learned operator in another preparation made by the immortal Hunter, in which the spur of a cock had been removed from its leg and transplanted to its comb, where it not only continued to grow but had acquired a far greater size than the spur ever acquired in its natural situation. This experiment involved a very interesting physiological inquiry—how the capillaries, which were destined by nature merely to furnish blood fitted for the elaboration of the tissues of the comb, should, under the stimulus of necessity, to use Hunter's own expression, be rendered competent to eliminate the horny matter of the spur, even to the extent of an hypertrophied condition.

Valley of the Wisconsin.

A correspondent of the Milwaukee Sentinel writes as follows, under date of July 19, 1853:

Whoever has said of the Valley of the Wisconsin River, that it was a sandy, valueless district, has committed a slander.

The largest corn-field, by far, that we have seen, and one of equal thrift of any, is in the valley, and upon the soil, which has been so much spoken against. This was a field of two hundred and forty acres.

As of most of the Western rivers, so of the Wisconsin, the bluffs upon either hand describe the margin of the valley, rising to an average height of three hundred feet.—The average width of the Wisconsin valley I should judge to be three miles. The soil, it is true, in most places, is sandy; but not more so than upon the Connecticut river, at Springfield and Greenfield.—Wherever we found anything like decent cultivation, the crops of corn, potatoes, oats, and even wheat looked well—discovering a quick and fertile soil. The bottoms of the Wisconsin, unlike those of the Upper Mississippi, lie high and dry, above the flow of the river, and consequently susceptible of being made the most beautiful of meadow farms. Neither the fine bottom lands of the Mohawk, or of the Connecticut, surpass those of the Wisconsin valley; there being this advantage to the latter: that the neighboring bluffs afford, with the rich and beautiful ravines, or pockets, running up them, from whence make out pure springs of water—the finest pasturage in the world

for sheep, cattle, and horses. These bluffs and ravines uniformly are covered with burr and white oaks, and some times the growth is dense. The river has a mean width of five hundred yards. Its fall is very slight—not exceeding two feet to the mile. An accurate observation made by Mr. Miller, who has charge of the Milwaukee and Miss. R. R. Co.'s survey from Arena to Richmond, a distance of some thirty miles, makes but one and a half foot to the mile. The margin of the river is skirted most of the way by a fringe of willows, elms and ash. The bed of the river is composed of coarse sand, ever shifting and moving. The banks are also sandy, except when the curves bring the channel against the bluff, where the lime stone bed is usually met. The traveller making this journey upon the road is afforded no suitable opportunity to judge of the extent or quality of this valley. It is only as he crosses and re-crosses it, and ascends the elevations, that he comes to see and know anything of its extent and value.

Carving of Poultry.

In M. Soyer's Modern Housewife, a clever and handy work on cookery, will at length be found a solution of that formidable problem—how to carve a fowl with elegance and ease. Soyer explains the marvel in a way which no one could previously have the slightest idea of: and which, in fact, is nothing else than a piece of legerdemain. Well, the way, he says, to carve a fowl neatly is to have nothing to carve—for it really comes to that. Yes, a fowl lies before you on the table, to all appearance requiring to be anatomized by the usual desperate process, at least in all but first rate hands, of wrenching the joints and bones asunder; but, lo! the thing is done by a mere touch of the knife. Legs, wings, breast-bones, instead of flying about in all directions, drop becomingly into the dish. If this be not a discovery we do not know what is. But how is it all managed? Here comes the secret; the fowl has had all of its joints cut by the cook before dressing, and that without disturbing the outer skin. To effect this properly, an instrument requires to be employed, called a tendon separator; of which Soyer gives a drawing. Of course, every one who reads this will get one of these

instruments, which we should think will not be more costly than an ordinary pair of scissors. The method of using the instrument and of trussing for table, is explained in the usual manner referred to.—We are told, that when roasted, the appearance of poultry is greatly improved by this simple operation—looking more plump on account of the sinews having lost their power of contraction.

Important Improvement and Economy in the Manufacture of Flour.

We clip the following interesting statement from the "*Chicago Weekly Tribune*" for October 15th, 1853:—

A recent English paper contains a detailed account of a remarkable invention which is likely to effect a complete revolution in the manufacture of flour. The invention was in its imperfect and unfinished state, exhibited at the world's fair in London, and having now been completed, is rapidly coming into use in England, France, Austria, and Mexico. The flour ground by the mills formed upon the model of this invention, is preferred by the bakers who have tried it, to all other flour which they had previously used, as it is more apt to rise easily and certainly than any other.

It was stated by a committee of the House of Parliament, that by this invention 81,857,120 quarter loaves in addition to those which are now made from the same quantity of wheat, would be produced, giving a clear saving of upwards of £2,000,000 per year. As a machine which effects such astonishing results, cannot fail to become of vast importance, and we copy from the *Mechanics Magazine* the following information in relation to it:

"On the 9th of February, a large party of engineering gentlemen, and of others engaged in an extensive way of business, as millers, assembled at the flour mills of the Messrs. Pavitt, High-street, Wapping, to witness the performance of two mills constructed by Mr. Middleton, on the principle of Westrup's patent. In the same establishment are seven other mills of the ordinary construction, and the trial of relative merits was between the two conical and the most effective pair of the flat mills. The result proved to be immensely in favor of the conical system; while the quality of the

article produced, according to the opinion of experienced bakers, is far superior. The economy of this new system of grinding is found to effect very sensibly the detail of operations both in the mill and in the bake house. In the former it becomes possible to grind up a large portion of farinaceous matter now ejected in the form of bran; that is to exhaust the husk of the clavel more completely, and therefore to yield a larger quantity of pure farina. In the latter, the tedious, but critical duty of watching for what is technically termed "the sponge," or rising of the dough, is quite superseded. At present, if this be neglected, the dough falls again in the oven, and the bread is sold at a reduced price, which is a serious disadvantage.

Under the conical system of grinding, in consequence of the greater proportion of gluten contained in the mass, the acids do not escape so rapidly and the sponge takes place in the oven.

Upon the whole, there is a large gain to the public, for besides saving in fuel it is capable of increasing the bread of the people to the value of £2,460,428 a year, which at 6d. per loaf would give them 81,857,120 more quarter loaves a year.

The "conical" mill is intended to obviate the defects of the flat mill, and a very few remarks will suffice to show that its inventor not only detected their causes, but has brought into operation a most philosophical, and therefore successful, combination of grinding and separating agencies, by which these defects have disappeared to an extent which leaves little to be desired.—The beneficial changes effected may be sufficiently enumerated. First, the reduction of the weight of the running-stone from 14 cwt. to 1½ cwt, by placing it beneath instead of upon the fixed one; second, the reduction of the size of the stones in the proportion of 3.34 to 1; and thirdly, the stones a new form, that of the frustum of a cone. The advantage of lessening the diameter and weight of a mass, of which the one is 4 cwt. and the other 14 cwt. will be apparent, when it is considered that its effective velocity is 120 revolutions per minute, and that this velocity must be sustained against the enormous friction of the grinding surfaces. The altered position of the running stone admits of a much more delicate adjustment of the opposing surfaces

and gives to the miller an easy and effective control over the most effective portion of this operation. The conical form facilitates the discharge of the flour, and obviates the clogging and over-heating of the old practice. In addition to the advantages, by a judicious modification of the ordinary mode of dressing, or rather, by a combination of the mill with the dressing machine, a perfect separation of the flour from the bran is effected at the moment the grist escapes from the stones. The bran still remains in the mill and falls by its own gravity to a second pair of stones in all respects resembling those already described.

Both pairs of stones are mounted on the same spindle and of course impelled by the same gearing. The operation of the lower pair need not be described; they complete the process, and leave nothing unconverted into flour which could add either to the weight or quality of the loaf. In considering this arrangement, we cannot fail to be struck with the analogy subsisting between it and that which we observe in the construction of the jaws of animals—a circumstance which assures us of its philosophical superiority.

There were three trials as regarded the old system and the new. The first experiment on the old mill gave a discharge of 16 lbs. of flour in five minutes, which was equal to 192 pounds per hour; while upon the patent mill there was a discharge of 38½ lbs. in five minutes, or 362 lbs. per hour.—The difference, therefore, on that experiment was against the old system 270 lbs. per hour. The second experiment tried was even more favorable as regarded the new system.

Two conical mills worked against two on the flat principle for one hour, ascertained exactly and with the following results:

Conical mill (No. 1)	produced	8½ bu.
Ditto (No. 2)	"	7¾ "
Flat mill (No. 1)	"	3 "
Ditto (No. 2)	"	3 "

The Washington Sentinel says there is only one stone in the Washington Monument contributed by the fair sex for inscription in the column, and this bears the inscription,

"Here industry her grateful tribute pays,
To him whose valor won us prosperous days.

Artificial Production of Fish

We give the following very interesting account of the artificial production of fish, from the Farmer's Magazine. The subject is attracting much interest abroad, and will doubtless be practically tested here.

ON THE ARTIFICIAL PRODUCTION OF FISH IN OUR RIVERS.

Not unconnected with the agriculture of the country, and certainly not uninteresting to the rural improver, are the wonderful discoveries just brought to bear on the artificial production of fish in our rivers. The whole subject seems to open out a new source of profit to the speculator, of interest to the naturalist, and of the increase of the nation's food. The capture of salmon—brought now to perfection so great, that our rivers are about denuded of that prince of fishes—cease to be either skilful or surprising before the schemes in operation for breeding that fish. Not only has it been tested by the stocking of the French rivers and streams of the Vosges, the Moselle, the Upper and Lower Rhine, but the spawn has been successfully transported to New Zealand.

A recent number of the Journal of the Highland and Agricultural Society of Scotland attributes the discovery of the plan to Mr. John Shaw, of Drumlanrig, so far back as 1833, and further proved by the Rev. D. S. Williamson, ten years afterwards. But the scientific world seems to have been still earlier at work; for, in 1764, Professor Jacob, of Berlin, discovered that the roe of fish was fecundated after ejection by the female; and more, that the roe and milt, extracted even from dead fishes possessed the vital power, and even when dead two or three days, that this power is not lost. The Professor also mentions how fish may be thus introduced into new districts, and even carried to other countries.

During the course of last summer, a small pamphlet, on the artificial production of fish, was published by Reeve & Co., which called particular attention to the French adoption of the joint discoveries of the German professor and the Scottish gardener, in filling the French streams and rivers with millions of fish of the most valuable kind.

Mr. Boccius last year undertook the arduous task of transporting fecundated trout

spawn to New Zealand. Gravel was placed in large iron boxes, with a supply of river water, in order to effect the necessary change; for in water totally stagnant the fish will not be produced. Owing to the warmth of the atmosphere, in the journey the young were produced before the ordinary time. The usual period varies from 70 to 100 days, according to temperature; but in this case we believe Mr. Boccius found them produced in about 42 days. The effect of a stream was obtained by constant dropping from a tank above the iron box; the water in which was, we believe, purified by the valisneria.

The originators of the French practice were two fishermen of the name of Gehin and Remy, of La Bresse, who, finding the fish fail in their streams, began to collect the spawn and apply the mill themselves, which they deposited in boxes or baskets full of holes, and placed them in situations of safety in running streams. A French paper says, "Applying this operation, the year afterwards to a great number of fish, they obtained several thousand trout; and in a year or two more the number had literally increased to millions."

The French government considered the matter of sufficient importance to take it up, and these two fishermen were taken into its pay, and made to apply the principle to the streams of the districts we have mentioned. The same paper goes on to say: "They have done so with the most singular success; rivers and lakes, in which there were no fish now literally teem with them."

The plan is to be further encouraged. A commission of *savans* is appointed to superintend the process. Salmon, perch, tench, and even lobsters are to be domesticated—so far at least as being bred and reared, out of the reach of their numerous enemies.

Perhaps no animal will multiply so fast as the fish. The tench produces 33,000 eggs, the mackerel 543,000, the eel fish 1,357,000. The herring produces also vast numbers, and, if only 2,000 of any one of these came to perfection, there would be in the second year, 12,000,000, in the third, 2,000,000,000. To protect, only therefore, is to insure the production of millions of fishes; but how any fish now happens to escape their enemies, natural

and artificial, seems positively more wonderful than their power of production.

The breeders of fish artificially in this country, are Mr. Boccius, Mr. Gurney, of Carshalton, and Mr. Young, of Lockshin. What should hinder the plan being tried by the landed proprietors near the sides of all the rivers in this and the sister kingdom? and especially why not try to introduce the salmon into rivers where it has not yet been found? Mr. Shaw appears certainly to have been the first to show the parr and the smolt to be only stages of the salmon; and to prove that by the construction of side ponds, with a small stream running over them, with sufficient water to keep them covered, but not to be too deep so as to favor the development of the spawn with as much rapidity as possible, the work will be done. The small fish will thus be preserved from their larger enemies until they have an opportunity of shifting better for themselves, and vast supplies will be afforded to the sea, to return again, either to the same spot, or most certainly to the same river, in another year. The grisle, or young salmon of from 2½ to 3 lbs. weight, has been sent to market, the spawn from which they have come having only been deposited in the preceding October or November; three months of this to be allowed for hatching—and often a longer period. A grisle, weighing 6 lbs. in the month of February after spawning, has, in its return from the sea in Sept., weighed 13 lbs.; and, according to Jessie, a salmon fry of April will in June weigh 4 lbs., and in August, 6 lbs.

Taking the rapid growth, the immense powers of reproduction, and the command which the artificial production seems to have upon the fish, we hardly know a subject of greater national importance than the encouragement of these experiments—if so they can now be called, after success so abundant.

We would strongly urge the thorough investigation of the subject, and the construction of breeding-ponds near the heads of our principal rivers, properly secured. The experiment has interest in itself enough to repay the trouble—for expense there seems to be but little—and, if Jacobi be right, almost every purchaser of a male and female salmon has the power of putting the process into operation. Might not

the Royal Agricultural Society of England investigate the subject with profit and advantage both to landlord and tenant?

A Chapter for Old Farmers

Can any body tell why country people so universally and pertinaciously persist in living in the *rear of the house*? Can any one tell why the front door and windows are never opened, save on the 4th of July and Thanksgiving time! why Zedekiah, and Timothy, and Jonathan, and the old farmer himself, must go *round* the house in order to get into it? why the whole family, (oblivious of six empty rooms,) take their "vapor bath," and their meals, simultaneously in the vicinity of a red hot cooking range, in the dog days? Why the village artist need paint the roof and the spout, and the window frames, bright crimson, and the doors the color of mermaid's tresses? Why the detestable sunflower, (which I never can forgive "Tom Moore" for noticing,) must always flaunt in the garden? Why the ungraceful prim poplar, fit emblem of a stiff old bachelor, is preferred to the swaying elm, or drooping willow, or majestic horse chestnut?

I should like to pull down the green window curtains, and hang up some of snowy muslin. I should like to throw wide open the hall door, and let the south wind play through. I should like to go out into the woods, and collect fresh, sweet wild flowers to arrange in a vase, in place of those defunct dried grasses, and old maid "everlastings." I should like to show Zedekiah how to nail together some bits of board for an embryo lounge; I should like to stuff it with cotton, and cover it with a neat "patch." I should like to cushion all the chairs after the same fashion. Then I should like, when the white-haired old farmer came panting up the road at twelve o'clock, with his scythe hanging over his arm, to usher him into that cool, comfortable room; set his bowl of bread and milk before him, and after he had disscused it, coax him (instead of tilting back on the legs of a hard chair,) to take a ten minutes nap on my model sofa, while I kept my eye on the clouds to see that no thunder shower played the mischief with his hay.

I should like to place a few common

sense, practical books on the table; with some of our fine daily and weekly papers. You may smile; but these inducements, and the comfortable and pleasant air of the apartment would bring the family often together after the day's toil; by degrees they would lift the covers of the books, and turn over the newspapers. Constant interchange of thought, feeling and opinion, with discussion of the important and engrossing questions of the day, would necessarily follow.

The village tavern keeper would probably frown upon it: but I will venture to predict for the inmates of the farm-house a growing love for "home," and an added air of intelligence and refinement, of which they themselves might possibly be unconscious.

[FANNY FERNS

DEATH OF JOHN DELAFIELD.

Another ardent, zealous and most untiring and influential laborer in the cause of Agricultural Improvement is no more! Hon. John Delafield, President of the N. Y. State Agricultural College, departed this life, at his residence—Rose Hill, Seneca county, on Saturday morning last. This melancholy event was as startling as unexpected to the family of the deceased, as it will be to distant friends—for he expired very suddenly, after only a few minutes illness, of disease of the heart. Mr. D. was about sixty years of age. Few particulars have reached us, as the painful intelligence was received by telegraph. A private letter which we received from Mr. Delafield only two days before his death, indicated vigorous health and enthusiastic zeal in the cause he had so zealously espoused and ably promoted. Truly, "in the midst of life, we are in death!"

—In the death of Mr. Delafield, the Agricultural interests of Western New York, the State, and indeed the whole country, sustain a loss,—while the event will be sincerely deplored by thousands of warm and admiring friends and acquaintances. As we have before said in these pages—"Such men as Mr. Delafield are rare—would that each county in the State possessed one who could and *would* do as much as he has for Seneca—and wherever and whenever found, should receive the distinguished honor to which they are entitled."—*Moore's Rural New Yorker.*

He alone is truly great who is so by virtue of intrinsic qualities. The adroit employment of artifice and falsehood may for a time deceive but that fine intuition which tests character and worth with infallible sagacity, will reverse the decision of mere opinion, and estimate the man as he is.

RECIPES.

CURE FOR CHAPPED HANDS.—Take three drachms of gum camphor, three do. spermaceti, and two ounces olive oil—put them together in a cup upon the fire, where they will melt slowly and form a white ointment in a few minutes. If the hands be effected, anoint them on going to bed, and put on a pair of gloves. A day or two will suffice to heal them.”

A Spanish remedy for cancerous complaints is said to be composed of the yolk of an egg, mixed to a thick paste with fine salt.

It is stated that raw eggs and milk are a sure remedy for almost any kind of poison taken into the stomach. This is information that may do a deal of good if remembered, and cannot possibly be productive of any harm. Paste it into your scrap-book.

NEW MODE OF TREATING LOCK-JAW.—Mr. John King, of the Clearspring District, the Hagerstown Herald says, was bitten on the wrist by a hog, a week or two ago. Several days after he was taken violently ill with lock-jaw. Dr. Macgill, of Hagerstown, was called in, who immediately administered chloroform, and laid the wound freely open, applying an emollient poultice, and continuing the chloroform with opium. In five hours, under this treatment, the spasms were arrested, and Mr. King is now entirely recovered.

INFALLIBLE RECIPE FOR COLDS.—In the season of colds and coughs, the following recipe from the Northern Farmer will be of some benefit to the afflicted. The Farmer says:

It was prescribed for us when we were suffering from a cough, and it seemed as if we were on the brink of consumption; no cessation or rest, day or night. We took it, and were cured in three days:

Recipe.—One table spoonful of molasses, two teaspoonfuls castor oil, one do. paregoric, one do spirits camphor. Mix and take often.

A piece of alum about the size of a common marble, pulverized and mixed with a wine glass full of brandy, is said to be a sure cure for the ague.

HEAVES IN HORSES.—A subscriber in Hamburg, S. C., sends us the following recipe for heaves in horses; for which he will accept our thanks:

“Take tar, about one table spoonful, on the point of a paddle, and, after drawing out the horse’s tongue, place it as low down on it as possible, so that he will swallow it. This to be done once a week. Give him, also, the same quantity of ground ginger three times a week, mixed with his feed, for one month. The horse to be only moderately worked. The remedy has cured many cases.—[Farmer and Planter.

TO REMOVE BOTS FROM HORSES.—Last summer as some young china trees reared their tops above the top of the palings of my horse lot, I discovered that one of my horses was eating of it. Being busily engaged in the duties of my profession, I drove the horse some ten miles that evening, and was surprised to see at every evacuation of the bowels, the large number of bots, or grubs, and small worms which passed off. Knowing the anthelmintic properties of the china tree, I was led to attribute the effect at once to it, so I gathered some of the green leaves of the china tree and tried it on my other horses, and it produced the same effect: I also noticed my horses improved in appearance, &c. I have since tried the above, and always with certain good effect. J. E. BYRD, M. D.

—[Southern Cultivator.

PELT ROT IN SHEEP.—This affection arises from exposure to cold, wet weather and hard keeping or poverty. The skin becomes so weak, as neither to be able to secrete the wool, or perfectly formed yolk; the wool falls off from the parts affected, and the yolk presents the appearance of a mere scurf.

Treatment.—If much wool becomes loose, the skin should be well cleansed with soap and water, so as to dislodge the scurf, and then an ointment, made of one part tar, and three or four parts oil or grease, should be applied to the parts affected.—Sometimes it will be necessary to apply a flannel covering to the parts from which the wool has fallen. Full feeding and a warm stall will generally complete the cure. —[Canfield.

HORTICULTURE.

Fruit Growers Meeting at Whitewater.

In accordance with resolutions passed at a meeting of *Fruit Growers*, held at Watertown on the 7th of Oct., a meeting convened at Whitewater, Friday the 18th of Nov., at 10 o'clock, A. M., for the purpose of organizing a Fruit Growers Association.

The Chairman being absent, the meeting was called to order by the appointment of R. W. Parker as Chairman.

After some remarks from E. B. Quiner, explanatory of the objects of the meeting, On motion, it was

Resolved, That a Fruit Growers association be formed, and that a committee of three be appointed by the chair, to draft a constitution—whereupon the chair appointed as such committee, Messrs. Gifford, Miller and Quiner.

On motion, the meeting adjourned to two o'clock, P. M.

Two o'clock, P. M., the meeting re-assembled, when the Committee submitted a Constitution, which, after some amendments was adopted as follows:

CONSTITUTION.

ART. I. This Society shall be called the *Wisconsin Fruit Grower's Association*.

ART. II. The object of this Association shall be the introduction of new and superior fruits, and the interchange and dissemination of knowledge respecting those varieties best adapted to the climate and soil of this State.

ART. III. The Officers of this Association shall consist of a President, three Vice-Presidents, a Recording Secretary, a Corresponding Secretary, a Treasurer, and an Executive Committee, consisting of three persons.

ART. IV. The President, or in his absence, one of the Vice-Presidents, shall perform the customary duties of a presiding officer. The Recording Secretary shall keep an accurate record of the proceedings of the Association. The Corresponding Secretary shall correspond with similar societies, and fruit growers, and elicit such information as shall further the interests of the Association. The Treasurer shall take charge of the funds of the Association and

pay them out on the order of the Executive Committee.

ART. V. The Executive Committee shall have the the general supervision and direction of the affairs of the Association, and shall appoint a corresponding committee, consisting of one person in each county in the State.

ART. VI. The Executive Committee shall appoint and give due notice of an Annual exhibition, at which time the annual meeting shall be held, for the election of officers and the transaction of such other business as may come before it.

ART. VII. Any person may become a member of this association by an annual payment of one dollar into the Treasury.

ART. VIII. This Constitution may be amended at any annual meeting by a majority of members present.

ART. IX. The duties of the members shall be to attend the annual meetings, and bring thereto specimens of any fine fruits in their possessions and scions of any new varieties, which in their opinion are worthy of dissemination.

After the adoption of the Constitution, the following persons were elected Officers of the Association:

President,

H. J. STARIN, of Walworth,

Vice Presidents,

L. C. HALSTED of Milwaukee,

MILES HOLMES of Jefferson,

S. P. LATHROP of Rock,

Recording Secretary,

MARK MILLER of Rock,

Corresponding Secretary

E. B. QUINER of Jefferson,

Treasurer,

R. W. PARKER of Milwaukee.

Executive Committee,

CHAS. GIFFORD, Milwaukee,

A. L. CASLEMAN, Waukesha,

D. J. POWERS, Dane.

Resolved, That the papers throughout the State, be, and are hereby requested to publish the proceedings of this meeting.

STARW BEDS are generally improved by being boxed at the side, or stitched through like mattresses.

SAUSAGES.—The best proportions are 3 lbs. salt, 10 oz. sage, 10 oz. pepper, to every 100 lbs. chopped meat.—*Housewife*.

HYGIENIC QUALITIES OF THE GRAPE.—

In the vineyard districts of France and Spain, the Hygienic properties of the grape are well known. The free use of this fruit, as we are advised, has a most salutary effect upon the animal system, diluting the blood, removing obstructions in the liver, kidneys, spleen, and other important organs, giving a healthy tone and vigor to the circulation, and generally augmenting the strength of the entire animal economy. In diseases of the liver, and especially in that monster compound affliction, dyspepsia, the salutary and potent influence of a "grape diet" is well known in France.—The inhabitants of the vineyard districts are never afflicted with these diseases; which fact, however, alone, would not be conclusive evidence of the medicinal qualities of the fruit of which they freely partake, since peasant life is rarely marred with this class of ailments; but hundreds who are thus afflicted yearly resort to the vineyard districts for what is known as the "grape cure," and the result proves to be a cure, except in very long, protracted, and inveterate cases, which are beyond the reach of medicinal remedies. The invigorating influence of the ripe grape, freely eaten, upon the feeble and debilitated, is very apparent, supplying vigor and the rose hue of health in the stead of weakness and pallor, and this by its diluting property, which enables the blood to circulate in the remoter vessels of the skin, which before received only the serous or watery particles.—[N. Y. Commercial.

HIGH CULTURE FOR GRAPES.—Dr. Underhill, of Crown Point, whose grapes have attained high reputation in the New York market for size and flavor, pays great attention to the thorough preparation of the soil, and keeps it in the highest state of fertility by manuring and deep culture. He usually applies bone dust at the rate of twenty-five bushels per acre, and uses largely a compost of swamp muck, rich loam, leaf mould, sods, leaves, and grape cuttings, with stable manure, liquid manure, yard drainings and potash. Grapes will grow on any soil if properly prepared. He has thirty acres in vineyard, and it is nearly all trenched three or four feet deep, but he now trenches by running a double Michigan plow some fourteen inches deep, and

following it with the largest size subsoil plow, about as much deeper. This is a cheap and effectual mode of deepening the soil. Of course his land is thoroughly drained and in constant cultivation. We gather this from a statement in the N. Y. Agricultor.

Milk for Manufacturing.

Milk now possesses other offices besides the production of butter and cheese and the flavoring of tea. It has made its way into the textile factories, and has become a valuable adjunct in the hands of the calico printer and the woolen manufacturer. In the class of pigment-printing work, which indeed is a species of painting, the colors are laid on the face of the goods in an insoluble condition, so as to present a full, brilliant face. As a vehicle for effecting this process of decoration, the insoluble albumen obtained from eggs was always used, until Mr. Pattison, of Glasgow, found a more economical substitute in milk. For this purpose buttermilk is now brought up, in large quantities, from the farmers; and the required insoluble matter is obtained from it at a price far below that of the egg albumen. This matter the patentee has called "lacbrine." A second application of the same article—milk has just been developed by causes arising out of the recent high price of olive oil. The woollen manufacturers are now using the high-priced article, mixed with milk. This mixture is said to answer much better than oil bone, the animal fat contained in the globules of the milk apparently furnishing an element of more powerful effect upon the woollen fibres than the pure vegetable oil alone. [London Mechanics' Jour.

WATERING CATTLE.—Many farmers suffer a loss by not providing a good and convenient water for their cattle. An animal that is compelled to go a half a mile over a slippery road, and chased perhaps by dogs, cannot gain in flesh by the operation. If a cow has to travel twice a day a half a mile to water, and return, she travels two miles a day;—or ten cows perform twenty miles of traveling per day, and two thousand miles each winter.

He that looses his countenance has nothing left worth keeping,

Chemistry of Plants. No. 6.

UPON WHAT DO PLANTS LIVE—FROM WHENCE COME THEIR MATERIALS—WHAT IS THE EFFECT OF PLANTS UPON THE SOIL ON WHICH THEY GROW, AND THE AIR IN WHICH THEY LIVE.

BY PROF. S. P. LATHROP, M. D.

It is not to be understood by our readers from the table of the composition of plants or crops of different kinds, in a previous number, that every kind of plant or crop, under any and all circumstances, will have in its composition *precisely* the same amount of each different material. The composition of the same kind of plant, if ripe and in a perfectly healthy state, is nearly the same in kind and quality; whatever may have been the circumstances of soil and climate where it has grown. This general truth, however, is consistent with certain differences, which are of great importance; in their bearing upon the practice of agriculture.

We have already alluded to the fact that the different parts of the same plant differ in the relative *amounts* and, also, in the *kind* of material which is found present in them; and that the age, or the season of the year when the examination of the plant is made, affords a difference in the amount and kind of material that is found present in it. We wish now to speak more fully of the application of these principles in the cultivation of crops and in the general management of the same.

We may, as has already been implied in what we have said, speak with propriety of feeding plants as we do of feeding animals.—“If we give abundant and invigorating food to an animal, it becomes vigorous and fat; on scanty and slightly nutritive food it continues poor and lean. It is precisely the same with plants. If they find *all* the substances which they require for their nourishment and full development in abundant quantity and in suitable form, in the soil and in the air, they will grow up more vigorously, and put forth more branches, leaves, flowers and fruit, than when they meet with these substances, or even with but one of them in insufficient quantity. By rich and plentiful food the farmer fattens his cattle; by rich and plentiful food he can also fatten his plants. In this respect plants are placed in the same circumstances as animals during stall-feeding. They are confined to

one fixed spot, and cannot quit it in order to seek in another place what may perhaps be wanting to them in their own locality. If, therefore, they are to grow luxuriantly, the farmer must take care that their food lies near enough for them to reach it by their roots. In fattening animals, the farmer is careful to supply them, in addition to good food, with warm sheds and suitable littering. He also provides for their cleanliness and proper attendance, because he knows that this care promotes and increases their health and comfort, and that food acts better upon a healthy beast than upon one that is unsound. The same thing applies with equal force in fattening plants. If they are required to grow in greater quantity and luxuriance upon a field than nature alone admits, not only must more nutritive material be placed at their service, but at the same time, a more grateful and appropriate domicile than the raw soil alone, must also be made ready for them.—The soil in particular, must be sufficiently deep, loose, warm and moist, in order that the roots may duly spread, and the nutritious matter must be properly dissolved. When, therefore, the farmer wishes to increase the natural fertility of his fields, two courses are to be adopted—*tillage of the soil and manuring.*

Again, there is a well established principle, both in the case of animals and of plants, that certain elements are determined towards specific parts, as that the phosphates of lime and magnesia are determined to the essentially nutritive part of plants, and the modifications produced by enriching the soil and improvement in the culture, are to be seen plainly in their accumulated quality. Cattle breeders, and even fruit growers well understand this principle. The farmer will, in one process of breeding, give you an animal possessing any and every desirable quality, provided these qualities are not the antagonists or opposites of each other. Witness the perfection of an animal for beef and for milk also, when properly bred, as seen in the improved short horn; and for the yoke and beef as seen in the beautiful and sprightly Devon. He can furnish you the small boned and tender muscled animal properly marbled with fat, so desirable for beef; or, at your bidding, he can furnish you the large formed animal duly provided and filled up with strong and elastic fibered muscles so well calculated for service. The fruit grower, to an almost unlimited extent, will

change the qualities of his pears, peaches, apples and apricots, giving the shape, flavor and coloring prescribed. So the agriculturist, guided by similar principles, can change the qualities of his crops, giving us wheat with an abundance of straw and a paucity of kernel, and these covered with a thick, heavy cuticle, which furnishes an abundance of bran and a moiety of flour, and this flour deficient in gluten, or the pastry part of flour, the important ingredient which renders it valuable for food. Or, on the other hand, by judicious and skilful cultivation, he can furnish wheat with its slight straws bowed with the weight of their golden kernels, covered with beautiful, transparent cuticle, rich in glutenous matter.

We have not space to go fully into the illustration of these principles in the statement of particular facts. Suffice it to say, that as a general principle, the leafy parts and roots of plants require and will appropriate to themselves in addition to nitrogen, alkalies and earth, such as potash and lime, while the seeds will appropriate to themselves phosphoric acid compounds and nitrogen. It will not, therefore, seem strange, on this principle, that some manures, as experience has demonstrated to every observer of cultivation, occasion the growth more particularly of the stalks and leaves, while others tend to the abundant promotion of seed.

Plants, therefore, in the earlier stages of existence require the former kind of food, while in the latter periods, when they are coming to maturity and ripening their seed, the latter kind of food is appropriate. Among the substances belonging to the former class, may be mentioned ammoniacal salts of all sorts, good guano, superphosphate of lime, urates and soot, putrid animal substances, as blood, flesh and urine, and fermented stable manure, especially of sheep and horses, together with the salts of potash, wood ashes, building rubbish, soap-suds, dish-water, &c., &c. Among the latter we would mention burnt bones, raw bones, bone dust, superphosphate of lime, decayed leaves and wood ashes.

Another principle intimately associated with the above, of much importance in this *fattening* of plants, and which is also well illustrated by the feeding of animals, should be mentioned.—It is a well known fact to every animal physiologist, that the food of the animal is much more easily digested when it is in a soluble

condition. Thus, the benefit derived from the grinding or cooking of the food for animals, depends upon the fact of its greater solubility in these conditions. The digestive organs of the animal are better able to act upon such food and to appropriate its material to their support—Often a large portion of unground food, such as most grains, are seen to be voided by the animal unaltered. Especially is this the case with animals which have too hastily eaten their food, or whose teeth have become injured by age or otherwise.

That much, so voided, is of course of no service to the animal as nourishment, at least very little if any. Thus with the plant, it should not only have food in sufficient quantity and of proper quality and kind, but it should also be in proper condition to be appropriated by the plant. Most manures act quickly or slowly upon plants as they are quickly or slowly soluble.

Again, it is found to be equally true of plants and animals, that there are what physicians style pathological states, by which is meant a diseased state or condition, induced by various agents to which they are subjected, such as dropsies or superabundance of fluids, chlorosis, rickets, softness or brittleness of the bones, &c., in animals. Some of these diseases are produced either by the presence of too much of some element, or an absence of other elements.

The only remedy in such cases, is to correct the disproportion and restore the due equilibrium by proper remedies. Just so, also, we may have diseased states of plants, either by a superabundance or deficiency of some of the elements furnished them by the soil, and the only remedy in these cases is like that in the former—a proper equilibrium must be restored. And now, how is this to be done? In the latter case just as in the former! To the animal, the deficient material is administered *directly*, as a medicine or as food, while the superabundant element is abstracted, either directly or by the mediation of medication. So in the plant, that which is wanting must be put within the reach of the suffering vegetable, that it may take it up and incorporated it into its own tissues and grow thereby, and the element acting injuriously upon the delicate fibres and tissues of the tender plant, must be removed; or, which is the *more practical* way for the farmer, must be *changed* in its character, and thus, rather rendered harmless by being made inactive; or:

which is better, beneficial, by furnishing a proper pabulum for the growing plant. Thus, the salts of iron are sometimes so abundant in the soil as to be injurious to vegetation. These are, however, easily neutralized, or even rendered useful as a fertilizer, by the simple application of lime. The salt of iron most usually present is in the form of a sulphate, and by the application of lime, a chemical interchange takes place, by which sulphate of lime—or real plaster of paris—and a simple oxide of iron are formed, the former of which substances is a desirable fertilizer, and the latter a desirable element in soils.

One point more, and we shall have finished what we have to say upon the chemistry of plants, and their relation to soils, &c.: All farmers know well the fact, which chemical analysis of crops fully demonstrates, that some crops are more exhausting to the land than others.

Now, many farmers are fearful of these exhausting crops and regard them as unprofitable. It is true that they require more food, or a greater quantity of manure than crops in general, but they furnish a proportionally more valuable crop from the same extent of surface.

It is the tendency of all crops, if removed entirely from the land, to exhaust it. A crop which incorporated into itself comparatively few materials, would be comparatively a worthless crop. Vegetation, as a whole, is to be regarded as a form of matter capable of being used for food, either for man or beast, and it derives a great value in this form, from the fact that it is composed of materials in their original form, wholly worthless as food, but which are converted by the powers of the plant into this usable and therefore useful form. Now, the more of this waste matter which the plant will convert into itself, and thus render it valuable for food, the more valuable the plant.

To cease their cultivation, therefore, would be like stopping a paper-mill, or running it only half the time, because, forsooth, it used up rags! while the interest of the money invested in the mill is the same whether it is run or not.

These latter remarks might have been made with equal and perhaps more propriety, in connection with our remarks respecting the use to be made of the farm, in the last number.

In closing these articles, we can but urge up on our farmers the importance of making themselves familiar with the principles of vegetable

physiology, which includes not only the operations carried on in the plant itself, but in all its relations to the world about it. Nothing would contribute more to the interest of agriculture, and to the education of the agricultor, ennobling both him and his pursuit.

Flowers and Shade Trees.

I seldom see two people envy one another seriously about their flower-beds or shade trees. There is a kind of religious, humanizing, generous effect in loving the beautiful things of nature, that makes us love to see everybody have them; while those who stake their respectability on dress or house-keeping, almost universally dislike to see others approach their standard, or rival them in their boasted sphere. This shows that learning to love the beautiful things of nature, beautifies our spirits—while priding ourselves on bright tin pans, well scoured floors or costly furniture, disfigures our immortal part. The country house that has its shade trees, its shrubbery and flowers, has hallowed memories to win back the hearts of its wanderers, and brighten their gloomiest hours. The woman who fails to have a green spot and shade at her door, fails in one important part of her domestic mission! Her home will not be so endeared to its inmates as it otherwise would be! True, the outside decorations should chiefly belong to man's labor; but very many men will not plant a tree or flower, who could be taught to love them and add to them if some one would begin. So, girls, do not scrub and cook and scour, until you have no time left to plant a tree or vine, and flower! Little care will suffice them when once planted: and they will do more to beautify and adorn your home than the contents of a tin pedlar's cart, polished every Saturday, until they dazzle you and outshine the neighborhood. [Mrs. Swisshelm.]

FEEDING DOMESTIC ANIMALS. If one cow daily treads three pounds of hay under foot in mud, she will waste about a hundred pounds per month; or a herd of twenty cows waste a ton per month. At this rate, how many times every ten years, would the quantity wasted pay the expense of making feeding boxes and racks?

EDITOR'S TABLE.

TO SUBSCRIBERS—If any of our subscribers are deficient in any numbers of the current volume, they will be supplied free of charge by informing us what numbers are missing.

PATENT OFFICE REPORT FOR 1852—3.—We are in receipt, through the politeness of the Hon. Chas. Mason, Commissioner of Patents, the Patent Office report for 1852—3, in two volumes of about 500 pages each. It is a very valuable document, and is much better got up, mechanically, than any of its predecessors. We have not had time since its reception to give it a thorough perusal, but from the examination we have made, feel safe in saying that it embodies a very great deal of useful information, and abounds in statistical facts of an important nature,—Agricultural, Commercial and Mechanical.

CHICKENS.—Mr. Jeremiah Curtis of Root Creek, Milwaukee Co., has sent us a fine pair of *Cochin China Chicks*. Mr. C. will accept our thanks for the present. If the birds sent us from Mr. C's yard may be taken as a fair sample of his stock, we would advise those in quest of fine fowls to pay him a visit. Mr. Curtis is breeding the *Black Spanish*, *White Shanghai* and *Brama Pootras*, from stock obtained from Eben Wright of Boston, whose reputation as an importer of fine fowl stands high.

GODY'S LADY'S BOOK.—This ever welcome monthly for December is on our table with its usual promptness. This number is a rich one and more than sustains the enviable reputation won by former issues. Too much cannot be said in praise of this work. The January No. will commence the *Forty Ninth Volume*. Now is the time to send in your subscriptions.

AGRICULTURAL ADDRESS.—We are in receipt of the Address delivered before the Racine Co. Ag. Society, at the late fair, by CHAMPION S. CHASE, Esq. It is a common sense, practical document—such as does honor to the author.

SCHOOL FELLOW.—This is one of the very best publications we know of for the little folks, among whom it is a great favorite wherever introduced. We say to parents, subscribe for it; you cannot make a better use of \$1. Evans & Britton, N. Y.

WATER-CURE AND PHRENOLOGICAL JOURNALS.—We can say no more in praise of these works than we have said before. Volumes 17 and 19 commence with the New Year.

LADIES WREATH AND PARLOR ANNUAL.—The November No. of this popular monthly is on hand, filled as usual with a choice variety of literary reading and neatly illustrated with plain and colored plates.

MECHANICS MAGAZINE.—The November No. is on our table filled with the usual variety of matter for mechanics and artisans. This is a most useful work.

Mr. Peabody, editor of the *Soil of the South*, mentions a new kind of watermelon, which he calls the orange-watermelon, and pronounces it a very singular, beautiful, and excellent melon. By cutting into the rind, as you peel an orange the entire skin peels off, leaving the whole pulp unbroken, which, with care, may be divided into quarters, just as you divide an orange.

BALL & POST'S CULTIVATOR.—Mr. Isaac Atwood, of Lake Mills, has purchased the right to manufacture and sell this *Cultivator* in the Counties of Rock, Dane, and Jefferson. Mr. A will sell to you on or individual rights. *Cultivators* will be delivered in Janesville, free of transportation—Price, \$10.

TO PREVENT RABBITS &C., FROM BARKING FRUIT AND OTHER TREES.—As the time is approaching when our fruit trees are endangered by rabbits and mice, the following, which we clip from the *Genesee Farmer*, may be worth a trial: Make a tolerably thick quick-lime white wash, with plenty of salt or brine in it, and apply plentifully after the leaves have fallen or the ground has frozen. It need not be applied higher up the tree than two or three feet.

PREMIUMS AWARDED AT THE LATE HORSE CONVENTION AT SPRINGFIELD.—Among the premiums awarded at the late Horse Fair held at Springfield, we notice the following:

Colts. Stallions of three years old.—1st premium of \$50 to John L. Briggs of Springfield.

Pairs of Ponies. First premium of \$50 to J. L. Briggs, of Springfield. Among the awards for single ponies, was a diploma to U. Bowen, of Richmond, N. H.

Geldings. Two years old and over.—First premium of \$100 to Ebenezer Flagg, of Worcester; second premium of \$50, to A. T. Smith

of Worcester; a diploma to S. H. Dumas, of Concord, N. H.

Thorough-Bred Horses—Stallions. First premium of \$100, to "Bob Logie," owned by J. H. Hutchinson, Montreal, Canada.

Blood Mares. First premium of \$100, to "Lady Digby," owned by James Turner of Boston; 2d, of \$50 to "Lady Sussex," owned by Dr. G. Bunting, Lewis Co., N. Y.

Stallions, of seven years and older. First premium of \$200, "Cassius M. Clay," owned by J. H. Goodwin of Kentucky. 2d, of \$100, to "Morrill Horse," owned by F. Morrill of Danville, Vt. 3d, of \$50, to "Bush Messenger," owned by H. Reed of Augusta, Me. Gratuities of \$10, were granted, among others, to "Ashuelot Morgan," owned in Richmond, N. H.; Deerfield Morgan, owned in Walpole, N. H.; and Chesterfield Morgan, owned in Keene.

Stallions of 4 to 7 years old. First premium of \$100, to "Paul Clifford," owned by Hudson & Wilcox, Vt.; 2d, of \$50, to Flying Morgan, owned in Mass.

Matched Horses. First premium of \$100, to Lewis Gale, Barre, Vt.; 2d, of \$50, to L. B. Chapman, Windsor Locks, Ct.; 4th, of \$20, to S. C. Hall, Manchester, N. H.

Fancy Matched Horses. First premium of \$100, to D. Sanderson, of Somerville, N. Y. 2d, of \$50, Doty & Hubbard, Montpelier, Vt.

Dogs.—A correspondent of the Michigan Farmer says "I have the names of 13 farmers in this vicinity, who have had one hundred and thirteen sheep killed by dogs."

WINNEBAGO COUNTY, IOWA.—At the Fair of this county, on the 8th of Oct., a certificate was read stating that J. C. Beard had raised eighty bushels of corn to the acre—seventy pounds to the bushel.

JEFFERSON CO. AG. SOCIETY.—At a meeting of this Society held at Fort Atkinson, the following gentlemen were chosen officers for 1853:

MILO JONES, Fort Atkinson, President.

PETER HAIH, Milford, 1st Vice Prest.

JUSTICE CARPENTER, Palmyra, 2d Vice Prest.

GEORGE P. MASON, Fort Atkinson, Treas.

S. C. WRITER, Fort Atkinson, Corresponding and Recording Secretary.

C. Bartlett, Milford; H. H. Wilds; John Wentworth, Koshkonong; N. P. Parsons, Cold Spring; George Blanchard, Lake Mills; Girard Crane, Oakland; Mr. Dey, Hebron; Myron Smyth, Sullivan; Enias D. Masters, Jefferson, Executive Committee.

The next Fair of the Society is to be held at Fort Atkinson in an enclosure.

EXPERIMENTS.—There is no way of making improvements in farming but by experience.—If the farmer is informed of, or has conceived, a different and better method of culture or management in any branch of his farming, he is to test the goodness of that method by experiment; and, if these prove successful, he may congratulate himself on having performed an act which is serviceable to his country and honorable to himself.—*Farmer's Assistant.*

STONE TREE.—There is a tree in Mexico, called the *chijol*, a very fine wood, which, according to a writer in the "National Intelligencer" (W. D. Porter,) becomes petrified after being cut a very few years, whether left in the open air or buried. From this timber, houses could be built, that would in a few years become fire proof, and last as long as those built of stone. The wood, in a green state, is easily worked; it is used in building wharves, forts, &c.

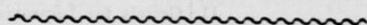
DAHLIA.—The Dahlia was discovered in Mexico, by Humboldt, in 1798, and sent by him to the Botanic Garden, at Madrid, where it received its name in honor of the Swedish naturalist, Dahl.

THE APPLE CROP IN GREAT BRITAIN.—An English correspondent in a recent letter says: "Apples are unusually plentiful this season, so much so, that farmers are giving them to their milch cows and pigs, and find that they are quite equal to potatoes for feeding purposes.—For the first time since I left Rochester, (3 years since,) I have been luxurating on apple *sass*, and thinking of the good old times in Western New York. For the last fifteen months it has done nothing here but rain, rain, rain, making rare times for umbrella makers, 'buss men and doctors."

IF SOME idea of the value of apples as an article of profit to the farmer, may be found in the fact that no less than 17,000 barrels have been purchased by two buyers chiefly in the towns of Kirkland, Marshall, and Augusta, (Oneida Co.,) and shipped east to market.—The amount received is probably \$20,000.

The Central Railroad has over twenty-six miles of freight cars, in constant use. Yet even this does not accommodate the vast business that offers itself, and new cars are constantly in process of construction.

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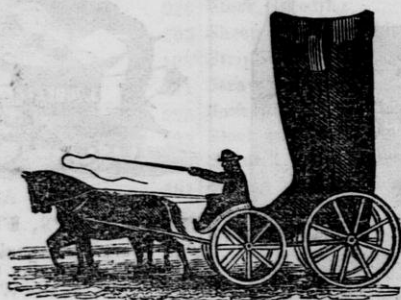
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